

**CLASSIFICATION  
AND  
SYNOPSIS OF THE TROCHILIDAE**

**ELLIOT**

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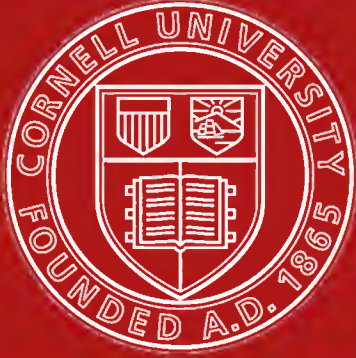
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A

CLASSIFICATION

AND

SYNOPSIS OF THE TROCHILIDÆ.

BY

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## P R E F A C E.

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IN the following Synopsis, I have given every species of Humming-bird known to me, that in my opinion is entitled to a separate rank, and even of these, it is not impossible that future information will compel us to place some of them among the synonymes of others. Although the Family contains a certain number of groups, composed of species having more or less relationship with each other, I have not seen my way clear to the recognition of any subfamilies, as has been done by other writers.—The *Phæthornithinæ*, which constitute Mr. Gould's first subfamily, cannot be considered (as restricted by that Ornithologist) as having all the genera particularly related, either in the form, color of plumage, or habits of their different members; witness, *EUTOXERES*, *GRYPUS*, and *PHÆTHORNIS*; nor are any of these so essentially different from all the rest of the Family as to necessitate their separation into a subfamily. Mr. Gould does not give any characters to distinguish the *Phæthornithinæ* from the *Trochilinae*, and I am unable to find any. The fact is, that the Trochilidæ is composed of so many groups, whose species have but little in common, that if it is deemed desirable to institute Subfamily divisions, many would be requisite, and I do not see any advantage that could possibly accrue from such a procedure. I have, therefore, not recognized any subfamilies, but have considered all the species as members of one great united Family. Generic division has been carried probably to a greater extreme among these birds than in any other group known in Ornithology, and there remain but comparatively few species that have not been made to stand at one time or another, as the representative of some so-considered distinct generic form. In the present Synopsis, the recognition of genera has been carried to the farthest limit that seemed practicable, and in every case it has been attempted to give structural characters for the genera which have been acknowledged. Of course, to those Ornithologists who consider that color of plumage is sufficient to establish genera, my treatment will not be acceptable, but in this Family at least, when it is not infrequently observed, that individuals of the same species vary from each other in the hues of their plumage to a great degree, color unsupported cannot be regarded

as worthy of any consideration as a GENERIC character, and, if structural ones exist sufficient for the establishment of a genus, then the hue of the plumage is immaterial. The arrangement here given of the species composing this Family is, I am well aware, very different from all those heretofore proposed. It is not, however, the result of guess or imagination, but has been arrived at by a careful comparison of the different species themselves, for of the 426 acknowledged as distinct in this Synopsis, about 380 are contained in the great collection, by the assistance of which this book has been written, and of the remaining ones, with but few exceptions, I have carefully examined the types. As has already been said by others, no perfect arrangement of the Family is possible at present, so many links being still needed to fill up the gaps, but the discoveries of late years have given us a much better idea of the Trochilidæ than was ever before possible, and many needed desiderata have been obtained, so that for the largest proportion of the Family a tolerably satisfactory arrangement can now be made. Between such genera as PHÆTHORNIS and EUPETOMENA, EUSTEPHANUS and AITHURUS, THALURANIA and MELLISUGA, SPARGANURUS and OXYPOGON, and some few others, constituting the end and beginning of their respective sections as given in this Synopsis, we cannot at the present time supply the connecting links, but within the last ten years so many extraordinary and unlooked-for forms have been obtained, that it does not seem too much to believe that among the vast unexplored regions of South America, many of the desired links between the genera mentioned will yet be forthcoming. Although one of the largest groups of birds known in Ornithology, it cannot be considered that we are yet acquainted with all the existing species of the Trochilidæ, and it is most probable that perhaps even more gorgeously plumaged and wonderful forms than any known, still remain to be discovered.

As some of the conclusions in this Synopsis, particularly in the matter of synonymy, may be contrary to the views of some Ornithologists, I would suggest that the various papers published by me in the Ibis upon this Family be consulted, as my reasons for many of the determinations will be there found given at length. The following is a list of these papers:—

Those written with the co-operation of Mr. Salvin.

1. (1873). The Genus PHÆTHORNIS, p. 1.
2. (1873). The Genera PYGMORNIS, GLAUCIS, and THRENETES, p. 269.
3. (1873). On two species of Trochilidæ of the Genus LOPHORNIS, p. 279.
4. (1873). The Genus THALURANIA, p. 353.

Those of which I alone am the author.

5. (1872). The Humming-birds of the West Indies, p. 345.
6. (1874). Description of a new species of EUCEPHALA, with a list of the known species, p. 87.
7. (1874). Remarks on some Typical Specimens of the Trochilidæ, with a description of one new Genus, p. 261.



8. (1874). The Genus *HELIANTHEA*, p. 330.
9. (1875). The Genera *CHLOROSTILBON* and *PANYCHLORA*, p. 149.
10. (1876). Remarks on some Type Specimens of Trochilidæ from the Museums of Neuchatel and Florence, p. 5.
11. (1876). The Genus *LAMPROPYGIA*, p. 54.
12. (1876). The Genera *CYANOMYIA* and *HELIOTRYPHA*, p. 311.
13. (1876). The Genera *HELIOTHRIX*, *CALLIPHLOX*, *CATHARMA*, and *PETASOPHORA*, p. 394.
14. (1877). Review of the Specimens of Trochilidæ in the Paris Museum brought by D'Orbigny from South America, p. 133.
15. (1878). The Genus *THAUMATIAS*, Gould (nec Eschsh., 1829, nec Bon., 1850), p. 35.

As some of these Genera will not be met with in the present Synopsis, having been obliged to give way to others possessing the right to priority, or else deemed unnecessary, it will be understood that, as employed in the various papers above mentioned, they are intended to represent the Genera used by Mr. Gould in his Monograph of the Trochilidæ. The memoirs having been written for the purpose of critically reviewing the *species* that had been described, the Genera were taken as given by the above-mentioned Ornithologist. In the present work, both Genera and Species have been critically examined, and it has been found necessary to make some important and very unexpected changes, especially in the first of these divisions; but it is believed that in every instance a satisfactory explanation is given for thus deviating from the course, which, when judged by the law of priority, had been ascertained to be incorrect, although perhaps sanctioned in some degree by custom.—In every case also, a genus that was in use has been dropped, when found to have been previously employed in some other branch of zoology. The synonymy is that which, in the majority of cases, refers to a passage in the work cited, that gives some desirable information regarding the species. I have not endeavored to make this “exhaustive,” as the term is used now-a-days in many instances, and consequently many lists of names and nothing else, and also works where the name of the species alone occurs without any information of importance attached to it, will not be found quoted. The chief exceptions to this are the lists of Bonaparte and Reichenbach, which, on account of the many genera first proposed in them, could not be passed over. The value of synonymy has not been deemed to consist in its great length.—The same may be said of the descriptions of the species. Usually one of a genus has been pretty thoroughly described, but I have thought it best, in the majority of instances, to give simply the differences that may exist in allied species, instead of going over the entire plumage, as this merely necessitates endless repetitions that would speedily become wearisome, and serve no useful purpose. Verbose and complicated descriptions have been carefully avoided, for it is not impossible that, after plodding through such a one, the bewildered reader on arriving at the termination has lost all track of the

beginning. Like lengthened useless synonymy, such descriptions if possible should be shunned.

Humming-birds vary greatly in their dimensions, even among members of the same species, and therefore a specimen cannot be decided to be something else because it does not agree exactly with the measurements of some described species, to the eighth of an inch. The total length means from the point of the bill to the end of the tail. Wing, from the shoulder to end of the longest primary. Tail, from the termination of the caudal vertebræ to the end of longest rectrices measured on top. Culmen, from the termination of the frontal feathers to the point.

When considerable difference exists in the dimensions of the sexes, those of the female are given as well as those of the male. In the majority of instances, however, they are too nearly the same to make it necessary that more than one should be recorded, and then that of the female is omitted.

The asterisk, placed before the names of certain species, indicates that it is not contained in my collection.—Those who may possess any of these desiderata, and are willing to dispose of them, would oblige me by informing me of the fact, as I am naturally desirous of making the collection as perfect as possible.

The drawings which illustrate the generic characters are, with but few exceptions, all made from specimens contained in my collection.

D. G. E.

## TABLE OF CONTENTS AND LIST OF SPECIES DESCRIBED.

	PAGE		PAGE
Genus <b>1. Eutoxeres</b> . . . . .	2	20. <i>Phæthornis pygmæus</i> . . . . .	20
1. <i>Eutoxeres aquila</i> . . . . .	3	21. <i>Phæthornis episcopus</i> . . . . .	20
2. <i>Eutoxeres heterura</i> . . . . .	3	22. <i>Phæthornis nigricinctus</i> . . . . .	20
3. <i>Eutoxeres condamini</i> . . . . .	3		
Genus <b>2. Rhamphodon</b> . . . . .	4	Genus <b>8. Eupetomena</b> . . . . .	21
1. <i>Rhamphodon nævius</i> . . . . .	4	1. <i>Eupetomena macroura</i> . . . . .	21
		2. <i>Eupetomena hirundo</i> . . . . .	22
Genus <b>3. Androdon</b> . . . . .	5	Genus <b>9. Sphenoproctus</b> . . . . .	22
1. <i>Androdon æquatorialis</i> . . . . .	5	1. <i>Sphenoproctus pampa</i> . . . . .	23
		2. <i>Sphenoproctus curvipennis</i> . . . . .	23
Genus <b>4. Glaucis</b> . . . . .	5	Genus <b>10. Campylopterus</b> . . . . .	23
1. <i>Glaucis hirsuta</i> . . . . .	6	1. <i>Campylopterus largipennis</i> . . . . .	24
2. * <i>Glaucis dorhui</i> . . . . .	7	2. <i>Campylopterus obscurus</i> . . . . .	25
3. <i>Glaucis antoniæ</i> . . . . .	7	3. <i>Campylopterus rufus</i> . . . . .	25
4. <i>Glaucis leucurus</i> . . . . .	7	4. * <i>Campylopterus hyperythrus</i> . . . . .	25
5. <i>Glaucis cervinicauda</i> . . . . .	8	5. <i>Campylopterus lazulus</i> . . . . .	26
6. <i>Glaucis ruckeri</i> . . . . .	8	6. <i>Campylopterus hemileucurus</i> . . . . .	26
Genus <b>5. Doleromya</b> . . . . .	8	7. <i>Campylopterus ensipennis</i> . . . . .	26
1. <i>Doleromya fallax</i> . . . . .	9	8. <i>Campylopterus villavicencio</i> . . . . .	27
Genus <b>6. Phæoptila</b> . . . . .	9	9. <i>Campylopterus cuvieri</i> . . . . .	27
1. <i>Phæoptila sordida</i> . . . . .	10	10. <i>Campylopterus roberti</i> . . . . .	28
Genus <b>7. Phæthornis</b> . . . . .	10	Genus <b>11. Aphantochroa</b> . . . . .	28
1. <i>Phæthornis bourcierii</i> . . . . .	12	1. * <i>Aphantochroa gularis</i> . . . . .	28
2. <i>Phæthornis philippi</i> . . . . .	12	2. <i>Aphantochroa cirrochloris</i> . . . . .	29
3. <i>Phæthornis yaruqui</i> . . . . .	13	3. <i>Aphantochroa hyposticta</i> . . . . .	29
4. <i>Phæthornis guyi</i> . . . . .	13	Genus <b>12. Cæligena</b> . . . . .	29
5. <i>Phæthornis emiliæ</i> . . . . .	13	1. <i>Cæligena clemenciæ</i> . . . . .	30
6. <i>Phæthornis augusti</i> . . . . .	14	2. <i>Cæligena henrici</i> . . . . .	30
7. <i>Phæthornis pretrii</i> . . . . .	14	3. <i>Cæligena viridipallens</i> . . . . .	31
8. <i>Phæthornis superciliosus</i> . . . . .	14	4. <i>Cæligena hemileuca</i> . . . . .	31
9. <i>Phæthornis longirostris</i> . . . . .	15	Genus <b>13. Lamprolæma</b> . . . . .	32
10. <i>Phæthornis hispidus</i> . . . . .	16	1. <i>Lamprolæma rhami</i> . . . . .	32
11. <i>Phæthornis syrmatophorus</i> . . . . .	16	Genus <b>14. Oreopyra</b> . . . . .	33
12. <i>Phæthornis anthophilus</i> . . . . .	16	1. <i>Oreopyra calolæma</i> . . . . .	33
13. <i>Phæthornis eurynome</i> . . . . .	17	2. <i>Oreopyra leucaspis</i> . . . . .	33
14. <i>Phæthornis squalidus</i> . . . . .	17	3. <i>Oreopyra cinereicauda</i> . . . . .	34
15. <i>Phæthornis longuemareus</i> . . . . .	18	Genus <b>15. Oreotrochilus</b> . . . . .	34
16. <i>Phæthornis adolphi</i> . . . . .	18	1. <i>Oreotrochilus pichincha</i> . . . . .	35
17. <i>Phæthornis griseigularis</i> . . . . .	18		
18. <i>Phæthornis striigularis</i> . . . . .	19		
19. <i>Phæthornis idaliæ</i> . . . . .	19		

## viii TABLE OF CONTENTS AND LIST OF SPECIES.

	PAGE		PAGE
2. Oreotrochilus chimborazo . . . . .	35	3. Iolæma frontalis . . . . .	59
3. Oreotrochilus estellæ . . . . .	36	4. *Iolæma whitelyana . . . . .	59
4. Oreotrochilus leucopleurus . . . . .	36	Genus <b>26. Sternoclyta</b> . . . . .	59
5. Oreotrochilus melanogaster . . . . .	36	1. Sternoclyta cyaneipectus . . . . .	60
6. Oreotrochilus adelæ . . . . .	37	Genus <b>27. Eugenes</b> . . . . .	60
Genus <b>16. Lampornis</b> . . . . .	37	1. Eugenes fulgens . . . . .	60
1. Lampornis violicauda . . . . .	38	2. Eugenes spectabilis . . . . .	61
2. Lampornis mango . . . . .	39	Genus <b>28. Urochroa</b> . . . . .	61
3. Lampornis prevosti . . . . .	39	1. Urochroa bougueri . . . . .	62
4. Lampornis viridis . . . . .	40	Genus <b>29. Eugenia</b> . . . . .	62
5. Lampornis veraguensis . . . . .	40	1. Eugenia imperatrix . . . . .	62
6. Lampornis gramineus . . . . .	40	Genus <b>30. Lampraster</b> . . . . .	63
7. Lampornis calosoma . . . . .	41	1. *Lampraster branicki . . . . .	63
8. Lampornis dominicus . . . . .	41	Genus <b>31. Heliodoxa</b> . . . . .	63
Genus <b>17. Eulampis</b> . . . . .	42	1. Heliodoxa jacula . . . . .	64
1. Eulampis holosericeus . . . . .	42	2. Heliodoxa jamesoni . . . . .	65
2. Eulampis jugularis . . . . .	43	3. Heliodoxa leadbeateri . . . . .	65
Genus <b>18. Lafresnaya</b> . . . . .	43	Genus <b>32. Pterophanes</b> . . . . .	66
1. Lafresnaya flavicaudata . . . . .	44	1. Pterophanes temminckii . . . . .	66
2. Lafresnaya gayi . . . . .	44	Genus <b>33. Patagona</b> . . . . .	67
Genus <b>19. Chalybura</b> . . . . .	45	1. Patagona gigas . . . . .	67
1. Chalybura buffoni . . . . .	45	Genus <b>34. Docimastes</b> . . . . .	68
2. *Chalybura urochrysea . . . . .	46	1. Docimastes ensiferus . . . . .	68
3. Chalybura isauræ . . . . .	46	Genus <b>35. Diphlogæna</b> . . . . .	69
4. Chalyburá melanorrhœa . . . . .	47	1. Diphlogæna iris . . . . .	69
5. Chalybura cæruleiventris . . . . .	47	2. Diphlogæna hesperus . . . . .	70
Genus <b>20. Florisuga</b> . . . . .	47	Genus <b>36. Helianthea</b> . . . . .	70
1. Florisuga mellivora . . . . .	48	1. Helianthea isaacsoni . . . . .	71
2. Florisuga fusca . . . . .	48	2. Helianthea typica . . . . .	71
Genus <b>21. Petasophora</b> . . . . .	49	3. Helianthea bonapartii . . . . .	72
1. Petasophora anais . . . . .	50	4. Helianthea eos . . . . .	72
2. Petasophora thalassina . . . . .	51	5. Helianthea lutitiæ . . . . .	73
3. Petasophora cyanotis . . . . .	51	6. Helianthea violifera . . . . .	73
4. Petasophora corruscans . . . . .	51	7. Helianthea osculans . . . . .	73
5. Petasophora rubrigularis . . . . .	51	8. Helianthea dichroua . . . . .	74
6. Petasophora serrirostris . . . . .	52	Genus <b>37. Bourcieria</b> . . . . .	74
7. Petasophora delphinæ . . . . .	52	1. Bourcieria inca . . . . .	75
Genus <b>22. Panoplites</b> . . . . .	53	2. Bourcieria couradi . . . . .	76
1. Panoplites jardini . . . . .	53	3. Bourcieria insectivora . . . . .	76
2. Panoplites flavescens . . . . .	54	4. Bourcieria fulgidigula . . . . .	76
3. Panoplites mathewsi . . . . .	54	5. Bourcieria torquata . . . . .	77
Genus <b>23. Phæolæma</b> . . . . .	55	6. Bourcieria traviesi . . . . .	77
1. Phæolæma rubinoides . . . . .	55	7. Bourcieria wilsoni . . . . .	77
2. Phæolæma æquatorialis . . . . .	55	8. *Bourcieria purpurea . . . . .	78
Genus <b>24. Clytolæma</b> . . . . .	56	9. Bourcieria assimilis . . . . .	78
1. Clytolæma rubiuea . . . . .	56	10. Bourcieria prunelli . . . . .	78
2. Clytolæma aurescens . . . . .	57	11. Bourcieria cæligena . . . . .	79
Genus <b>25. Iolæma</b> . . . . .	57		
1. *Iolæma luminosa . . . . .	58		
2. Iolæma schreibersi . . . . .	58		

TABLE OF CONTENTS AND LIST OF SPECIES.

ix

	PAGE		PAGE
12. Bourcieria columbiana . . . . .	79	6. *Thalurania jelskii . . . . .	101
13. Bourcieria boliviana . . . . .	79	7. *Thalurania watertoni . . . . .	101
Genus <b>38. Hemistephania</b> . . . . .	80	8. Thalurania refulgens . . . . .	101
1. Hemistephania johannæ . . . . .	80	9. Thalurania eriphile . . . . .	101
2. Hemistephania ludovicæ . . . . .	81	10. Thalurania hypochlora . . . . .	102
3. Hemistephania rectirostris . . . . .	81	11. Thalurania bicolor . . . . .	102
4. Hemistephania euphrosinæ . . . . .	81	Genus <b>50. Mellisuga</b> . . . . .	103
5. Hemistephania veraguensis . . . . .	82	1. Mellisuga minima . . . . .	103
Genus <b>39. Floricola</b> . . . . .	82	Genus <b>51. Microchera</b> . . . . .	104
1. Floricola longirostris . . . . .	83	1. Microchera albocoronata . . . . .	104
2. Floricola albicrissa . . . . .	83	2. Microchera parvirostris . . . . .	104
3. Floricola constanti . . . . .	84	Genus <b>52. Trochilus</b> . . . . .	105
4. Floricola leocadiæ . . . . .	84	1. Trochilus colubris . . . . .	105
Genus <b>40. Lepidolarynx</b> . . . . .	84	2. Trochilus alexandri . . . . .	106
1. Lepidolarynx mesoleucus . . . . .	85	Genus <b>53. Calypte</b> . . . . .	106
Genus <b>41. Heliomaster</b> . . . . .	86	1. Calypte costæ . . . . .	107
1. Heliomaster furcifer . . . . .	86	2. Calypte annæ . . . . .	107
Genus <b>42. Heliotrypha</b> . . . . .	86	3. Calypte helenæ . . . . .	108
1. Heliotrypha viola . . . . .	87	Genus <b>54. Selasphorus</b> . . . . .	108
2. Heliotrypha exortis . . . . .	87	1. *Selasphorus floresii . . . . .	109
3. Heliotrypha micrastur . . . . .	88	2. Selasphorus platycercus . . . . .	109
4. Heliotrypha barrali . . . . .	88	3. Selasphorus ardens . . . . .	110
Genus <b>43. Heliangelus</b> . . . . .	89	4. Selasphorus flammula . . . . .	110
1. Heliangelus clarissæ . . . . .	89	5. Selasphorus rufus . . . . .	110
2. Heliangelus strophianus . . . . .	90	6. Selasphorus scintilla . . . . .	111
3. Heliangelus spencei . . . . .	90	7. Selasphorus henschawi . . . . .	111
4. Heliangelus amethysticollis . . . . .	90	8. Selasphorus torridus . . . . .	112
5. Heliangelus mavors . . . . .	91	Genus <b>55. Catharma</b> . . . . .	112
Genus <b>44. Urosticte</b> . . . . .	91	1. Catharma orthura . . . . .	112
1. Urosticte ruficrissa . . . . .	91	Genus <b>56. Atthis</b> . . . . .	113
2. Urosticte benjamini . . . . .	92	1. Atthis heloisæ . . . . .	113
Genus <b>45. Eustephanus</b> . . . . .	92	2. Atthis ellioti . . . . .	114
1. Eustephanus galeritus . . . . .	93	Genus <b>57. Stellula</b> . . . . .	114
2. Eustephanus fernandensis . . . . .	93	1. Stellula calliope . . . . .	115
3. Eustephanus leyboldi . . . . .	94	Genus <b>58. Rhodopis</b> . . . . .	115
Genus <b>46. Topaza</b> . . . . .	94	1. Rhodopis vesper . . . . .	115
1. Topaza pella . . . . .	95	2. *Rhodopis atacamensis . . . . .	116
2. Topaza pyra . . . . .	95	Genus <b>59. Heliactin</b> . . . . .	116
Genus <b>47. Aithurus</b> . . . . .	96	1. Heliactin cornuta . . . . .	116
1. Aithurus polytmus . . . . .	96	Genus <b>60. Calothorax</b> . . . . .	117
Genus <b>48. Hylonympha</b> . . . . .	97	1. Calothorax pulchra . . . . .	118
1. Hylonympha macrocerca . . . . .	97	2. Calothorax lucifer . . . . .	118
Genus <b>49. Thalurania</b> . . . . .	98	Genus <b>61. Acestrura</b> . . . . .	119
1. Thalurania glaucopis . . . . .	99	1. Acestrura mulsanti . . . . .	119
2. Thalurania columbica . . . . .	99	2. *Acestrura decorata . . . . .	119
3. Thalurania furcata . . . . .	99	3. Acestrura heliodori . . . . .	120
4. Thalurania furcatoides . . . . .	100	4. *Acestrura micrura . . . . .	120
5. Thalurania nigrofasciata . . . . .	100		

x TABLE OF CONTENTS AND LIST OF SPECIES.

	PAGE		PAGE
Genus <b>62. Chætocercus</b> . . . . .	120	Genus <b>74. Loddigesia</b> . . . . .	144
1. Chætocercus jourdani . . . . .	121	1. *Loddigesia mirabilis . . . . .	145
2. Chætocercus rosæ . . . . .	121	Genus <b>75. Lesbia</b> . . . . .	145
3. Chætocercus bombus . . . . .	122	1. Lesbia gouldi . . . . .	146
Genus <b>63. Thaumastura</b> . . . . .	122	2. Lesbia nuna . . . . .	147
1. Thaumastura cora . . . . .	123	3. Lesbia eucharis . . . . .	147
Genus <b>64. Doricha</b> . . . . .	123	4. Lesbia amaryllis . . . . .	148
1. Doricha enicura . . . . .	124	Genus <b>76. Zodalia</b> . . . . .	149
2. Doricha elizæ . . . . .	125	1. *Zodalia ortonii . . . . .	149
3. Doricha bryantæ . . . . .	125	2. *Zodalia glyceria . . . . .	150
4. Doricha evelynæ . . . . .	125	Genus <b>77. Cynanthus</b> . . . . .	150
5. Doricha lyrura . . . . .	126	1. Cynanthus forficatus . . . . .	151
Genus <b>65. Myrtis</b> . . . . .	126	2. Cynanthus mocoa . . . . .	152
1. Myrtis fanny . . . . .	127	Genus <b>78. Sappho</b> . . . . .	153
2. Myrtis yarelli . . . . .	127	1. Sappho sparganura . . . . .	154
Genus <b>66. Tilmatura</b> . . . . .	128	2. Sappho phaon . . . . .	154
1. Tilmatura duponti . . . . .	128	3. *Sappho caroli . . . . .	155
Genus <b>67. Smaragdochrysis</b> . . . . .	129	Genus <b>79. Oxypogon</b> . . . . .	155
1. Smaragdochrysis iridescens . . . . .	129	1. Oxypogon lindeni . . . . .	156
Genus <b>68. Ptochoptera</b> . . . . .	129	2. Oxypogon guerini . . . . .	156
1. *Ptochoptera iolæma . . . . .	130	Genus <b>80. Oreonympha</b> . . . . .	157
Genus <b>69. Calliphlox</b> . . . . .	130	1. Oreonympha nobilis . . . . .	157
1. Calliphlox amethystina . . . . .	130	Genus <b>81. Rhamphomicron</b> . . . . .	158
2. Calliphlox mitchelli . . . . .	131	1. Rhamphomicron olivaceus . . . . .	158
Genus <b>70. Lophornis</b> . . . . .	131	2. Rhamphomicron heteropogon . . . . .	158
1. Lophornis stictolophus . . . . .	133	3. Rhamphomicron herrani . . . . .	159
2. Lophornis delatirii . . . . .	133	4. Rhamphomicron stanleyi . . . . .	159
3. Lophornis regulus . . . . .	133	5. Rhamphomicron ruficeps . . . . .	160
4. Lophornis ornatus . . . . .	134	6. Rhamphomicron microrhynchum . . . . .	160
5. Lophornis gouldi . . . . .	134	Genus <b>82. Avocettinus</b> . . . . .	161
6. Lophornis magnificus . . . . .	135	1. Avocettinus eurypterus . . . . .	161
7. Lophornis helenæ . . . . .	135	Genus <b>83. Avocettula</b> . . . . .	162
8. Lophornis adorabilis . . . . .	135	1. Avocettula recurvirostris . . . . .	162
9. Lophornis verreauxi . . . . .	136	Genus <b>84. Metallura</b> . . . . .	163
10. Lophornis chalybea . . . . .	136	1. Metallura opaca . . . . .	163
Genus <b>71. Gouldia</b> . . . . .	137	2. Metallura jelski . . . . .	164
1. Gouldia popelairii . . . . .	138	3. *Metallura chloropogon . . . . .	164
2. Gouldia langsdorffi . . . . .	138	4. Metallura eupogon . . . . .	164
3. Gouldia conversi . . . . .	139	5. Metallura æneicauda . . . . .	165
4. Gouldia lætitia . . . . .	139	6. Metallura primolina . . . . .	165
Genus <b>72. Discura</b> . . . . .	140	7. Metallura williami . . . . .	165
1. Discura longicauda . . . . .	140	8. Metallura tyrianthina . . . . .	166
Genus <b>73. Steganura</b> . . . . .	141	9. Metallura smaragdinicollis . . . . .	166
1. Steganura underwoodi . . . . .	142	Genus <b>85. Chrysuronia</b> . . . . .	167
2. Steganura melanantha . . . . .	142	1. Chrysuronia humboldti . . . . .	168
3. Steganura solstitialis . . . . .	142	2. Chrysuronia ænone . . . . .	168
4. Steganura peruana . . . . .	143	3. Chrysuronia josephina . . . . .	169
5. Steganura addæ . . . . .	143	4. Chrysuronia eliciæ . . . . .	169
6. *Steganura cissiura . . . . .	144	5. Chrysuronia chrysur . . . . .	169

TABLE OF CONTENTS AND LIST OF SPECIES.

xi

	PAGE		PAGE
Genus <b>86. Augastes</b> . . . . .	170	12. <i>Eriocnemis chrySORama</i> . . . . .	193
1. <i>Augastes lumachellus</i> . . . . .	170	13. <i>Eriocnemis godini</i> . . . . .	193
2. <i>Augastes superbus</i> . . . . .	171	14. <i>Eriocnemis vestita</i> . . . . .	193
Genus <b>87. Phlogophilus</b> . . . . .	171	15. <i>Eriocnemis smaragdinipectus</i> . . . . .	194
1. <i>Phlogophilus hemileucus</i> . . . . .	172	16. <i>Eriocnemis nigrivestis</i> . . . . .	194
Genus <b>88. Schistes</b> . . . . .	172	17. <i>Eriocnemis dyselius</i> . . . . .	194
1. <i>Schistes personatus</i> . . . . .	173	Genus <b>99. Panterpe</b> . . . . .	195
2. <i>Schistes geoffroyi</i> . . . . .	173	1. <i>Panterpe insignis</i> . . . . .	195
Genus <b>89. Heliothrix</b> . . . . .	174	Genus <b>100. Uranomitra</b> . . . . .	195
1. <i>Heliothrix auritus</i> . . . . .	174	1. <i>Uranomitra quadricolor</i> . . . . .	196
2. <i>Heliothrix auriculatus</i> . . . . .	175	2. <i>Uranomitra violiceps</i> . . . . .	196
3. <i>Heliothrix barroti</i> . . . . .	175	3. <i>Uranomitra viridifrons</i> . . . . .	197
Genus <b>90. Chrysolampis</b> . . . . .	176	4. <i>Uranomitra cyanocephala</i> . . . . .	197
1. <i>Chrysolampis moschitus</i> . . . . .	176	5. <i>Uranomitra microrhyncha</i> . . . . .	197
Genus <b>91. Bellona</b> . . . . .	178	6. <i>Uranomitra franciæ</i> . . . . .	197
1. <i>Bellona cristata</i> . . . . .	178	7. * <i>Uranomitra cyanicollis</i> . . . . .	198
2. <i>Bellona exilis</i> . . . . .	179	Genus <b>101. Leucippus</b> . . . . .	198
Genus <b>92. Cephalolepis</b> . . . . .	179	1. <i>Leucippus chionogaster</i> . . . . .	199
1. <i>Cephalolepis delalandi</i> . . . . .	180	2. <i>Leucippus chlorocercus</i> . . . . .	199
2. <i>Cephalolepis loddigesi</i> . . . . .	180	Genus <b>102. Leucochloris</b> . . . . .	200
Genus <b>93. Adelomyia</b> . . . . .	181	1. <i>Leucochloris albicollis</i> . . . . .	200
1. <i>Adelomyia cervina</i> . . . . .	181	Genus <b>103. Agyrtria</b> . . . . .	201
2. <i>Adelomyia inornata</i> . . . . .	181	1. <i>Agyrtria niveipectus</i> . . . . .	202
3. <i>Adelomyia chlorospila</i> . . . . .	182	2. <i>Agyrtria leucogaster</i> . . . . .	202
4. <i>Adelomyia melanogenys</i> . . . . .	182	3. <i>Agyrtria viridiceps</i> . . . . .	203
Genus <b>94. Anthocephala</b> . . . . .	183	4. <i>Agyrtria milleri</i> . . . . .	203
1. * <i>Anthocephala floriceps</i> . . . . .	183	5. <i>Agyrtria candida</i> . . . . .	203
Genus <b>95. Abeillia</b> . . . . .	183	6. * <i>Agyrtria norrisii</i> . . . . .	204
1. <i>Abeillia typica</i> . . . . .	184	7. <i>Agyrtria brevisrostris</i> . . . . .	204
Genus <b>96. Klais</b> . . . . .	184	8. * <i>Agyrtria compsa</i> . . . . .	204
1. <i>Klais guimeti</i> . . . . .	184	9. * <i>Agyrtria neglecta</i> . . . . .	205
Genus <b>97. Aglæactis</b> . . . . .	185	10. <i>Agyrtria bartletti</i> . . . . .	205
1. <i>Aglæactis cupripennis</i> . . . . .	186	11. * <i>Agyrtria nitidifrons</i> . . . . .	205
2. <i>Aglæactis caumatonota</i> . . . . .	186	12. * <i>Agyrtria cæruleiceps</i> . . . . .	206
3. <i>Aglæactis castelnaudi</i> . . . . .	187	13. <i>Agyrtria tephrocephala</i> . . . . .	206
4. <i>Aglæactis pamela</i> . . . . .	187	14. <i>Agyrtria tobaci</i> . . . . .	206
Genus <b>98. Eriocnemis</b> . . . . .	188	15. <i>Agyrtria fluviatilis</i> . . . . .	207
1. <i>Eriocnemis derbiana</i> . . . . .	189	16. <i>Agyrtria apicalis</i> . . . . .	207
2. <i>Eriocnemis assimilis</i> . . . . .	189	17. * <i>Agyrtria maculicauda</i> . . . . .	207
3. <i>Eriocnemis aureliæ</i> . . . . .	190	18. * <i>Agyrtria luciæ</i> . . . . .	208
4. <i>Eriocnemis squamata</i> . . . . .	190	19. <i>Agyrtria nigricauda</i> . . . . .	208
5. <i>Eriocnemis lugens</i> . . . . .	190	20. <i>Agyrtria nitidicauda</i> . . . . .	208
6. <i>Eriocnemis alinæ</i> . . . . .	191	Genus <b>104. Arinia</b> . . . . .	209
7. <i>Eriocnemis mosquera</i> . . . . .	191	1. * <i>Arinia boucardi</i> . . . . .	209
8. * <i>Eriocnemis glaucopoides</i> . . . . .	191	Genus <b>105. Elvira</b> . . . . .	210
9. <i>Eriocnemis luciani</i> . . . . .	192	1. <i>Elvira cupreiceps</i> . . . . .	210
10. <i>Eriocnemis cupreiventris</i> . . . . .	192	2. <i>Elvira chionura</i> . . . . .	210
11. * <i>Eriocnemis sapphiropygia</i> . . . . .	193	Genus <b>106. Callipharus</b> . . . . .	211
		1. <i>Callipharus nigriventris</i> . . . . .	211
		Genus <b>107. Eupherusa</b> . . . . .	212
		1. <i>Eupherusa poliocerca</i> . . . . .	212

	PAGE		PAGE
2. <i>Eupherusa eximia</i> . . . . .	212	8. * <i>Eucephala chlorocephala</i> . . . . .	231
3. <i>Eupherusa egregia</i> . . . . .	213	9. * <i>Eucephala cyanogenys</i> . . . . .	231
<b>Genus 108. <i>Polytmus</i></b> . . . . .	213	<b>Genus 112. <i>Timolia</i></b> . . . . .	231
1. <i>Polytmus thaumantias</i> . . . . .	214	1. <i>Timolia lerchi</i> . . . . .	232
2. <i>Polytmus viridissimus</i> . . . . .	214	<b>Genus 113. <i>Juliamyia</i></b> . . . . .	232
3. <i>Polytmus leucorrhous</i> . . . . .	215	1. <i>Juliamyia typica</i> . . . . .	233
<b>Genus 109. <i>Amazilia</i></b> . . . . .	216	2. <i>Juliamyia felicianae</i> . . . . .	233
1. <i>Amazilia pristina</i> . . . . .	217	<b>Genus 114. <i>Damophila</i></b> . . . . .	233
2. <i>Amazilia leucophæa</i> . . . . .	218	1. <i>Damophila amabilis</i> . . . . .	234
3. <i>Amazilia alticola</i> . . . . .	218	<b>Genus 115. <i>Iache</i></b> . . . . .	234
4. <i>Amazilia dumerili</i> . . . . .	218	1. <i>Iache latirostris</i> . . . . .	235
5. <i>Amazilia cinnamomea</i> . . . . .	219	2. <i>Iache magica</i> . . . . .	235
6. * <i>Amazilia graysoni</i> . . . . .	219	3. <i>Iache doubledayi</i> . . . . .	235
7. <i>Amazilia yucatanensis</i> . . . . .	219	<b>Genus 116. <i>Hylocharis</i></b> . . . . .	236
8. <i>Amazilia fuscicaudata</i> . . . . .	220	1. <i>Hylocharis lactea</i> . . . . .	236
9. <i>Amazilia viridiventris</i> . . . . .	220	2. <i>Hylocharis sapphirina</i> . . . . .	236
10. * <i>Amazilia ocai</i> . . . . .	221	3. <i>Hylocharis cyanea</i> . . . . .	237
11. <i>Amazilia beryllina</i> . . . . .	221	<b>Genus 117. <i>Cyanophaia</i></b> . . . . .	237
12. <i>Amazilia edwardi</i> . . . . .	221	1. <i>Cyanophaia cæruleigularis</i> . . . . .	238
13. <i>Amazilia niveiventris</i> . . . . .	222	2. <i>Cyanophaia gondoti</i> . . . . .	239
14. <i>Amazilia mariæ</i> . . . . .	222	3. * <i>Cyanophaia lumiuosa</i> . . . . .	239
15. * <i>Amazilia cyanura</i> . . . . .	223	<b>Genus 118. <i>Sporadinus</i></b> . . . . .	240
16. * <i>Amazilia iodura</i> . . . . .	223	1. * <i>Sporadinus bracei</i> . . . . .	240
17. <i>Amazilia lucida</i> . . . . .	223	2. <i>Sporadinus elegans</i> . . . . .	241
18. <i>Amazilia erythronota</i> . . . . .	224	3. <i>Sporadinus riccordi</i> . . . . .	241
19. <i>Amazilia feliciæ</i> . . . . .	224	4. <i>Sporadinus maugæi</i> . . . . .	242
20. <i>Amazilia sophiæ</i> . . . . .	224	<b>Genus 119. <i>Chlorostilbon</i></b> . . . . .	242
21. <i>Amazilia warszewiczi</i> . . . . .	225	1. <i>Chlorostilbon auriceps</i> . . . . .	243
22. <i>Amazilia saucerottii</i> . . . . .	225	2. <i>Chlorostilbon caniveti</i> . . . . .	243
23. <i>Amazilia cyanifrons</i> . . . . .	225	3. <i>Chlorostilbon pucherani</i> . . . . .	244
24. * <i>Amazilia elegans</i> . . . . .	226	4. <i>Chlorostilbon splendidus</i> . . . . .	244
<b>Genus 110. <i>Basilinna</i></b> . . . . .	226	5. <i>Chlorostilbon haberlini</i> . . . . .	245
1. <i>Basilinna leucotis</i> . . . . .	227	6. <i>Chlorostilbon angustipennis</i> . . . . .	245
2. <i>Basilinna xanthusi</i> . . . . .	227	7. <i>Chlorostilbon atala</i> . . . . .	246
<b>Genus 111. <i>Eucephala</i></b> . . . . .	227	8. <i>Chlorostilbon prasinus</i> . . . . .	246
1. <i>Eucephala grayi</i> . . . . .	228	<b>Genus 120. <i>Panychlora</i></b> . . . . .	247
2. * <i>Eucephala smaragdo-cærulea</i> . . . . .	229	1. <i>Panychlora poortmani</i> . . . . .	247
3. * <i>Eucephala cæruleo-lavata</i> . . . . .	229	2. <i>Panychlora aliciaæ</i> . . . . .	248
4. * <i>Eucephala scapulata</i> . . . . .	229	3. * <i>Panychlora stenura</i> . . . . .	248
5. * <i>Eucephala hypocyanea</i> . . . . .	230		
6. <i>Eucephala subcærulea</i> . . . . .	230		
7. <i>Eucephala cærulea</i> . . . . .	230		



## CLASSIFICATION AND SYNOPSIS OF THE TROCHILIDÆ.

### Class AVES.

#### DIVISION PSILOPÆDES.

Young at birth, helpless, and up to the period of the growth of the feathers, entirely naked, the down being very slight, and not covering the skin. Incapable of feeding themselves, life is sustained by the introduction of food into the throat by means of the parents' bill. The nest is occupied until the birds are full grown.

#### Order MACROCHIRES.

Picarian birds, with the palate nearly œgithognathous;<sup>1</sup> possessing but one carotid artery, the sinistra; a nude oil-gland, and no cœca. The femoro-caudal, and ambiens muscles, are alone present; the flexor longus hallucis, independent of the flexor perforans digitorum; tensor patagii brevis, pterylosis, and sternum, characteristic. Second, third, and fourth toes directed forwards, the hallux backwards.

#### FAMILY TROCHILIDÆ.

Body small, sometimes minute, bill varying from feeble to rather stout, generally longer than the head (in one instance exceeding the entire length of the body), usually straight (in one case curved to the extent of a third of a circle), with the tomia inflected, and a short gape devoid of bristles. Nostrils basal, linear, covered by an operculum, sometimes hidden in frontal feathers. Tongue slender, capable of great extension (the cornua of the hyoid curving around and over the back of the skull), and consists of two minute parallel tubes. Wings narrow, pointed, falcate; the primaries (which are ten in number), stiff and long, the secondaries very short. The manus is very long and the humerus extremely short, enabling the wing to be moved with great rapidity. Sternum large with an extremely deep

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<sup>1</sup> Humming-birds and Goatsuckers are *Insessomial Schizognaths*. Parker, Trans. Linn. Soc., Vol. I. Zool., 2d ser. p. 100, 1876.

keel. Tail, always of ten feathers, various in shape and size, in some cases exceeding the body in length, in others so short as to be hardly perceptible; the rectrices varying from broad and even, to the shape of spines; tips sometimes spatulate. Tarsi short, either naked, moderately clothed, or completely hidden in tufts of downy feathers. Feet small, toes usually short, the claws curved, sharp, and rather large. Feet used for perching, not for progression, the wings being the instruments employed for almost every change of position. Plumage from plain, even sombre tints, to the most gorgeously brilliant metallic hues known among created things; the iridescent feathers, however, being, in the majority of instances, observable only in the males.<sup>1</sup>

I commence my arrangement of the Family with the genus EUTOXERES, which is an aberrant form, not especially allied to any of the known genera, the curious bills of the different species giving them a position apart from the rest of the Trochilidæ. They are large birds, with but little metallic coloring upon any part of their plumage.

#### Genus I.—EUTOXERES.

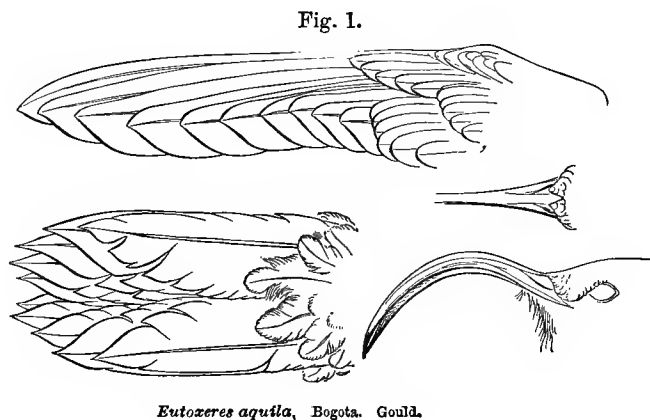
*Eutoxeres*, REICH., Syst. Av. Nat., t. xl (1849).  
*Myiætina*, BON., Rev. Mag. Zool. (1854), p. 249.

TYPE.  
*T. aquila*, Bourc.  
*T. aquila*, Bourc.

*Ch.* Bill greatly curved, forming nearly one-third of a circle; wide at base, narrowing suddenly and becoming compressed laterally; mandible entirely hidden in maxilla, except at the point. Cutting edges of bill, not serrated. Tail cuneate, feathers pointed. Feet large, tarsi bare. Sexes alike in plumage.

*Range.* Costa Rica, Veragua, Columbia, Ecuador.

Three species are here recognized.



#### Key to the species.

- |   |                          |
|---|--------------------------|
| A. Striæ on feathers of the throat and breast buffy-white, on abdomen pure white. | 1. <i>E. aquila</i> .    |
| B. Striæ on lower parts light buff.   | 2. <i>E. heterura</i> .  |
| C. Tail, with lateral rectrices deep buff.  | 3. <i>E. condamini</i> . |

These birds are remarkable for their greatly curved bills. The plumage is generally sombre, and nearly devoid of metallic hues.

<sup>1</sup> See Appendix, p. 249, for Key to the Genera.

**1. Eutoxeres aquila.**

*Trochilus aquila*, BOURC., Proc. Zool. Soc. (1847), p. 42.

*Eutoxeres aquila*, REICH., Syst. Av. Nat., t. xl (1849).—ID., Aufz. der Colib., p. 15 (1853).—ID., Troch. Enumer., p. 12 (1855).—GOULD, Mon. Troch., vol. i, p. 111.—ID., Intr. Troch., octavo ed., p. 36.—CAB. and HEIN., Mus. Hein. Th., iii, p. 3 (note) (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 27.

*Polytmus aquila*, GRAY, Gen. B., vol. i, p. 108, sp. 39 (1844-49).

*Myiætina aquila*, BON., Rev. and Mag. Zool. (1854) p. 249.

*Eutoxeres salvini*, GOULD, Ann. Mag. Nat. Hist., 4th ser., vol. i, p. 458 (1868), ex Veragua.

*Hab.* Costa Rica (eastern side), Veragua, Columbia.

*Adult.* Top of head and occiput brownish-black, feathers tipped slightly with buff. Upper parts dark shining green; wings purple; under parts brownish-black, striated with buffy-white on the throat and breast, pure white on abdomen and flanks. Median rectrices shining dark green tipped with white. Lateral ones dark green on outer webs, brownish-green on inner, and broadly tipped with white. Maxilla black; mandible flesh-color. Total length,  $5\frac{5}{16}$  in. Wing, 3 in. Tail,  $2\frac{3}{16}$  in. Culmen,  $1\frac{3}{16}$  in.

I cannot perceive that the difference of coloration pointed out by Mr. Gould is of sufficient importance to separate the Veraguan birds specifically from those of Columbia, and have therefore placed the *E. salvini* as a synonym of *E. aquila*.

**2. Eutoxeres heterura.**

*Eutoxeres heterura*, GOULD, Ann. Mag. Nat. Hist., 4th ser., vol. i, p. 455 (1868).

*Hab.* Ecuador.

Exactly like the preceding, *E. aquila*, except that the striæ upon the feathers of the under parts are bright buff. This difference is apparently constant. Dimensions the same.

**3. Eutoxeres condamini.**

*Trochilus condamini*, BOURC., Compt. Rend., tom. 32, p. 186 (1851).—ID., Rev. and Mag. Zool. (1851), p. 186.

*Myiætina condamini*, BON., Rev. and Mag. Zool. (1854), p. 249.

*Eutoxeres condamini*, GOULD, Mon. Troch., vol. i, pl. 4.—ID., Intr. Mon. Troch., octavo ed., p. 37.—REICH., Aufz. der Col., p. 15 (1853).—ID., Troch. Enumer., p. 12 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 3 (note 2), (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 29.

*Hab.* Ecuador.

Easily distinguished from the other two species of the genus, by the coloring of the rectrices. The median ones are dark shining green, tipped with white; next on either side, blackish-brown tipped with white, remainder deep buff, graduating into white at the tips. Total length,  $6\frac{5}{16}$  in. Wing, 3 in. Tail,  $2\frac{3}{16}$  in. Culmen,  $1\frac{5}{16}$  in. Description taken from the type in my collection.

## Genus II.—RHAMPHODON.

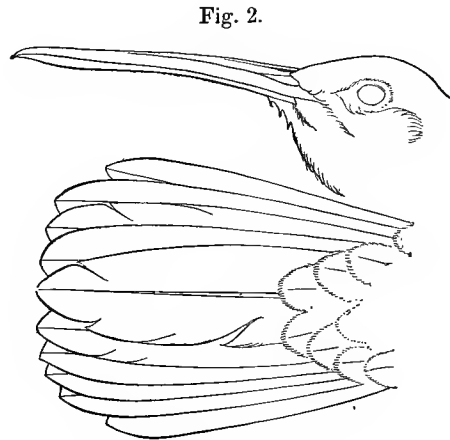
*Grypus*, SPIX. (nec Germ., 1817, Coleop.), Av. Spec. Nov. (1824), p. 79.  
*Rhamphodon*, LESS., Ind. Gen. Ois. du Genre. Troch. (1832), p. viii.

TYPE.  
*T. nœvius*, Dumont.  
*T. nœvius*, Dumont.

*Ch.* Bill nearly twice the length of the head, curved; edges of mandibles in the male serrated near the tip which is hooked: culmen compressed at base. Mandible of female curving slightly upwards near the tip, leaving an open space between it and the maxilla at this part. Tail slightly rounded. Wings long and ample. Size large. Sexes alike in plumage.

*Range.* Southern Brazil.

The term *Grypus*, bestowed upon the *T. nœvius*, Dumont, having been employed seven years previously for a genus of Coleoptera, cannot be again used here, and therefore, RHAMPHODON of Lesson is the one to be adopted. The species, included in the present genus and in the one following, are closely allied. They are large birds, with bills strongly serrated near the tips, and have but little metallic coloring. Indeed RHAMPHODON does not possess any.



*Rhamphodon nœvius*. 24787. Brazil.

1. *Rhamphodon nœvius*.

*Trochilus nœvius*, DUMONT, Dict. Sc. Nat., tom. xvii, p. 432.

*Grypus ruficollis*, SPIX., Av. Bras., vol. i, p. 79, tab. 80, fig. 3 (1824).

*Rhamphodon maculatum*, LESS., Colib., p. 18, t. i (1831).—ID., Ind. Gen. Ois. du Genre. Troch. p. viii (1831).

*Rhamphodon nœvius*, REICH., Aufz. der Colib., p. 15 (1853).—ID., Troch. Enum., p. 12 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 3 (1860).

*Grypus nœvius*, GOULD, Mon. Troch., vol. i, pl. 1.—ID., Intr. Troch., octavo ed., p. 35 (1861).—GRAY, Gen. B., vol. i, p. 105.—BON., Consp. Av., vol. i, p. 147 (1850).—ID., Rev. and Mag. Zool. (1854), p. 249.

*Hab.* Southeastern Brazil.

*Male.* Top of head dark brown, superciliary stripe buff; ear-coverts and lores blackish-brown. Upper surface greenish-brown, each feather margined with light brown. Wings purple. Chin and a line down the centre of the throat black, each feather margined with pale buff. Sides of throat reddish-buff. Under parts black, the feathers on the upper part of the breast conspicuously edged with white; abdomen and flanks blackish-brown, feathers edged with buff. Under tail-coverts buff, streaked with dark brown in the centre. Median rectrices reddish-bronze darkest at the tip, next also bronze tipped with buff, which runs in an oblique direction, is most extensive on the outer webs, and occupies the half of the outermost feather. Total length, 6 in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{1}{2}$  in. Culmen,  $1\frac{7}{16}$  in.

There is no difference in the plumage of the sexes, but the female has a more slender bill, without hook or serrations.

## Genus III.—ANDRODON.

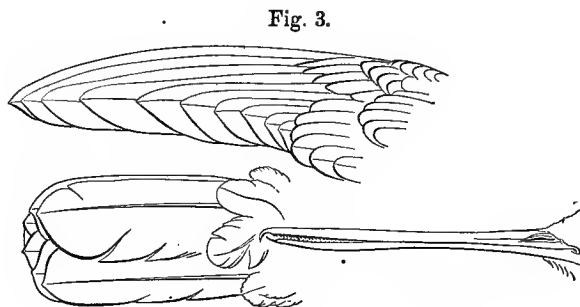
*Androdon*, GOULD, Ann. Mag. Nat. Hist. 3d ser. (1863), p. 247.

TYPE.

*A. æquatorialis*, Gould.

*Ch.* Bill twice as long as head, straight, broad at base, tapering to a point. Cutting edges serrated, tip hooked. Wings long, reaching nearly to the end of the tail, which is rather short, broad, and rounded. Feet moderate; tarsi naked. Size large.

*Range.* Ecuador.



*Androdon æquatorialis* ♂ Ecuador. J. Gould, type.

*Ecuadorian* ...

1. *Androdon æquatorialis*.

*Androdon æquatorialis*, GOULD, Ann. Mag. Nat. Hist. 3d ser. (1863), p. 247.

*Grypus æquatorialis*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 32, pl. —.

*Hab.* Ecuador.

*Male.* Bill long, straight, hooked at point, serrated on the edges of both maxilla and mandible. Forehead dark gray, feathers tipped with metallic grass-green; occiput and nape metallic dark blue. Back, bright metallic light grass-green. Rump white, a few dark blue feathers on the edge of the green of the back. Under parts white, edges of feathers blackish-brown. Under tail coverts olive-green, central part and tips of feathers white. Wings dark purple. Tail, median feathers greenish-gray, tipped with dark green; lateral feathers greenish-gray, with a subterminal bar of dark green, tips white. Maxilla black, mandible flesh-color. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $1\frac{3}{4}$  in.

The female differs in the coloration of the head, which has the forehead dark purplish-brown, top of head bronze, occiput dark metallic green.

The genus GLAUCIS naturally follows ANDRODON. The species comprised in it are birds of moderate size, and of plain plumage. I have placed in it some species heretofore separated under the term THRENETES, as, with the exception of color, by which, indeed, they themselves were not at all assimilated (witness *antonice* and *leucurus*), they do not possess, so far as I can see, any characters to give them a distinctive generic rank.

## Genus IV.—GLAUCIS.

*Glaucis*, BOIE, Isis (1831), p. 545.

*Threnetes*, GOULD, Intr. Troch., octavo ed. (1861), p. 40.

*Dnophora*, HEINE, Journ. für Ornith. (1863), p. 175.

TYPE.

*T. hirsutus*, Gmel.

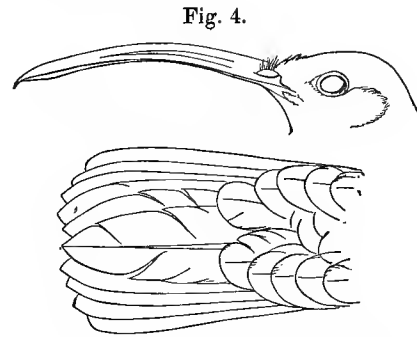
*T. leucurus*, Linn.

*T. antonice*, Bourc. and Muls.

*Ch.* Bill long, much curved, stout, high at base. Wings long, narrow. Tail moderate, rounded, feathers pointed in young. Sexes alike in plumage.

*Range.* Central America, Venezuela, Guiana, Brazil, Columbia, and Ecuador.

Six species belong to this genus, according to my views.



*Glaucis hirsutus.* Merida, Venezuela. Goering.

A. Under parts buff.

- a. Tail chestnut, with a subterminal black bar, tips white. Median rectrices shining green, tip white.  
 b. Tail reddish-bronze, tip whitish.

1. *G. hirsuta.*

2. *G. dorhni.*

B. Throat black.

- a. Tail green with light edges.  
 b. Tail with central feathers green, tips white, lateral ones white margined more or less with blackish-brown.  
 c. Tail, median feathers green, rest buff margined with blackish-brown on the outer ones.  
 d. Tail, median feathers dark green, lateral ones pure white, with a very broad subterminal black band.

3. *G. antoniæ.*

4. *G. leucurus.*

5. *G. cervinicauda.*

6. *G. ruckeri.*

## 1. *Glaucis hirsuta.*

*Trochilus hirsutus*, GMEL., Syst. Nat., tom. i, p. 490 (1788).

*Trochilus brasiliensis*, LATH., Ind. Orn., vol. i, p. 308, sp. 23 (1790).

*Trochilus ferrugineus*, WIED., Beitr., vol. iv., p. 120, sp. 21.

*Trochilus mazeppa*, LESS., Troch., p. 18, pl. 3 (1831).

*Trochilus superciliosus*, LESS., Colib., t. 6, ♀? (1831).

*Glaucis hirsuta*, BOIE, Isis (1831), p. 545.—REICH., Aufz. der Colib. (1853), p. 15.—ID., Troch. Enum. (1855), p. 12.—BON., Rev. and Mag. Zool. (1854), p. 249.—CAB. and HEIN., Mus. Hein. Th., iii, p. 4 (1860).—GOULD, Mon. Troch., vol. i, pl. 5.—ID., Intr. Troch., octavo ed., p. 38 (1861).—SALV. and ELLIOT, Ibis (1873), p. 276.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 39.

*Trochilus dominicus*, LICHT. (nec LINN.), Doublt., p. 10, sp. 110.

*Polytmus hirsutus*, GRAY, Gen. B., vol. i, p. 108, sp. 83 (1844-49).

*Glaucis mazeppa*, GOULD, Mon. Troch., vol. i, pl. 6.—ID., Intr. Troch., octavo ed., p. 38.—REICH., Aufz. der Colib., p. 15.—ID., Troch. Enum., p. 12.—BON., Rev. and Mag. Zool. (1854), p. 249.

*Glaucis melanura*, GOULD, P. Z. S. (1860), p. 364.—ID., Mon. Troch., vol. i, pl. 9.—ID., Intr. Troch., octavo ed., p. 39 (1861).

*Glaucis lanceolata*, GOULD, Mon. Troch., vol. i, pl. 8.—ID., Intr. Troch., octavo ed., p. 39.

*Glaucis aenea*, LAWR., Proc. Acad. Nat. Sc., Phil. (1867), p. 232.

*Hab.* Costa Rica to Rio de Janeiro, along the eastern coast of South America. Islands of Tobago and Trinidad.

*Adult.* Entire upper surface and sides of the neck, shining green, suffused with dark brown on the head. Wings purplish-brown; under surface varying from chestnut-red to buff. Tail rounded; median rectrices shining green tipped with white. Bill, maxilla black, mandible flesh-color. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $1\frac{1}{8}$  in.

The young birds have the tail feathers sharply pointed, and the black subterminal

bar is very conspicuous, but as they grow older the rectrices lose their pointed tips, and become more and more rounded, and the black bar grows narrower, sometimes becoming obsolete.

*Bonin's Hummingbird*

## 2. \**Glaucis dorhni*.

*Trochilus dorhni*, BOURC., Ann. Soc. Sci., Lyon (1852), ♀.

*Grypus spixi*, GOULD, P. Z. S. (1860), p. 304.—ID., Mon. Troch., pl. 2, vol. i.—ID., Intr. Mon. Troch. p. 35, ♂.

*Glaucis dorhni*, GOULD, Mon. Troch., vol. i, pl. 1.—ID., Intr. Mon. Troch., octavo ed., p. 39, ♀?—SALV. and ELLIOT, Ibis (1873), p. 276.—REICH., Aufz. der Colib., p. 15 (1853).—ID., Troch. Enum., p. 12 (1855).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 44.—CAB. and HEIN., Mus. Hein. Th., iii, p. 4 (note 2).—BON., Rev. and Mag. Zool. (1854), p. 249.

*Hab.* Brazil.

I place this species in the present genus, because the bill does not appear to have the peculiar hook, characteristic of *Rhamphodon*, nor do the mandibles possess more serration on their edges than is perceived in the majority of humming-birds. See our remarks in the Ibis, 1873, p. 276. This bird is easily distinguished by the colouring of the tail; it resembles the *G. hirsuta*, but has all the rectrices reddish-bronze, the females tipped with white, most extensive on the outermost feather. Total length,  $4\frac{7}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $1\frac{1}{2}$  in.

## 3. *Glaucis antoniae*.

*Trochilus antoniae*, BOURC. and MULS., Ann. Soc. Agric., Lyon (1846), p. 329.

*Lampornis antoniae*, BON., Consp. Gen. Av., vol. i (1850), p. 72

*Aphantochroa antoniae*, REICH., Aufz. der Colib., p. 15 (1853).—ID., Troch. Enum., p. 12 (1855).

*Polytmus antoniae*, GRAY, Gen. Birds, vol. i, p. 108, sp. 37.

*Threnetes antoniae*, GOULD, Mon. Troch., vol. i, pl. 15.—ID., Intr. Troch., octavo ed., p. 40.—SALV. and ELLIOT, Ibis (1873), p. 278.

*Dnophera antoniae*, HEINE, Journ. für Ornith. (1863), p. 175.

*Glaucis antoniae*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 46.

*Hab.* Cayenne.

Throat black, sometimes a light band across the upper part of breast, entire rest of plumage very dark greenish-bronze, in some specimens almost black. Central rectrices shining dark green; lateral ones purplish-brown glossed with green. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{2}{3}$  in. Culmen, 1 in.

## 4. *Glaucis leucurus*.

*Trochilus leucurus*, LINN., Syst. Nat. (1766), vol. i, p. 190.—GMEL., Syst. Nat. (1788), vol. i, p. 487.—D'ORB, and LAFRES, Syn. Av. ii, p. 32, sp. 29 (1838).

*White-tailed Humming-bird*, LATH., Gen. Syn., vol. ii, p. 757.—ID., Gen. Hist. Birds, vol. iv, p. 308.

*Polytmus leucurus*, GRAY, Gen. Birds, vol. i, p. 108 (1844-49).

*Glaucis leucurus*, BON., Consp. Gen. Av., p. 67 (1850).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 49.

*Threnetes leucurus*, GOULD, Mon. Troch., vol. i, pl. 13.—ID., Intr. Troch., octavo ed., p. 40.—BON., Rev. and Mag. Zool. (1854), p. 249.—REICH., Aufz. der Colib., p. 15 (1853).—ID., Troch. Enum., p. 12 (1855).—SALV. and ELLIOT, Ibis (1873), p. 277.—ELLIOT, Ibis (1877), p. 142.

*Hab.* Surinam.

Upper surface and median rectrices shining green. Wings purple, lateral feathers white, margined and stained more or less with dark brown, most extensive on the

outermost feather. Lores and auriculars brown. Chin and throat black, bordered on each side by a line of white. A band of reddish-buff crosses the lower part of the throat. Breast and flanks shining green, abdomen grayish-buff. Under tail coverts olive-green margined narrowly with buff. Maxilla black, mandible flesh-color, tip black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen, 1 in.

### 5. *Glaucis cervinicauda*.

*Threnetes cervinicauda*, GOULD, P. Z. S. (1854), p. 109.—ID., Mon. Troch., vol. i, pl. 14.—ID., Intr. Troch. octavo ed., p. 40.—SALV. and ELLIOT, Ibis (1873), p. 278.

*Hab.* Upper Amazon, Ecuador, Columbia.

This species is almost precisely the same as the preceding, and it is rather difficult to tell them apart. The chief and only difference is that the tail of this bird is buff, where the other is white, but I have specimens from Surinam of *G. leucurus*, which also have buff on the rectrices. I think that with a sufficiently large series of specimens to enable a satisfactory opinion to be formed, it will be found that individuals of the two species, as usually considered, are in reality but representatives of a single one, with a wide dispersion. Total length, 5 in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $1\frac{1}{4}$  in.

### 6. *Glaucis ruckeri*.

*Trochilus ruckeri*, BOURC., P. Z. S. (1847), p. 46.

*Polytmus ruckeri*, GRAY, Gen. Birds, vol. i, p. 108.

*Threnetes ruckeri*, REICH., Aufz. Colib., p. 15.—ID., Troch. Enum., p. 12.—BON., Rev. and Mag. Zool. (1854), p. 249.

*Glaucis ruckeri*, GOULD, Mon. Troch., vol. i, pl. 11.—ID., Intr. Troch., octavo ed., p. 40.—CAB. and HEIN., Mus. Hein. Th., iii, p. 4 (note 3) (1860).—SALV. and ELLIOT, Ibis (1873), p. 278.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 47.

*Glaucis fraseri*, GOULD, Mon. Troch., vol. i, pl. 12.—ID., Intr. Troch., octavo ed., p. 40 (1861).

*Hab.* Central America, Ecuador.

Upper parts shining green, brown on the head; upper tail feathers margined with buff. Wings purple. Chin and upper part of throat blackish-brown; lower part bright rufous, a buffy stripe behind the eye, another below. Lores and ear-coverts black. Under surface brownish-gray; under tail coverts bronzy-green. Median rectrices shining green tipped with white, remainder white, with a very broad subterminal black bar. Maxilla black, mandible flesh-color, tip black. Total length,  $4\frac{1}{2}$  in. Wing,  $1\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $1\frac{1}{8}$  in. Some examples are bright bronze-green above, and they seem to vary in color on the upper parts as is observed among specimens of *G. hirsuta*.

## Genus V.—DOLEROMYA.

*Doleromya*, BON., Rev. and Mag. Zool. (1854), p. 249.

*Dolerisca*, CAB. and HEIN., Mus. Hein. (1860), Th., iii, p. 6.

TYPE.

*T. fallax*, Bourc.

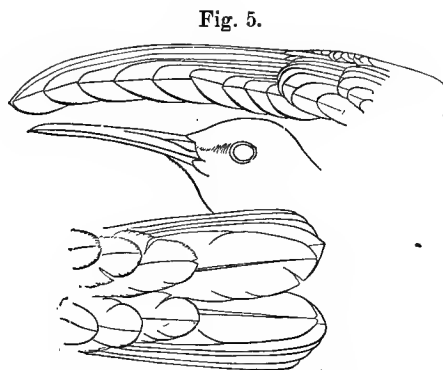
*T. fallax*, Bourc.



*Ch.* Bill longer than the head, straight, broad, and flat at base. Wings long, primaries rather broad, the first slightly pointed. Tail even, feathers rather broad and slightly pointed. Feet large, tarsi partly feathered. Sexes alike.

*Range.* Venezuela.

One species is known.



*Doleromyia fallax.* Venezuela. Verreaux.

### 1. *Doleromyia fallax.*

*Trochilus fallax*, BOURC., Rev. Zool. (1843), p. 103.

*Trochilus (Lampornis) fulviventris*, GOULD, P. Z. S. (1846), p. 88.

*Polytmus fallax*, GRAY, Gen. B., vol. i, p. 108, sp. 55.

*Leucippus fallax*, BON., Consp. Gen. Av., p. 73, sp. 1 (1850).—REICH., Anz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 8, pl. 783, figs. 4820–21 (1855).—GOULD, Mon. Troch., vol. ii, pl. 56.—ID., Intr. Troch., octavo ed., p. 56 (1861).

*Doleromyia fallax*, BON., Rev. and Mag. Zool. (1854), p. 249.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 206.

*Dolerisca fallax*, CAB. and HEIN., Mus. Hein., Th., iii (1860).—SCLAT. and SALV., Nomencl., p. 79 (1873).

*Dolerisca cervina*, GOULD, Intr. Troch., octavo ed., p. 56 (1861).

*Hab.* Venezuela.

*Adult.* Top of head olive-brown tinged with green; upper surface light green; four central tail feathers bronzy-green; lateral ones bronze-green at base, passing into black, and largely tipped with white, most extensive on external feathers. Throat, breast, abdomen, and flanks reddish-buff. Under tail-coverts white. Wings purplish-brown. Maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{3}{16}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{8}$  in.

### Genus VI.—PHÆOPTILA.

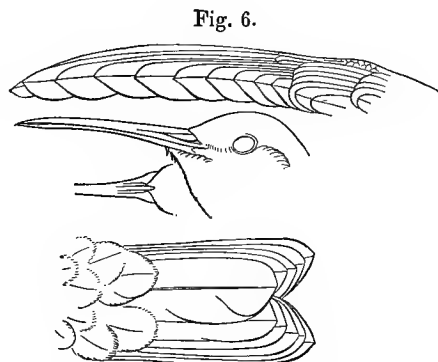
*Phæoptila*, GOULD, Intr. Mon. Troch., octavo ed., p. 169 (1861).

TYPE.  
*C.?* *sordida*.

*Ch.* “Bill longer than the head, fleshy at the base and slightly arched; wings of medium length; tail the same, and slightly forked; feet rather stout; hind toe and nail shorter than the middle toe and nail.” (Gould, loc. cit.)

*Range.* Mexico.

But one species is known, which I consider should follow *DOLEROMYA*, as being far more naturally its position than when placed next to *LACHE*, where it has usually been left, and with which genus I cannot perceive that it has anything in common.



*Phæoptila sordida.* Oaxaca. Gould.

### 1. *Phæoptila sordida*.

*Cyanomyia*? *sordida*, GOULD, Ann. Mag. Nat. Hist. (1859), p. 97, vol. iv, ♂.

*Uranomytra sordida*, CAB. and HEIN., Mus. Hein. Th., iii, p. 41 (note) (1860).

*Phæoptila sordida*, GOULD, Mon. Troch., vol. v, pl. 340.—ID., Intr. Troch., octavo ed., p. 169.

*Phæoptila zonura*, GOULD, Intr. Troch., octavo ed., p. 170, ♀ (1861).

*Doleromya sordida*, MULS., Hist. Ois. Mouch., tom. i, p. 207.

*Hab.* Mexico (Oaxaca).

*Male.* Upper surface bronzy-green, brown on top of the head, under parts dark grayish-brown. Ear-coverts blackish-brown. Vent white. Tail bronzy olive-green. Wings pale purplish-brown. A white spot behind the eye. Bill flesh-color, tip black. Feet black. Total length,  $4\frac{3}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{8}$  in.

*Female.* Differs in being lighter beneath, and in having a subterminal blackish-brown band on the lateral rectrices, which are also tipped with grayish-white. Dimensions the same as the male.

One of the most extensive of the genera of Humming-birds is now reached: viz. PHÆTHORNIS, comprising no less than twenty-two species. The majority are plainly attired, without any metallic coloring, and all are chiefly remarkable for their peculiarly shaped tails, the middle feathers of which extend beyond the rest, and are always longest in the females. I have included in this genus those birds usually separated under the term PYGMORNIS, as I do not find that they really possess any characters to entitle them to a distinct generic rank, and it is impossible to ascertain where PHÆTHORNIS ends and PYGMORNIS begins. All the species are closely related and form one natural group.

### Genus VII.—PHÆTHORNIS.

*Phæthornis*, SWAINS, Zool. Journ. (1827), p. 357.

*Phræthornis*, BOIE, Isis (1831) p. 548.

*Phæthornis*, LESS., Ind. Gen. and Syn. Genr. Troch. (1832), p. xiv.

*Ptyonornis*, REICH, Aufz. der Colib., p. 14 (1853).

*Eremita*, REICH., Aufz. der Colib., p. 14 (1853).

*Ametrornis*, REICH., Aufz. der Colib., p. 14 (1853).

*Orthornis*, BON., Rev. and Mag. Zool. (1854), p. 249.

*Guyornis*, BON., Rev. and Mag. Zool. (1854), p. 249.

*Pygmornis*, BON., Rev. and Mag. Zool. (1854), p. 250.

*Toxateuches*, CAB. and HEIN., Mus. Hein. (1860), Th., iii, p. 11.

*Mesophila*, MULS. and VERR., Class. Troch. (1865), p. 17.

*Momus*, MULS. and VERR., Class. Troch. (1865), p. 19.

*Pygornis*, MULS. and VERR., Class. Troch. (1865), p. 18.

*Anisoterus*, MULS., Hist. Nat. Ois. Mouch. (1873), tom. i, p. 72.

*Milornis*, MULS., Hist. Nat. Ois. Mouch. (1873), tom. i, p. 77.

#### TYPE.

*T. superciliosus*, Linn.

*T. superciliosus*, Linn.

*T. superciliosus*, Linn.

*T. eurynome*, Less.

*T. pygmæus*, Spix.

*T. bourcierii*, Less.

*T. bourcierii*, Less.

*T. guyi*, Less.

*T. intermedius*, Less.

*T. guyi*, Less.

*T. yaruqui*, Bourc.

*T. idaliæ*, Bourc.

*T. strigularis*, Gould.

*T. pretrii*, Less.

*T. squalidus*, Temn.

*Ch.* Bill curved, sometimes straight, much longer than the head, slender, terminating in a sharp point. Median pair of rectrices prolonged far beyond the rest, this elongation greatest in the females and young. Tail cuneate, or rounded. Wings long and pointed. Feet rather small, tarsi bare. Sexes alike.

*Range.* Southern Mexico to and including Bolivia on the west coast of South America, and to the southern parts of Brazil on the east. Not found in the West Indies.

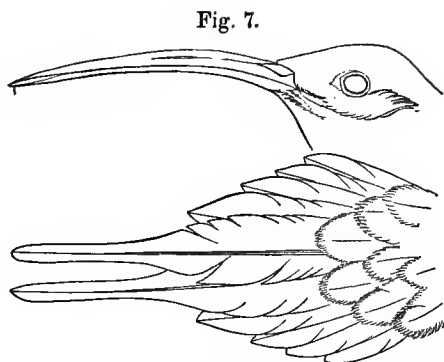


Fig. 7.

*Phæthornis superciliosus.* ♂. Conispata, Peru. Whitely.

Twenty-two species of this genus are here recognized. They have been separated into many genera by various authors, as the list above given will show, but according to my view, the species constitute only a single genus, composed of various groups, no one of which exhibits generic characters of sufficient importance to separate it from the rest.

*Key to the species.*

- |  |                               |
|--|-------------------------------|
| A. Bill nearly straight.   |                               |
| a. Pale buff beneath.  | 1. <i>P. bourcierii.</i>      |
| b. Deep rufous beneath.  | 2. <i>P. philippi.</i>        |
| B. Bill curved.  |                               |
| a. Dark gray or iridescent green beneath; adult males with the extremity of median rectrices reduced to a point. |                               |
| a'. Base of rectrices black.   | 3. <i>P. yaruqui.</i>         |
| b'. Rump and base of rectrices green.  | 4. <i>P. guyi.</i>            |
| c'. Rump and base of rectrices bluish-green.   | 5. <i>P. emiliae.</i>         |
| b. Gray or rufescent beneath.  |                               |
| a'. Rectrices next to median very long.  |                               |
| a''. Grayish-white beneath.  | 6. <i>P. augusti.</i>         |
| b''. Rufescent beneath.  | 7. <i>P. pretrii.</i>         |
| b'. Central rectrices far exceeding the rest in length.  |                               |
| a''. Species with median gular stripe.   |                               |
| a'''. Buff beneath.  |                               |
| 1. Rump narrowly edged with fulvous.   | 8. <i>P. superciliosus.</i>   |
| 2. Rump broadly edged with fulvous.  | 9. <i>P. longirostris.</i>    |
| b'''. Gray beneath.  |                               |
| 1. Rump banded with gray.  | 10. <i>P. hispidus.</i>       |
| c'''. Rufescent beneath.   |                               |
| 1. Upper tail-coverts clear rufous.  | 11. <i>P. syrmatorphorus.</i> |
| b''. Species with scale-like markings on the throat.   |                               |
| a'''. Whitish beneath.   | 12. <i>P. anthropilus.</i>    |
| b'''. Rufescent beneath.   |                               |
| 1. Large size.   | 13. <i>P. eurynome.</i>       |
| 2. Small size.   | 14. <i>P. squalidus.</i>      |
| c'. Central rectrices of females longer than the rest. Tail of male rounded.                                     |                               |
| a''. Rump rufescent or bright rufous.  |                               |
| a'''. Tail feathers very broad, central ones acute.  | 15. <i>P. longuemareus.</i>   |
| b'''. Tail feathers narrow.  | 16. <i>P. adolphi.</i>        |

- |      |   |     |                           |
|------|---|-----|---------------------------|
| c''' | Median tail feathers subterminally black.           | 17. | <i>P. griseigularis</i> . |
| d''' | Throat gray striated with black.                    | 18. | <i>P. striigularis</i> .  |
| b''  | Rump green, same color as the back.                 | 19. | <i>P. idaliæ</i> .        |
| c''  | With prominent pectoral band in the male.           |     |                           |
| a''' | Mandible basal half yellow.                         |     |                           |
|      | 1. Lateral rectrices bronzy-brown tipped with buff. | 20. | <i>P. pygmæus</i> .       |
|      | 2. Lateral rectrices black.                         | 21. | <i>P. episcopus</i> .     |
| b''' | Mandible three-fourths yellow.                      | 22. | <i>P. nigricinctus</i> .  |

The birds composing this group are moderate to almost minute in size, with usually slightly curved bills, and a plumage generally wanting in metallic hues. They are dwellers of the thick forests, apparently preferring dark and gloomy situations. The sexes are alike in plumage.

### 1. *Phaethornis bourcieri*.

- Trochilus bourcieri*, LESS., Trochil. (1832), p. 62, t. 18.—BON., Consp. Gen. Av., vol. i, p. 67 (1850).  
*Phaethornis bourcieri*, GRAY, Gen. Birds, vol. i, p. 104, sp. 9.—GOULD, Mon. Troch., vol. i, pl. 25.—ID., Intr. Troch., octavo ed., p. 43 (1861).—SALV. and ELLIOT, Ibis (1873), p. 13.  
*Ametrorornis abnormis*, REICH., Journ. für Ornith. (1853), p. 14.—PELZ., Orn. Bras., pp. 27, 56.—REICH., Aufz. der Colib., p. 14.—ID., Troch. Enum., p. 12.  
*Ametrorornis bourcieri*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 10 (1860).  
*Orthornis bourcieri*, BON., Rev. and Mag. Zool. (1854), p. 249.  
*Phaethornis bourcieri*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 85.—BON., Consp. Av., p. 67.

*Hab.* Pebas, Peru (Hauxwell), Marabitanas (Natt).

*Adult.* Upper surface bronze-green. Upper tail coverts tipped with buff, and have a subterminal bar of dark brown. Wings purple. Under surface grayish-buff. Tail bronze-green at base deepening to black towards the extremities and tipped with buff. The median rectrices elongated, with their ends pure white. Bill straight, maxilla black, mandible flesh-color, the point dark brown. Total length,  $5\frac{1}{4}$  in. Wing, 2 in. Tail,  $2\frac{1}{2}$  in. Culmen, 1 in.

### 2. *Phaethornis philippi*.

- Trochilus philippi*, BOURC., Ann. Sc., Lyon (1847), p. 623.—BON., Consp. Gen. Av., vol. i, p. 68.  
*Trochilus filippi*, BOURC., Rev. Zool. (1847), p. 401.  
*Phaethornis philippi*, GRAY, Gen. Birds, vol. i, p. 104, sp. 18.—GOULD, Mon. Troch., vol. i, pl. 21.—ID., Intr. Troch., octavo ed., p. 43.—SALV. and ELLIOT, Ibis (1873), p. 13.  
*Phaethornis philippi*, BON., Consp. Av., p. 68 (1850).  
*Orthornis defilippii*, BON., Rev. and Mag. Zool. (1854), p. 249.  
*Ametrorornis Defilippii*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).—CAB. and HEIN., Mus. Hein. Theil., iii, p. 10 (note) (1860).  
*Phaethornis defilippii*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 87.

*Hab.* Bolivia.

Head and back bronzy-green. Upper tail coverts shining green, with a subterminal dark brown bar, and largely tipped with dark rufous, this last color giving the predominant hue to this part. Wings purplish-brown. Entire under parts rich dark buff. Median rectrices have the base bronzy-green, graduating into

brownish-black, with their elongated tips white. Lateral feathers shining bronze-green, at base succeeded by a broad black bar, and tipped with rufous. Bill straight. Maxilla black, mandible flesh-color, tip brown. Total length,  $5\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $2\frac{3}{4}$  in. Culmen,  $1\frac{1}{4}$  in. Description taken from the unique type in my collection.

### 3. *Phæthornis yaruqui*.

*Trochilus yaruqui*, Bourc., Compt. Rend., tom. xxxii, p. 187 (1851).

*Phæthornis yaruqui*, GOULD, Mon. Troch., vol. i, pl. 27.—In, Intr. Troch., octavo ed., p. 44.—SALV. and ELLIOT, Ibis (1873), p. 11.—REICH. Aufz. der Colib., p. 14.—ID., Troch. Enum., p. 12.

*Phæthornis yaruqui*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 56.

*Guyornis yaruqui*, BON., Rev. and Mag. Zool. (1854), p. 249.

*Toxateuches yaruqui*, CAB. and HEIN., Mus. Hein. Th., iii, p. 11 (note) (1860).

*Hab.* Ecuador.

Top of head very dark brown. Entire body dark shining green. Superciliary stripe and one at base of mandible buff. Tail black, central feathers tipped with white. Young birds have these quite long, but they become shorter with age, until in the adult males, they are but little longer than the lateral feathers. The white portion also becomes less, until it is reduced to little more than a spot. Maxilla black, mandible flesh-color, tip black. The females apparently always retain their elongated median rectrices, which do not become shortened by age, and the under surface of the body is not of so dark a color as is observed in the males. Total length,  $5\frac{1}{2}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $1\frac{3}{4}$  in.

### 4. *Phæthornis guyi*.

*Trochilus guyi*, LESS., Hist. Troch., p. 119, t. 44 (1831).

*Phæthornis guyi*, GRAY, Gen. Birds, vol. i, p. 104, sp. 6.—BON., Consp. Gen. Av., vol. i, p. 67 (1850).—GOULD, Mon. Troch., vol. i, pl. 26.—ID., Intr. Troch., octavo ed., p. 44.—SALV. and ELLIOT, Ibis (1873), p. 12.

*Phæthornis guyi*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).

*Guyornis typus*, BON., Rev. and Mag. Zool. (1854), p. 249.

*Phæthornis guyi*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 58.

*Hab.* Trinidad, Venezuela, Eastern Peru.

Upper surface shining green. Wings purplish-brown. Upper tail coverts shining dark green, edged with white, and barred subterminally with black. Stripe above and behind the eye, another below it, and a third in the centre of the throat, dark buff. Auriculars and lores black. Under surface ash-gray; flanks glossed with green; abdomen buff. Tail shining green at base, remaining portion black tipped with white. Maxilla black, mandible flesh-color tipped with black. Total length, 6 in. Wing,  $2\frac{1}{2}$  in. Tail,  $2\frac{1}{2}$  in. Culmen,  $1\frac{5}{8}$  in.

### 5. *Phæthornis emiliæ*.

*Trochilus emiliæ*, BOURC., Ann. Soc. Sc., Lyon (1846), p. 317.

*Trochilus apicalis*, "LICHT.," CAB., Tsch. Fann. Per., p. 243 (1844).—HEIN., Journ. für Ornith. (1863) p. 177.

*Phæthornis emiliæ*, BON., Consp. Av., vol. i, p. 68 (1850).—ID., Rev. and Mag. Zool. (1854), p. 249.

*Phæthornis apicalis*, BON., Consp. Av., vol. i, p. 68 (1850).

*Phæthornis emiliæ*, GRAY, Gen. B, vol. i, p. 104, sp. 7.—REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).—GOULD, Intr. Troch., octavo ed., p. 44 (1861).—SALV. and ELLIOT, Ibis (1873), p. 12.

*Hab.* Costa Rica, Veragua, Columbia.

Precisely like the *P. guyi*, but the upper tail coverts and base of tail are blue instead of green. Dimensions the same.

### 6. *Phaethornis augusti*.

*Trochilus augusti*, BOURC., Ann. Sc. Phys. etc., Lyon (1847), vol. i, p. 623.

*Phaethornis augustæ*, BON., Consp. Gen. Av., vol. i, p. 68.

*Phaethornis augusti*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).—GOULD, Mon. Troch., vol. i, pl. 29.—BON., Rev. and Mag. Zool. (1854), p. 249.—GOULD, Intr. Troch., octavo ed., p. 45 (1861).—WYATT., Ibis (1871), p. 376.—SALV. and ELLIOT, Ibis (1873), p. 10.

*Phaethornis augusta*, GRAY, Gen. B., vol. i, p. 104.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 75.

*Hab.* Venezuela, Columbia (Wyatt).

Top of head dark brown; back grayish-bronze; upper tail coverts shining green in the centre of the feathers, broadly margined with red, this being the predominant color of this part of the body. Line above and behind the eye and one beneath, white. Under parts ashy-gray, feathers of the throat lighter and with a central mark of dark brown. Tail bronzy at base, succeeded by a black bar and tipped with white. Central feathers bronze graduating into white, which latter hue occupies fully a third of the feathers. Median pair longest, the rectrices on either side longer than the others, but not quite so elongated as the middle pair. Maxilla black, mandible flesh-color, tip black. Total length,  $6\frac{1}{2}$  in. Wing  $2\frac{1}{4}$  in. Tail  $3\frac{1}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

### 7. *Phaethornis pretrei*.

*Trochilus pretrei*, LESS. et DELATTE., Rev. Zool. (1839), p. 20.

*Trochilus superciliosus*, MAX., Beitr., vol. iv (1832), p. 116.

*Phaethornis pretrei*, GRAY, Gen. Birds, vol. i, p. 104, t. 35, sp. 16.—GOULD, Mon. Troch., vol. i, pl. 28.—REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).—BON., Rev. and Mag. Zool. (1854), p. 249.—SALV. and ELLIOT, Ibis (1873), p. 11.

*Phaethornis pretrei*, BON., Consp. Gen. Av., vol. i, p. 68 (1850).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 72.

*Phaethornis superciliosus*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 9.—GOULD, Intr. Troch., octavo ed., p. 45 (1861).

*Hab.* Brazil, Minas Geræs, Bahia.

Top of head dark brown, back bronze-green. Wings purple. Upper tail coverts rust-red. Auriculars blackish-brown. Superciliary stripe and one below the eye, buff. Throat light buff in the centre, rest of under parts deep buff. Median rectrices bronze-green, their elongated tips pure white. Next one on either side longer than the other lateral feathers, and like them is bronze-green at base, succeeded by a broad black band, and tipped with white. Maxilla black, mandible red, tipped with black. Total length, 6 in. Wing,  $2\frac{3}{8}$  in. Tail,  $2\frac{7}{8}$  in. Culmen,  $1\frac{1}{8}$  in.

### 8. *Phaethornis superciliosus*.

*Trochilus superciliosus*, LINN., Syst. Nat. (1766), tom. i, p. 189.—VIEILL., Ency. Meth., vol. ii, p. 549, sp. 5.—LESS., Hist. Nat. Colib., p. 35, pl. 6 (1831).—ID., Trait. Orn., p. 288 (1831).—D'ORB. and LAFRES. Syn. Av., ii, p. 32, sp. 27 (1838).

*Brin blanc*, MALE, VIEILL., Ois. Dor., tom. i, p. 37, pl. 17 (1802).

- Phæthornis superciliosus*, SWAIN, Class. B., vol. ii, p. 330 (1837).—GRAY, Gen. B., vol. i, p. 104.—REICH., Troch. Enum., p. 12 (1853).—ID., Aufz. der Colib., p. 14 (1855).—GOULD, Mon. Troch., vol. i, pl. 17.—SALV. and ELLIOT, Ibis (1873), p. 4.—ELLIOT, Ibis (1877), p. 141.
- Phæthornis malaris*, NORDEN., Erm. Reise. Alt., pl. 2 (1835).—GRAY, Gen. B., vol. i, p. 104, sp. 2.—BON., Consp. Av., vol. i, p. 67 (1850).—CAB. and HEIN., Mus. Hein. Th., iii, p. 9 (1860).—GOULD, Intr. Troch., octavo ed., p. 41, sp. 17 (1861).
- Phæthornis superciliosus*, BON., Consp. Av., p. 67 (1850).—ID., Rev. and Mag. Zool. (1854), p. 249.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 61.
- Phæthornis malaris*, BON., Consp. Av., p. 67 (1850).—ID., Rev. and Mag. Zool. (1854), p. 249.
- Phæthornis consobrinus*, "BOURC.," REICH., Aufz. der Colib., p. 17 (1853).—GOULD, Intr. Troch., octavo ed., p. 42.
- Phæthornis fraterculus*, GOULD, Mon. Troch., vol. i, pl. 18.—ID., Intr. Troch., octavo ed., p. 42 (1861).
- Phæthornis moorei*, LAWR., Ann. N. Y. Lyc. Nat. Hist., vol. vi, p. 258 (1858).

*Hab.* Guiana, Brazil, Columbia, Ecuador, and Peru.

The adult has top of head dark brown, sometimes glossed with dark green. Nape and back shining green or bronze; rump has all the feathers narrowly edged with rufous, with a subterminal bar of dark brown, and the remaining portion like those of the back. Tail shining green at base, succeeded by a jet black band and tipped with buff. Central pair of rectrices much longer than the rest, extend to a point, and are pure white for nearly their entire length beyond the lateral feathers. Occasionally some of the lateral rectrices are edged with white. Under parts dark gray on breast and throat, changing to buff on the abdomen and lower tail coverts. Some specimens have a median buff gular stripe, others have the entire throat blackish-brown. Stripe over the eye, and one from the maxilla going under the eye, buff. Bill black on the maxilla, flesh-color on the mandible. Total length, 6 in. Wing,  $2\frac{3}{8}$  in. Tail,  $2\frac{3}{4}$  in. Culmen,  $1\frac{3}{8}$  in.

The colors of the upper parts vary considerably, ranging from a dark green to almost a bronzy-red, and the shades on the under portion are also different in individuals, and this, without sufficient examples to show these variations, has been the main reason that so many specimens have been described as distinct, and the synonymy so greatly increased.

### 9. *Phæthornis longirostris*.

- Ornismya longirostris*, LESS. et DE LATRE, Echo du Monde Savant (1843), no. 45, p. 1070.
- Trochilus cephalus*, BOURC. et MULS., Rev. Zool. (1848), p. 269.
- Ptyonornis cephalus*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).
- Phæthornis cephalus*, BON., Rev. and Mag. Zool. (1854), p. 249.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 64.
- Phæthornis cassini*, LAWR., Ann. N. Y. Lyc. Nat. Hist., vol. viii, p. 347.
- Phæthornis cephalus*, GOULD, Mon. Troch., pl. 19.
- Phæthornis longirostris*, CAB. and HEIN., Mus. Hein. Th., iii, p. 9 (1860).—GOULD, Intr. Troch., p. 42.—SALV. and ELLIOT, Ibis (1873), p. 5.
- Phæthornis boliviana*, GOULD, Intr. Mon. Troch., octavo ed., p. 42.

*Hab.* Central America from Southern Mexico to the lower portion of the valley of the Magdalena, and western Ecuador.

This bird is hardly separable from the preceding. As a rule the buff edging on the feathers of the rump and lower back are rather clearer and more conspicuous, and the gular stripe is a brighter buff, without the tendency to assume the blackish-brown throat observed in some specimens of *superciliosus*. Otherwise in their general size and coloration the two forms are about the same.

**10. Phæthornis hispidus.**

- Trochilus hispidus*, GOULD, P. Z. S. (1846), p. 90.  
*Phæthornis hispidus*, GRAY, Gen. Birds, vol. i, p. 104, sp. 14 (1844-49).—GOULD, Mon. Troch., pl. 22.—ID.,  
 Intr. Troch., octavo ed., p. 43.—SALV. and ELLIOT, Ibis (1873), p. 7.  
*Trochilus oseryi*, BOURC. and MULS., Ann. Sc., Lyon, vol. iv (1852), p. 139.  
*Ptyonornis hispida*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).  
*Ametronis oseryi*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).  
*Phæthornis oseryi*, GOULD, Mon. Troch., vol. i, pl. 23.—ID., Intr. Troch., octavo ed., p. 43.  
*Orthornis oseryi*, BON., Rev. and Mag. Zool. (1854), p. 249.  
*Phæthornis hispidus*, BON., Rev. and Mag. Zool. (1854), p. 249.—ID., Consp. Av., p. 68.—MULS., Hist. Nat. Ois.  
 Mouch., tom. i, p. 70.  
*Phæthornis villosus*, LAWR., Ann. N. Y. Lyc. Nat. Hist., vol. vi, p. 259.

*Hab.* Columbia to Bolivia.

This species is distinguishable from all the others of the genus by being gray beneath. Top of head dark brown, back shining dark green shading into bronze-brown on the upper tail coverts. Above and below the eye is a line of buffy-white. A white line down the centre of the throat, rest of under surface brownish-gray. Wings purple. Tail dark green at base, then brownish-black, tipped with white; the median pair much longer than the rest. Maxilla black, mandible flesh-color, tip black. Total length,  $5\frac{1}{2}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $1\frac{3}{8}$  in.

**11. Phæthornis syrmatophorus.**

- Phæthornis syrmatophorus*, GOULD, Contr. Ornith. (1851), p. 139.—REICH., Aufz. der Colib., p. 14 (1853).—  
 ID., Troch. Enum., p. 12 (1855).—GOULD, Mon. Troch., pl. 20.—ID., Intr. Troch., octavo ed., p. 43 (1861).  
 —SALV. and ELLIOT, Ibis (1873), p. 8.  
*Phæthornis syrmatophorus*, BON., Rev. and Mag. Zool. (1854), p. 249.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 68.

*Hab.* Peru, environs of Quito. Pallatanga (Fraser).

Top of head brownish-black, feathers tipped with buff. Back metallic-green, edged with buff. Rump and upper tail coverts deep buff. A buffy-white line over the eye going to the neck. Auriculars blackish-brown. Chin white, bordered with a few blackish-brown feathers on either side. Entire under parts deep buff. Base of tail green, followed by a black bar, the lateral feathers tipped with dark buff, the median pair, which are greatly elongated, have their tips pure white. Wings purple. Maxilla black, mandible orange-red, tip black. Total length, 6 in. Wing,  $2\frac{7}{16}$  in. Tail,  $2\frac{3}{4}$  in. Culmen,  $1\frac{9}{16}$  in.

**12. Phæthornis anthophilus.**

- Trochilus anthophilus*, BOURC., Rev. Zool. (1843), p. 71.—BOURC. and MULS., Ann. Sc., Lyon (1843), p. 47.  
*Phæthornis anthophilus*, GRAY and MITCH., Gen. Birds, vol. i, p. 104, sp. 15.—GOULD, Mon. Troch., vol. i, pl.  
 24.—ID., Intr. Troch., octavo ed., p. 10 (1861).—SALV. and ELLIOT, Ibis (1873), p. 10.—CAB. and HEIN.,  
 Mus. Hein. Theil., iii, p. 8 (1860).—URICÆCHIA, Contr. a. las Cierce (1861), p. 7.—REICH., Troch. Enum.,  
 p. 12.—ID., Aufz. der Colib., p. 14.  
*Phæthornis anthophilus*, BON., Consp. Av., p. 68.—ID., Rev. and Mag. Zool. (1854), p. 249.—MULS., Hist. Nat.  
 Ois. Mouch., tom. i, p. 83.

*Hab.* Upper valley of the Magdalena. Tibacuy. Venezuela (Gøering).

Top of head dark brown, upper parts bronzy-green, upper tail coverts margined



with buff. Stripe over and behind the eye buffy-white; auriculars dark brown. Under parts grayish-white tinged with buff on abdomen and flanks. Feathers of chin and throat with a central streak of dark brown. Wings purplish-brown. Tail pale shining green, with a subterminal black bar, and tipped with an arrow-headed mark of white; central feathers having their prolonged tips all white. Maxilla black, mandible flesh-color, tip black. Total length,  $5\frac{3}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $1\frac{5}{8}$  in.

### 13. *Phæthornis eurynome*.

*Trochilus eurynome*, LESS., Troch., p. 91, t. 31 (1831).

*Phæthornis eurynome*, GRAY, Gen. Birds, vol. i, p. 104, sp. 5.—GOULD, Mon. Troch., vol. i, pl. 16.—ID., Intr.

Troch., octavo ed., p. 41.—CAB. and HEIN., Mus. Hein. Th., iii, p. 9, sp. 12 (1860).—SALV. and ELLIOT,

Ibis (1873), p. 8.—VON PELZ., Orn. Bras., p. 27.

*Phæthornis melanotis*, REICH., Troch. Enum., p. 12 (1855).

*Ptyornornis eurynome*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).

*Phæthornis eurynomus*, BON., Rev. and Mag. Zool. (1854), p. 249.—ID., Consp. Av., p. 69, vol. i (1850).

*Phæthornis eurynome*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 80.

*Hab.* Brazil, southern portion.

Top of head blackish-brown, each feather margined with bright rufous, nape nearly clear rufous in some specimens, in others like the top of head. Upper surface shining green, feathers edged with brown and rufous, giving this part a scaly appearance. A buff line above and behind the eye, and a broader one down the sides of the throat. Cheeks and ear coverts brownish-black. Throat brownish-black margined with buff. Breast grayish-brown, rest of under parts buff. Tail has the basal portion shining green, same color as the back, succeeded by black, and the tips edged with white in the form of an inverted V. Apical half of median rectrices, which are longer than the rest, white. Maxilla black. Mandible flesh-color, tip black. Total length,  $6\frac{1}{8}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $2\frac{7}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

### 14. *Phæthornis squalidus*.

*Trochilus squalidus*, TEMM., Pl. Col., 120, fig. 1 (1823), ex Natt. MS.

*Phæthornis leucophrys*, GRAY, Gen. Birds, vol. i, p. 104, sp. 10.—REICH., Aufz. der Colib., p. 14 (1853).

*Phæthornis brasiliensis*, GRAY (nec LATH.), Gen. Birds, vol. i, p. 104, sp. 10 (1844-49).

*Trochilus leucophrys*, "LICHT," NORDM., Reis. Att., p. 2, sp. 18.

*Phæthornis intermedius*, GOULD (nec LESS.), Mon. Troch., vol. i, pl. 30.

*Phæthornis squalidus*, BON., Rev. and Mag. Zool. (1854), p. 249.—ID., Consp. Av., p. 68.—MULS., Hist. Nat.

Ois. Mouch., tom. i, p. 77.

*Phæthornis squalidus*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).—CAB. and

HEIN., Mus. Hein. Th., iii, p. 8 (1860).—GOULD, Intr. Troch., octavo ed., p. 45.—SALV. and ELLIOT, Ibis

(1873), p. 9.

*Ptyornornis intermedia*, REICH., Aufz. der Colib., p. 14.—ID., Troch. Enum., p. 12 (1855).

*Hab.* Southern Brazil.

Head dark brown; rest of upper surface bronzy-brown; feathers of upper tail coverts margined with buff. Wings purple. A line above and behind the eye buff. Throat dark brown. Entire under surface buff, darkest on sides of the neck and flanks. Base of tail feathers bronze-green, succeeded by a black band, and tipped with buff. The green on the middle pair graduates into brown, and this

into pure white. Maxilla black, mandible flesh-color, tip black. Total length,  $4\frac{3}{4}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen, 1 in.

### 15. *Phaethornis longuemareus*.

- Trochilus longuemareus*, LESS., Troch., p. 15, pl. 11 (1831).—BON., Consp. Gen. Av., vol. i, p. 67 (1850).  
*Phaethornis longuemareus*, GRAY, Gen. Birds, vol. i, p. 104.—GOULD, Mon. Troch., vol. i, pl. 31.—REICH., Aufz. der Colib., p. 14.—ID., Troch. Enum., p. 12 (1855).  
*Phaethornis intermedius*, BON., Consp. Av., p. 67 (1850).  
*Phaethornis longuemareus*, BON., Consp. Av. (1850), vol. i, p. 67.  
*Pygmornis intermedius*, BON., Rev. and Mag. Zool. (1854), p. 250.  
*Pygmornis longuemareus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 12) (1860).—GOULD, Intr. Troch., octavo ed., p. 46 (1861).—SALV. and ELLIOT, Ibis (1873), p. 271.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 93.

*Hab.* Guiana, Trinidad (Léotaud).

Top of head dark brown; upper surface bronzy-brown. Wings purple. Lores and ear coverts dark brown; superciliary stripe, and one from base of maxilla, buff. Chin and upper part of throat black. Under parts buff. Tail feathers bronzy-green, fading into gray near the tips. Lateral rectrices tipped with buff or buffy-white, central ones with white tips. Median rectrices of female considerably longer than the rest. Maxilla black. Basal half of mandible flesh-color, rest black. Total length, 4 in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

### 16. *Phaethornis adolphi*.

- Phaethornis adolphi*, GOULD, Mon. Troch., vol. i, pl. 35.—Pt. xiv (1857).  
*Pygmornis adolphi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 10) (1860).—GOULD, Intr. Troch., octavo ed., p. 47.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 102.—SALV. and ELLIOT, Ibis (1873), p. 271.

*Hab.* Mexico and Central America to Panama.

Upper parts bronzy-brown. Upper tail coverts rufous. Wings purple. Ear coverts dark brown. Superciliary stripe buff. Under surface dark buff, grayish on the throat and breast. Tail bronze-green tipped with buff on lateral feathers, white on middle pair, and has a rounded shape in the male; the median rectrices are elongated in the female. Maxilla black. Basal half of mandible flesh-color, rest black. I notice that specimens from Mexico are much lighter in color beneath, than those from Central America; but this evidently has no specific importance. Total length,  $3\frac{3}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

### 17. *Phaethornis griseigularis*.

- Phaethornis griseigularis*, GOULD, P. Z. S. (1851), p. 115.—ID., Mon. Troch., vol. i, p. 36.  
*Pygmornis griseigularis*, BON., Rev. and Mag. Zool. (1854), p. 250.—GOULD, Intr. Troch., p. 47 (1861).—SALV. and ELLIOT, Ibis (1873), p. 272.  
*Eremita griseigularis*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 11 (1855).  
*Trochilus aspasiae*, BOURC. and MULS., Ann. Soc. Linn., Lyon (1856), vol. viii.  
*Phaethornis zonura*, GOULD, P. Z. S. (1860), p. 305.—ID., Mon. Troch., vol. i, p. 34.  
*Pygmornis griseogularis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 8 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 99 (partim).  
*Pygmornis zonura*, GOULD, Intr. Troch., octavo ed., p. 47 (1861).

*Hab.* Columbia.

Upper parts bronzy-brown. Upper tail coverts rufous. Wings purple. Stripe over the eye buff. Auriculars black. Under surface buff, chin grayish. Tail feathers black, or black with a greenish shade, tipped with buff on the lateral ones, and with white on central pair. Maxilla black; basal half of mandible flesh-color, remainder black. Total length, 3 in. Wing,  $1\frac{1}{4}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

In his description Mr. Gould speaks of a black crescent across the breast. This is a mistake, there is no such mark, and his figures are correctly portrayed without any black on the breast.

### 18. *Phæthornis striigularis*.

*Phæthornis striigularis*, GOULD, Mon. Troch., vol. i, pl. 37.—Pt. vii (1854).

*Pygmornis amauro*, BOURC., Rev. Zool. (1856), p. 522.—CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 11).

*Pygmornis striigularis*, GOULD, Intr. Troch., octavo ed., p. 48 (1861).—SALV. and ELLIOT, Ibis (1873), p. 273.—

CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 9).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 96.

*Phæthornis atrimentalis*, LAWR., Ann. Lyc. Nat. Hist. N. Y., vol. vi, p. 260.

*Phæthornis amauro*, GOULD, Mon. Troch., vol. i, pl. 32.

*Pygmornis amauro*, GOULD, Intr. Troch., octavo ed., p. 46 (1861).

*Hab.* Columbia and Ecuador.

Upper parts bronze-brown. Rump and upper tail coverts rufous. Wings purple. Ear coverts black; a stripe of buff above and below the eye. Throat and breast gray, the former striated with brownish-black. Abdomen deep buff. Under tail coverts gray tipped with buff. Tail greenish-bronze, tipped with white. Maxilla black; basal half of mandible yellow, rest black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{8}$  in.

### 19. *Phæthornis idaliæ*.

*Trochilus idaliæ*, BOURC. and MULS., Ann. Soc. Linn., Lyon (1856), vol. iii.

*Phæthornis obscura*, GOULD, P. Z. S. (1857), p. 14.

*Phæthornis obscura*, GOULD, Mon. Troch., vol. i, pl. 38.

*Pygmornis obscura*, CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 7) (1860).

*Phæthornis viridicaudata*, GOULD, Mon. Troch., vol. i, pl. 33, ♀.—CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 5) (1860).

*Pygmornis idaliæ*, GOULD, Intr. Troch., p. 48 (1861).—SALV. and ELLIOT, Ibis (1873), p. 270.

*Pygmornis aspasixæ*, GOULD, Intr. Troch., p. 47 (1861).

*Hab.* South Brazil.

Head dark brown above; upper surface shining green. Wings purple. Buff stripe behind the eye; ear coverts black. Buffy-white stripe along the side of the throat. This last is black, becoming chestnut on the breast, dark gray on the abdomen, and white on the vent. Under tail coverts grayish-white. Tail dark bronze-brown tipped with white. Maxilla black, mandible flesh-color, tip brownish-black. Total length,  $3\frac{3}{8}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

Female has the throat and under parts buff, palest on abdomen. Tail bronze-green, passing into blackish-brown and tipped with white. The throat and under surface of the males vary greatly in their coloration, some specimens being very much darker than others.

**20. Phæthornis pygmæus.**

- Trochilus pygmæus*, SPIX, Av. Bras., p. 78, pl. 80, fig. 1 (1824).  
*Phæthornis rufigaster*, LESS., der Colib., t. 9, p. 43 (1831).  
*Trochilus davidianus*, LESS., Troch., p. 50, pl. 13 (1832).  
*Trochilus brasiliensis*, D'ORB. and LAFRES (nec LATH.), Syn. Av., ii, p. 32, sp. 28 (1828).  
*Phæthornis davidianus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 13 (1848).  
*Phæthornis eremita*, BON., Consp. Av., vol. i, p. 68 (1850).  
*Phæthornis pygmæus*, BON., Consp. Av., vol. i, p. 68 (1850).  
*Eremita rufigaster*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 11 (1855).  
*Eremita davidianus*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 11 (1855).  
*Eremita pygmæa*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 11 (1855).  
*Pygmornis davidianus*, BON., Rev. and Mag. Zool. (1854), p. 250.  
*Phæthornis pygmæus*, GOULD, Mon. Troch., vol. i, pl. 41 (1861).  
*Pygmornis pygmæa*, GOULD, Intr. Troch., octavo ed., p. 49.—CAB. and HEIN., Mus. Hein. Th., iii, p. 6 (1860).—SALV. and ELLIOT, Ibis (1873), p. 273.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 105.  
*Phæthornis eremita*, GOULD, Mon. Troch., octavo ed., vol. i, pl. 40 (1861).  
*Pygmornis eremita*, GOULD, Intr. Troch., octavo ed., p. 49 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 8) (1860).  
*Pygmornis rufiventris*, BON., Rev. and Mag. Zool. (1854), p. 250.—GOULD, Intr. Troch., octavo ed., p. 48 (1861).  
*Pygmornis pygmæus*, ELLIOT, Ibis (1877), p. 141.

*Hab.* Guiana, Brazil.

*Adult.* Top of head dark brown; back bronze-brown, rump and upper tail coverts rust-red. A buff stripe above and behind the eye. Ear coverts black. Chin white, rest of under surface deep buff, crossed on lower part of breast by a line of black. Tail bronzy-brown, tipped with buff. Wings dark purplish-brown. Maxilla and apical half of mandible black, rest of mandible flesh-color. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{1}{4}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

**21. Phæthornis episcopus.**

- Phæthornis episcopus*, GOULD, P. Z. S. (1857), p. 14.—ID., Mon. Troch., vol. i, pl. 39, fig. 2.  
*Pygmornis episcopus*, GOULD, Intr. Troch., octavo ed., p. 48.—CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 4) (1860).—SALV. and ELLIOT, Ibis (1873), p. 274.

*Hab.* Guiana.

Precisely like the *P. pygmæus*, except that the lateral tail feathers are broader, and black instead of bronzy-brown. Dimensions similar.

**22. Phæthornis nigrincinctus.**

- Phæthornis nigrincinctus*, LAWRE., Ann. Lyc. Nat. Hist. N. Y., vol. vi, p. 260 (1858).—GOULD, Mon. Troch., vol. i, pl. 39, fig. 1.  
*Pygmornis nigrocincta*, CAB. and HEIN., Mus. Hein. Th., iii, p. 7 (note 6) (1860).  
*Pygmornis nigrocinctus*, GOULD, Intr. Troch., octavo ed., p. 48.—SALV. and ELLIOT, Ibis (1873), p. 274.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 108.

*Hab.* Upper Amazons, Pebas, Peru, Eng. do Gama, Brazil.

This species in its plumage resembles very closely the two preceding ones, but may be recognized by the mandible being flesh-color for its entire length, excepting at the extreme tip, which is brownish-black. The tail is like *pygmæus*, perhaps a little darker. Total length,  $2\frac{1}{4}$  in. Wing, 1 in. Tail, 1 in. Culmen,  $\frac{1}{6}$  in.

The birds composing the three following genera are characterized by having the shafts of the primaries more or less developed, and in the males these are broad and flattened. The majority of the species have a portion of their plumage composed of metallic feathers. The genera are mainly distinguished by the shape of the tail, this being long and deeply forked in EUPETOMENA, cuneate in SPHENOPROCTUS, and rounded in CAMPYLOPTERUS. Having been unable to perceive any satisfactory generic characters to separate *cuvieri* and *roberti* from CAMPYLOPTERUS, I have kept them in that genus, the fact that the shafts of the primaries are less flattened than is observed in other species of the genus not being sufficient, in my opinion, to cause their removal to a distinct one.

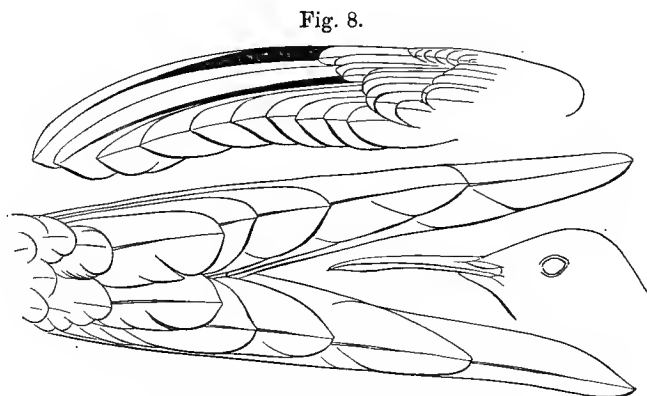
### Genus VIII.—EUPETOMENA.

*Eupetomena*, GOULD, Mon. Troch., pl. vi (1853).—Intr. Troch., octavo ed., p. 50.  
*Prognornis*, REICH., Aufz. der Colib. (1853), p. 11.

TYPE.  
*T. macrourus*, Gmel.  
*T. macrourus*, Gmel.

*Ch.* Bill long as the head, slightly curved. Tail very long, deeply forked, outermost rectrices much longer than the rest, turning slightly outward at tip. Shaft of primaries in the male, broad and flattened. Sexes alike.

*Range.* Guiana, Brazil, Peru.



*Eupetomena macroura*. ♂. Cayenne. Bourcier.

#### Key to the species.

- |  |                         |
|--|-------------------------|
| A. Tail steel-blue, body shining green.      |                         |
| a. Head and breast shining prussian-blue.    | 1. <i>E. macroura</i> . |
| b. Head and breast shining dark cobalt-blue. | 2. <i>E. hirundo</i> .  |

### 1. *Eupetomena macroura*.

*Trochilus macrourus*, GMEL., Syst. Nat. (1788), vol. i, p. 487, sp. 27.—VIEILL., Ency. Méth., p. 566, sp. 69.  
*Trochilus forcipatus*, LATH., Ind. Orn., vol. i, p. 304, sp. 9 (1790).  
*Ornismya hirundinacea*, LESS., Ois. Mouch., p. 98, pl. 25.—ID., Suppl., p. 79, pl. 39 (1829).  
*Polytmus macrourus*, GRAY, Gen. Birds, vol. i, p. 107, sp. 9 (1844-59).  
*Prognornis macroura*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 9, t. 806, fig. 4873-75.  
*Eupetomena macroura*, BON., Rev. and Mag. Zool. (1854), p. 254.—CAB. and HEIN., Mus. Hein. Th., iii, p. 14.  
—GOULD, Intr. Troch., octavo ed., p. 50 (1861).—BON., Rev. and Mag. Zool. (1854), p. 254.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 111.—ELLIOT, Ibis (1877), p. 134.  
*Eupetomena hirundinacea*, GOULD, Mon. Troch., vol. ii, pl. 42.

*Hab.* Cayenne, Brazil.

Head, neck, and breast deep shining prussian-blue; plumage of body dark shining green; some feathers on the rump tipped with dark purple. Upper and under tail coverts, and all the rectrices, dark steel-blue. Wings purplish-brown. Bill black. Total length,  $6\frac{5}{8}$  in. Wing, 3 in. Tail,  $3\frac{3}{4}$  in. Culmen,  $\frac{7}{8}$  in.

## 2. *Eupetomena hirundo*.

*Eupetomena hirundo*, GOULD, Ann. Mag. Nat. Hist. (1875), ser. 4, vol. 16.—SCLAT. and SALV., P. Z. S. (1876), p. 18.

*Hab.* Peru, Huiro valley of Santa Ana (Whitely).

Head, neck, and breast shining dark cobalt-blue; plumage of body shining grass-green, lighter than in *E. macroura*. Wings purple-brown. Tail with its upper and under coverts steel-blue; some of the feathers of upper tail coverts edged with purple. Bill black. Total length,  $6\frac{7}{8}$  in. Wing, 3 in. Culmen, 1 in. Tail,  $3\frac{1}{2}$  in.

For the species that are now reached, but two generic terms have ever been proposed: viz., PAMPA and SPHENOPROCTUS. The first of these has the priority by seven years. Neither of them were defined by their respective authors, and therefore, according to the views of some ornithologists, have really no right to any consideration. The first is objectionable from the fact that it is a specific name elevated to a generic rank, especially objectionable in this case, because the *Ornis-myia pampa*, Less., has never had a second specific appellation bestowed upon it, and therefore if *Pampa* is accepted the species must stand as *Pampa pampa* (a very undesirable combination), or a new specific name be given to it. The one bestowed by Reichenbach, if adopted, of *Pampa campyloptera*, would but complicate matters unfavorably, because the genus with which these birds are very closely allied is CAMPYLOPTERUS. Under these circumstances I have adopted the name given by Cabanis and Heine of SPHENOPROCTUS, for there is no necessity whatever that a new specific name should be given to one of the birds, a proceeding that would but increase the confusion tenfold.

### Genus IX.—SPHENOPROCTUS.

*Pampa*, REICH., Aufz. der Colib., p. 11 (1853).

*Sphenoproctus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 11 (1860).

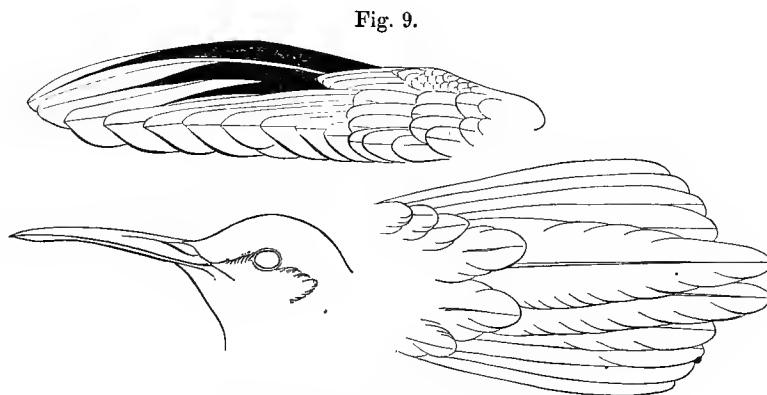
TYPE.

*O. pampa*, Less.

*O. pampa*, Less.

*Ch.* Bill nearly straight, long as head; nostrils covered by a membrane. Wings long, shafts of first three primaries in the males, broad and flattened; the first primary falcate. Tail cuneate. Sexes alike.

*Range.* Mexico and Guatemala.



*Sphenoproctus pampo*. Guatemala. Boucard.

*Key to the species.*

- A. Under surface grayish-white.  
 a. Top of head deep metallic purplish-blue. 1. *S. pampa*.  
 b. Top of head pale metallic blue. 2. *S. curvipennis*.

**1. *Sphenoproctus pampa*.**

*Ornismya pampa*, LESS., Ois. Mouch. Suppl., p. 127, t. 15 (1829).

*Polytmus pampa*, GRAY, Gen. Birds, vol. i, p. 107, sp. 7.

*Pampa campyloptera*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 9, pl. 800, fig. 4861-62 (1855).

*Campylopterus pampa*, GOULD, Mon. Troch., vol. ii, pl. 43.—BON., Consp. Gen. Av., vol. i, p. 71.—ID., Rev. and Mag. Zool. (1854), p. 250.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 115.

*Sphenoproctus pampa*, GOULD, Intr. Troch., octavo ed., p. 51.—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 11 (partim).

*Hab.* Guatemala.

Top of head and occiput brilliant metallic purplish-blue. Upper surface shining grass-green; wings purplish-brown. Under surface grayish-white. Ear coverts brown, under tail coverts buffy-white. Four central rectrices dark bronze-green; lateral ones dark purple, glossed with green at the base. Bill black, feet brown. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{7}{8}$  in.

**2. *Sphenoproctus curvipennis*.**

*Trochilus curvipennis*, LICHT., Preis-Verz. Mex. Their. (1830), no. 32.

*Sphenoproctus pampa*, CAB. and HEIN., Mus. Hein. Th., iii, p. 11 (partim) (1860).

*Sphenoproctus curvipennis*, GOULD, Intr. Troch., octavo ed., p. 51 (1861).

*Hab.* Mexico.

Top of head pale blue glossed with purple; in some specimens brownish on the forehead. Upper parts shining green. Wings purplish-brown. Under parts grayish-white. Four central tail feathers dark green, rest purple glossed with green at base. Bill black. Total length,  $5\frac{5}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{1}{2}$  in. Culmen,  $1\frac{3}{16}$  in.

**Genus X.—CAMPYLOPTERUS.**

## TYPE.

*Campylopterus*, SWAIN., Zool. Journ. (1826), p. 358.

*Polytmus*, GRAY (nec BRISS.), List. Gen. Birds (1848).

*Sæpiopterus*, REICH., Aufz. der Colib., p. 11 (1853).

*Platystylopterus*, REICH., Aufz. der Colib., p. 11 (1853).

*Loxopterus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 13 (1860).

*Phæochroa*, GOULD, Intr. Mon. Troch., octavo ed., p. 55 (1861).

*T. largipennis*, Bodd.

*T. largipennis*, Bodd.

*T. lazulus*, Vieill.

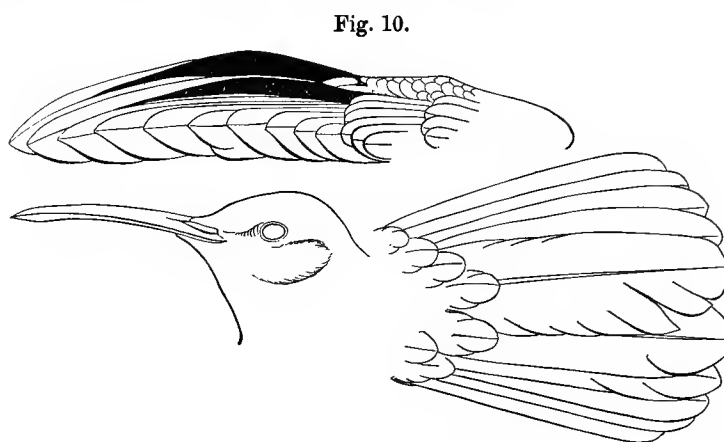
*C. rufus*, Less.

*C. hyperythrus*, Cab.

*T. cuvieri*, Delatt. and Bourc.

*Ch.* Bill longer than the head, curved, broad, and flat at base. Wings ample, shafts of primaries in the male, broad and flat on their basal half. Tail ample, rounded, feathers broad. Size large.

*Range.* Mexico, Central America, Tobago, Venezuela, Guiana, Northern Brazil, Columbia, Ecuador, and Peru.—Ten species are acknowledged.



*Campylopterus largipennis.* Cayenne. Verreaux.

*Key to the species.*

- |  |                             |
|--|-----------------------------|
| A. Entire under surface dark gray, not metallic.   |                             |
| a. Lateral rectrices largely tipped with white.  | 1. <i>C. largipennis.</i>   |
| b. Lateral rectrices slightly tipped with white.   | 2. <i>C. obscurus.</i>      |
| B. Under parts entirely rufous, not metallic.  |                             |
| a. Lateral rectrices buff with a subterminal black bar.  | 3. <i>C. rufus.</i>         |
| b. Lateral rectrices uniform buff.   | 4. <i>C. hyperythrus.</i>   |
| C. Under parts metallic.   |                             |
| a. Tail chestnut tipped with green.  | 5. <i>C. lazulus.</i>       |
| b. Tail. Lateral feathers, basal half black, rest white.   |                             |
| a'. Upper and under surface violet-blue.   | 6. <i>C. hemileucurus.</i>  |
| b'. Upper and under surface golden-green. Throat blue.   | 7. <i>C. ensipennis.</i>    |
| D. Under surface dark gray. Throat blue. Top of head of both sexes metallic-green. Lateral rectrices steel-blue. | 8. <i>C. villavicencio.</i> |
| E. Under surface dull bronzy-green.  |                             |
| a. Lateral rectrices greenish-bronze tipped with white.  | 9. <i>C. cuvieri.</i>       |
| b. Lateral rectrices, base green, remainder black tipped with white.   | 10. <i>C. roberti.</i>      |

### 1. *Campylopterus largipennis.*

*Trochilus largipennis*, BODD., Tab. Plan. Enlum. d'Anbent, pl. 672, fig. 2 (1783).

*Trochilus cinereus*, GMEL., Syst. Nat. (1788), p. 490, sp. 41.

*Trochilus campylopterus*, GMEL., Syst. Nat. (1788), vol. i, p. 499.

*Trochilus latipennis*, LATH., Ind. Orn., vol. i, p. 310 (1780).—VIEILL., Nouv. Dict. Hist. Nat., tom. vii, p. 365.

*Ornismya latipennis*, LESS., Ois. Mouch., p. 121, pl. 34 (1829).

*Polytmus largipennis*, GRAY, Gen. Birds, vol. i, p. 107.

*Campylopterus latipennis*, BON., Consp. Gen. Av., vol. i, p. 71.—REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 9, t. 802, fig. 4865-66.—BON., Rev. and Mag. Zool. (1854), p. 250.—GOULD, Mon. Troch., vol. ii, pl. 48.—ID., Intr. Troch., octavo ed., p. 53.

*Campylopterus largipennis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 12 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 119.

*Hab.* Guiana.

*Adult.* Head, upper surface, and flanks grass-green. Wings purplish-brown. Median rectrices dark green, next on either side, green at base, remaining part



black; rest of tail feathers black broadly tipped with white. Under surface gray. Maxilla black, mandible flesh-color. Total length,  $5\frac{1}{4}$ . Wing,  $3\frac{1}{8}$ . Tail,  $2\frac{1}{8}$ . Culmen, 1.

## 2. *Campylopterus obscurus*.

*Campylopterus obscurus*, GOULD, P. Z. S. (1848), p. 13.—ID., Mon. Troch., vol. ii, pl. 49.—ID., Intr. Troch., octavo ed., p. 54.—BON., Consp. Gen. Av., vol. i, p. 71.—ID., Rev. and Mag. Zool. (1854), p. 250.—REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 9.

*Campylopterus æquatorialis*, GOULD, Intr. Troch., octavo ed., p. 54 (ex Ecuador).

*Hab.* Valley of the Amazon to Peru, and Ecuador.

*Adult.* Upper parts grass-green. Under surface dark gray. Middle rectrices green, three lateral ones black tipped with white.

This species only differs from the *C. largipennis* in the small amount of white upon the tips of the tail feathers. I have placed as a synonym the *C. æquatorialis*, Gould, as I cannot really perceive any grounds for separating them; and it would even seem that the specific characters distinguishing the present bird from *largipennis* are of the most trivial kind.

## 3. *Campylopterus rufus*.

*Campylopterus rufus*, LESS., Rev. Zool. (1840), p. 73.—GOULD, Mon. Troch., vol. ii, pl. 50.—ID., Intr. Troch., octavo ed., p. 54.—BON., Consp. Gen. Av., vol. i, p. 71.—ID., Rev. and Mag. Zool. (1854), p. 250.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 135.

*Polytmus rufus*, GRAY, Gen. Birds, vol. i, p. 107.

*Platystylopterus rufus*, REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 8, pl. 789, fig. 4834-35.

*Hab.* Guatemala.

Head and upper parts bronzy-green. Wings purplish-brown. Entire under parts dark buff. Four central rectrices bronzy-green, remainder rufous, and all but the median pair with a subterminal black bar and tips buff. The black bar increases in width towards the outer rectrices, but on the outermost only appears on the inner web. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail, 2 in. Culmen, 1 in.

## 4. \**Campylopterus hyperythrus*.

*Campylopterus hyperythrus*, CAB., Schomb. Reise. Brit. Guiana (1848), vol. iii, p. 709, no. 202.—BON., Rev. and Mag. Zool. (1854), p. 250.—GOULD, Mon. Troch., vol. ii, pl. 51.—ID., Intr. Troch., octavo ed., p. 54.

*Platystylopterus hyperythrus*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 8, pl. 790, fig. 4836-38 (1855).

*Loxopterus hyperythrus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 13 (1860).

*Hab.* Guiana.

The principal difference that distinguishes this species from the *C. rufus*, is, that the lateral rectrices are uniform rufous without any black bar. More specimens are required (the type being still unique) to enable us to ascertain if the example is really entitled to a distinctive rank, or if the absence of the bar is merely an individual peculiarity.

### 5. *Campylopterus lazulus*.

*Trochilus lazulus*, BONNATT, Ency. Meth., vol. ii, p. 557 (1791).

*Trochilus falcatus*, LESS., Ois. Mouch., p. 126, pl. 36 (1829).—SWAIN., Ill. Zool., vol. ii, pl. 83.

*Polytmus lazulus*, GRAY, Gen. Birds, vol. i, p. 107 (1844-49).

*Sæpiopterus lazulus*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 9, pl. 801, fig. 4863-64 (1855).

*Campylopterus lazulus*, BON., Rev. and Mag. Zool. (1854), p. 250.—ID., Consp. Gen. Av., p. 71.—GOULD, Mon.

Troch., vol. ii, pl. 44.—ID., Intr. Troch., octavo ed., p. 51.—CAB. and HEIN., Mus. Hein. Th., iii, p. 13.—

MULS., Hist. Nat. Ois. Mouch., tom. i, p. 131.

*Hab.* Venezuela, Columbia, Ecuador.

*Male.* Entire upper surface glittering grass-green. Wings purplish-brown. Throat and breast dark metallic-blue with a purple lustre, blending into the glittering green of the abdomen and flanks. Under tail coverts chestnut. Rectrices deep chestnut, tipped with shining green. Bill black. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail 2 in. Culmen, 1 in.

*Female* has the under surface brownish-gray, lateral tail feathers chestnut, margined with black. Upper parts similar to the male.

### 6. *Campylopterus hemileucurus*.

*Trochilus hemileucurus*, LICHT., Preis-Verz. Mex. Thier. (1833), no. 33.

*Ornismya (Campylopterus) Delattrei*, LESS., Rev. Zool. (1839), p. 14.

*Mellisuga delattrei*, GRAY, Gen. Birds, vol. i, p. 113.

*Campylopterus delattrei*, GOULD, Mon. Troch., vol. i, pl. 45.—BON., Consp. Gen. Av., vol. i, p. 71.—ID., Rev. and

Mag. Zool. (1854), p. 250.—REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 9, t. 804, fig. 4869-70.

*Campylopterus hemileucurus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 13.—GOULD, Intr. Troch., octavo ed., p. 52.

*Hab.* Mexico to Veragua in Central America.

*Male.* Top of head and lores dull black. A small spot of white behind the eye. Occiput black, and entire under surface bright violet-blue. Rump and upper tail coverts green. Wings brown. Under tail coverts, blue-black glossed with green. Tail steel-black, middle feathers glossed with green, and the outer ones largely tipped with white. Bill black. Total length,  $5\frac{3}{4}$  in. Wing,  $3\frac{1}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $1\frac{1}{8}$  in.

*Female.* Head brown. Upper surface and flanks brilliant green, inclining to blue on the upper tail coverts. Throat greenish-blue. Under surface gray. Median rectrices dark green, rest black, three lateral ones tipped with white. The size is about the same as that of the male.

### 7. *Campylopterus ensipennis*.

*Trochilus ensipennis*, SWAIN., Zool. Illust., vol. ii, pl. 107.

*Campylopterus ensipennis*, LESS., Ois. Mouch., p. 124, pl. 35 (1829).—ID., Trait. Orn., p. 289.—GOULD, Mon.

Troch., vol. ii, pl. 46.—ID., Intr. Troch., octavo ed., p. 53.—REICH., Aufz. der Colib., p. 11.—ID., Troch.

Enum., p. 9, pl. 803, fig. 4867-68.—BON., Consp. Gen. Av., vol. i, p. 71.—ID., Rev. and Mag. Zool. (1854),

p. 250.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 122.—CAB. and HEIN., Mus. Hein. Th., iii, p. 12.

*Polytmus ensipennis*, GRAY, Gen. Birds, vol. i, p. 107.

*Hab.* Island of Tobago. Venezuela.

*Male.* Chin and throat shining dark lazuline-blue. Entire rest of body glittering metallic golden-green. Wings purplish-brown. Median rectrices dark green, next on either side black, remainder black at base, rest white. Bill black. Total length,  $5\frac{1}{2}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen, 1 in.

*Female.* Differs in having the centre of the throat only, blue, and the centre of breast and abdomen gray. In size the sexes do not differ much.

### 8. *Campylopterus villavicencio.*

*Trochilus villavicencio*, BOURC., Compt. Rend., vol. 32, p. 187.—ID., Rev. and Mag. Zool. (1851), p. 97.

*Heliomaster villavicencio*, REICH., Aufz. der Colib., p. 13 (1853).—BON., Rev. and Mag. Zool. (1854), p. 251.

*Selasphorus (Heliomaster) villavicencio*, REICH., Troch. Enum., p. 11 (1855).

*Campylopterus splendens*, LAWR., Anu. N. Y. Lyc. Nat. Hist., vol. vi, p. 262 (1858), ♂.—GOULD, Intr. Troch., octavo ed., p. 53.

*Campylopterus villavicencio*, GOULD, Mon. Troch., vol. ii, pl. 42.—ID., Intr. Troch., octavo ed., p. 53.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 130.

*Hab.* Ecuador, Rio Napo.

*Male.* Top of head metallic golden-green. Upper parts and flanks dark green. Wings purplish-brown. Throat deep metallic purplish-blue. Under surface dark greenish-gray. Median rectrices dark green, remainder steel-blue. Bill black. Total length,  $5\frac{1}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen, 1 in.

*Female.* Top of head metallic golden-green. Upper parts golden-green. Under surface ashy-white. Tail like the male, with the lateral feathers tipped with grayish-white. Maxilla black, mandible flesh-color.

This species is remarkable, in that both sexes have metallic crowns.

### 9. *Campylopterus cuvieri.*

*Trochilus cuvieri*, DELATTR. and BOURC., Rev. Zool. (1846), p. 310.

*Campylopterus cuvieri*, BON., Consp. Gen. Av., p. 71, sp. 9 (1850).—GOULD, Mon. Troch., vol. i, pl. 52.—REICH., Troch. Enum., p. 9, t. 805, fig. 4871 (1855).

*Aphantochroa cuvieri*, BON., Rev. and Mag. Zool. (1854), p. 250.—CAB. and HEIN., Mus. Hein. Th., iii, p. 14 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 13.

*Phæochroa cuvieri*, GOULD, Intr. Troch., octavo ed., p. 55 (1861).

*Hab.* Costa Rica, Panama, Venezuela, Columbia.

*Adult.* Upper surface shining grass-green. Wings purplish-brown. Under surface dull bronze-green, feathers tipped with gray. Centre of abdomen buff. Under tail coverts brown fringed with white. Tail greenish-bronze, outer feathers tipped with white. Maxilla black, mandible flesh-color. Total length,  $4\frac{5}{8}$  in. Wing,  $2\frac{7}{8}$  in. Tail, 2 in. Culmen,  $\frac{7}{8}$  in.

This species and the succeeding one have generally been placed in the genus *Phæochroa*, Gould; but as they have (in a less degree) the flattened broad shafts on the primaries, which are the chief distinction of *CAMPYLOPTERUS*, and no different character that is strictly generic, I have not employed the term *Phæochroa*. As the members of the genus *APHANTOCHROA* have very differently shaped shafts to the primaries, this bird and the *C. roberti* should not be placed with them, as has been done by M. Mulsant.

### 10. *Campylopterus roberti*.

*Aphantochroa roberti*, SALV., P. Z. S. (1861), p. 203.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 138.  
*Campylopterus roberti*, GOULD, Mon. Troch., vol. ii, pl. 53.  
*Phaëochroa roberti*, GOULD, Intr. Troch., octavo ed., p. 55 (1861).

*Hab.* Guatemala.

This species differs from the *C. cuvieri*, in having the lateral rectrices black tipped with white (the extreme basal portion being green); and also in the entirely black bill. In size the two species are alike.

### Genus XI.—APHANTOCHROA.

*Aphantochroa*, GOULD, Mon. Troch., pt. vi. (1852).—ID., Intr. Troch., octavo ed., p. 55.  
*Agapeta*, HEIN., Jour. für Ornith. (1863), p. 178.  
*Placophorus*, MULS., Catal. Ois. Mouch. (1875), p. 6.

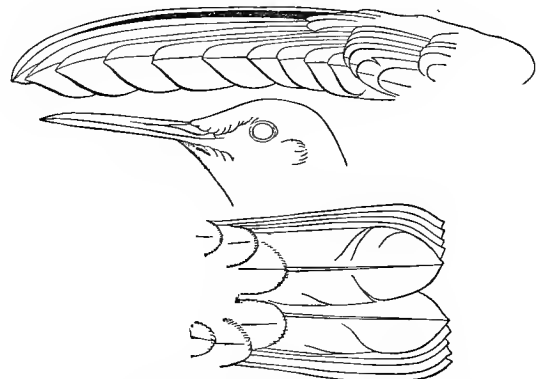
TYPE.

*T. cirrhochloris*, Vieill.  
*A. gularis*, Gould.  
*A. gularis*, Gould.

*Ch.* "Bill stout, rather longer than the head, and slightly arched; wings broad and moderately long; tail square and moderately large; tarsi clothed; hind toe rather short. Sexes alike in plumage." (Gould, loc. cit.)

*Range.* Brazil, through the Amazonian valley to Ecuador.

Fig. 11.



*Aphantochroa cirrhochloris*. ♂. Brazil. Gardner.

#### Key to the species.

- |   |                              |
|---|------------------------------|
| A. Upper parts dark grass-green.                    |                              |
| a. Metallic spot of lilac on the throat.            | 1. <i>A. gularis</i> .       |
| b. Throat and breast dark gray, glossed with green. | 2. <i>A. cirrhochloris</i> . |
| c. Under parts white, spotted with green.           | 3. <i>A. hyposticta</i> .    |

These species, with the exception of *gularis*, which has a bright throat mark, are plain unpretending birds, of moderate size, and clothed in a rather dull plumage.

### I. \**Aphantochroa gularis*.

*Aphantochroa gularis*, GOULD, P. Z. S. (1860), p. 310.—ID., Mon. Troch., vol. ii, pl. 55.—ID., Intr., Troch., octavo ed., p. 55.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 142.

*Hab.* Rio Napo, Ecuador.

Upper parts shining grass-green. Under parts also grass-green, excepting a metallic-lilac spot on the throat, and the centre of abdomen, thighs, and under tail coverts, which are white. Median rectrices grass-green, remainder purplish-green. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{1}{4}$  in. Bill,  $1\frac{1}{8}$  in.

**2. *Aphantochroa cirrochloris*.**

*Trochilus cirrochloris*, VIEILL., Nouv. Dict. Hist. Nat., tom. 23, p. 430.

*Ornismya simplex*, LESS., Ois. Mouch., p. 119, pl. 33 (1829).

*Polytmus cirrochloris*, GRAY, Gen. Birds, vol. i, p. 107, sp. 4.

*Trochilus campylostylus*, LICHT., Verzeich. Doubl., p. 14.

*Campylopterus cirrochloris*, BON., Consp. Gen. Av., vol. i, p. 71 (1850).

*Aphantochroa cirrochloris*, GOULD, Mon. Troch., vol. i, pl. 54.—ID., Intr. Troch., octavo ed., p. 55.—BON., Rev. and Mag. Zool. (1854), p. 250.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 139.—CAB. and HEIN., Mus. Hein. Th., iii, p. 14.—REICH., Aufz. der Colib., p. 15.—ID., Troch. Enum. p. 12.

*Campylopterus campylostylus*, BURM., Th. Bras., vol. ii, p. 329, sp. 2 (1856).

*Hab.* Brazil.

*Adult.* Upper surface dark green. Wings purplish-brown. Throat and breast grayish-brown, feathers tipped with green. Abdomen grayish-brown with a band of white just above the vent. Under tail coverts dark brown edged with whitish. Median rectrices green, rest dark purplish-brown. Bill black. Total length,  $4\frac{3}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.

**3. *Aphantochroa hyposticta*.**

*Aphantochroa hyposticta*, GOULD, P. Z. S. (1862), p. 124.

*Hab.* Ecuador.

Upper parts dark green. Wings purplish-brown. Feathers of throat, breast, and abdomen white at base and tipped with green. Flanks green; under tail coverts green edged with white. Median rectrices green, remainder green at base shading into black and edged with white. Bill black, except base of mandible, which is flesh-color. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{7}{8}$  in. Culmen, 1 in.

## Genus XII.—CÆLIGENA.

*Cæligena*, LESS., Ind. and Syn. Gen. Ois. du Genr. Trochilus (1832), p. xviii.

*Delattria*, BON., Consp. Gen. Av., vol. i (1850), p. 70.—ID., Compt. Rend. (1850), p. 380.

*Chariessa*, HEIN., Journ. für Ornith. (1863), p. 178.

*Himelia*, MULS., Cat. Ois. Mouch. (1875), p. 7.

## TYPE.

*O. clemenciae*, Less.

*O. henrica*, Less.

*O. henrica*, Less.

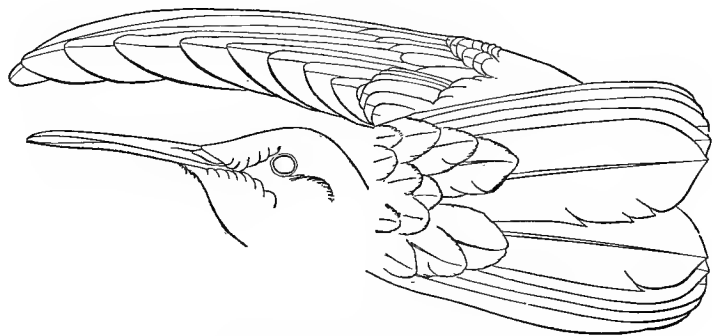
*O. henrica*, Less.

*Ch.* Bill longer than the head, straight. Wings very long and ample. Tail rounded, feathers broad. Tarsi clothed. Sexes unlike in plumage.

*Range.* Mexico, Guatemala, and Costa Rica.

I consider that there are four species which should be placed in this

Fig. 12.



*Cæligena clemenciae*. ♂. Mexico. Salvin.

genus, as I cannot perceive any generic character to separate *henrici* and *viridipallens* from *clemenciæ*, nor the species usually known as *Oreopyra hemileuca* from those just named. They are handsome birds, the males possessing bright metallic throats.

*Key to the species.*

- |                               |                            |
|-------------------------------|----------------------------|
| A. Under parts grayish-brown. |                            |
| a. Throat metallic-blue.      | 1. <i>C. clemenciæ</i> .   |
| b. Throat metallic lilac-red. | 2. <i>C. henrici</i> .     |
| B. Under parts white.         |                            |
| a. Throat metallic-green.     | 3. <i>C. viridipallens</i> |
| b. Throat metallic-amethyst.  | 4. <i>C. hemileuca</i> .   |

### 1. *Cæligena clemenciæ*.

*Ornismya clemenciæ*, LESS., Ois. Mouch., p. 216, pl. 80 (1829).

*Lampornis clemenciæ*, LESS., Trait. Orn., p. 279 (1831).—BON., Rev. and Mag. Zool. (1854), p. 250.

*Cæligena clemenciæ*, LESS., Ind. Gen. Syn. Ois., Genr. *Trochilus*, p. 18 (1831).—GOULD, Intr. Troch., octavo ed., p. 59.—REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 3, t. 687, fig. 4516-17 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 15 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 180.

*Mellisuga clemenciæ*, GRAY, Gen. Birds, vol. i, p. 112, sp. 16 (1844-49).

*Delatiria clemenciæ*, BON., Consp. Gen. Av., p. 70 (1850).—GOULD, Mon. Troch., vol. ii, pl. 60.

*Hab.* Mexico.

*Male.* Upper parts bronzy-green. Behind the eye a stripe of white. Throat metallic azure-blue. Under surface dark ash-gray. Under tail coverts greenish-gray bordered with grayish-white. Upper tail coverts greenish-black. Tail black, two outermost feathers tipped with white. Maxilla brownish-black, mandible flesh-color. Total length,  $4\frac{3}{4}$  in. Wing,  $3\frac{1}{8}$  in. Tail, 2 in. Culmen,  $\frac{7}{8}$  in.

*Female* has the crown dark brown, and entire under surface dark gray.

### 2. *Cæligena henrici*.

*Ornismya henrica*, LESS. and DELATTR., Rev. Zool. (1839), p. 17.

*Topaza henrici*, GRAY, Gen. Birds, vol. i, p. 110.

*Delatiria henrica*, BON., Consp. Gen. Av. (1850), p. 70.—ID., Rev. and Mag. Zool. (1854), p. 253.—GOULD, Mon. Troch., vol. ii, pl. 62.—ID., Intr. Troch., octavo ed., p. 60 (1861).

*Lamprolaima henrica*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Enum., p. 6, pl. 742, fig. 4701, 4703 (1855).

*Cæligena henrici*, CAB. and HEIN., Mus. Hein. Th., iii, p. 15 (note) (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 182.

*Chariessa henrici*, HEINE, Journ. für Ornith. (1863), p. 178.

*Hab.* Guatemala.

*Male.* Upper parts bronzy-green fading into brownish on the rump. Wings purplish-brown. Throat metallic lilac-red. Under surface grayish-brown. Tail blackish-brown tipped with grayish on the lateral feathers. Bill black. Total length,  $4\frac{3}{8}$  in. Wing,  $3\frac{3}{4}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{7}{8}$  in.

*Female* has the under parts pale brown, slightly tinged with buff, without any metallic spot on the throat; rest of plumage like the male.

### 3. *Cæligena viridipallens*

*Trochilus viridipallens*, BOURC. and MULS., Ann. Soc., Lyons (1846), p. 321.

*Polytmus viridipallens*, GRAY, Gen. Birds, vol. i, p. 108.

*Delatiria viridipallens*, BON., Consp. Gen. Av., p. 70 (1850).—GOULD, Mon. Troch., vol. ii, pl. 63.—ID., Intr. Troch., octavo ed., p. 60 (1861).

*Agytria viridipallens*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Enum., p. 7, pl. 758, fig. 4746.

*Thaumantias viridipallens*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Chariessa viridipallens*, HEINE, Journ. für Ornith. (1863), p. 173.

*Cæligena viridipallens*, MULS., Hist. Nat. Ois. Mouch., vol. i, p. 185.

*Hab.* Guatemala.

*Male.* Upper parts bronzy-green, changing to coppery-green on the rump. White line behind the eye. Throat pale metallic-green. Under parts white, flanks green. Under tail coverts greenish-gray margined with white. Upper tail coverts purplish-black. Median rectrices brownish-gray, pale on the lateral rectrices. Bill black. Total length,  $4\frac{1}{8}$  in. Wing,  $2\frac{1}{2}$  inch. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in. Description taken from type specimen in my collection.

*Female* has the throat white, and the lateral rectrices almost white. (Type.)

*Young male.* Median rectrices purplish-black. Throat and breast very dark gray.

*(Oreopyra)*  
**4. *Cæligena hemileuca***

*Oreopyra hemileuca*, SALV., P. Z. S. (1864), p. 584.

*Hab.* Costa Rica.

*Male.* Entire upper parts grass-green. White line behind the eye. Throat metallic-amethyst. Under parts pure white. Under tail coverts grayish-white. Wings purple-brown. Tail bronzy-green, all the feathers but the median pair, with a subterminal blackish-brown bar; tips buffy-white. Bill black. Total length, 4 in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Same as the male, excepting the throat, which is white spotted with green.

This species was described and placed in the genus OREOPYRA by Mr. Salvin, but it differs from the members of that genus in various ways, and is apparently more properly placed in the present one. I can find no characters to separate it from CÆLIGENA. From the species of OREOPYRA it differs, in having a rounded tail instead of a forked one, and also the sexes are alike, except that the female has no metallic throat spot; while the females of OREOPYRA are reddish-buff beneath—a style of coloration entirely different from the males.

## Genus XIII.—LAMPROLÆMA.

*Lamprolaima*, REICH., Aufz. der Colib. (1853), p. 9.

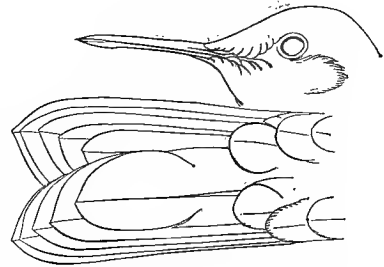
TYPE.  
*O. rhami*, Less.

*Ch.* Bill straight, slender, tip acute, about equal in length to the head. Wings long, ample. Tail long, slightly forked, feathers broad. Feet rather large; tarsi clothed to the toes. Sexes dissimilar in plumage.

*Range.* Mexico and Guatemala.

This genus, comprising but a single species, is closely allied to both the members of CÆLIGENA and OREOPYRA, and finds its natural position here, as a connecting link for the two genera just mentioned. The *L. rhami* is a very beautiful bird, about equal in size to the *C. clemenciæ*, and like that species has a brilliant throat, but differs from it in its lustrous metallic breast, which equals in beauty that of the *Oreopyra calolæma*, next to which species I have placed it.

Fig. 13.



*Lamprolæma rhami*. ♂. Oaxaca. Sallé.

1. *Lamprolæma rhami*.

*Ornismya rhami*, LESS., Rev. Zool. (1838), p. 315.

*Mellisuga rhami*, GRAY, Gen. Birds, vol. i, p. 112.

*Lampornis rhami*, BON., Consp. Gen. Av., p. 72 (1850).

*Lamprolaima rhami*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, pl. 746, fig. 4712-13 (1855).

*Delattria rhami*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Heliodoxa rhami*, REICH., Troch. Enum., p. 6 (1855).

*Lamprolæma rhami*, GOULD, Mon. Troch., vol. i, pl. 61.—ID., Intr. Troch., octavo ed., p. 59 (1861).

*Lamprolaema rhami*, CAB. and HEIN., Mus. Hein. Th., iii, p. 30 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 218.

*Hab.* Mexico, Guatemala.

*Male.* Entire upper surface grass-green. Greater wing coverts, secondaries, and basal two-thirds of primaries chestnut-red, remainder purplish-brown. Throat metallic amethyst-red, surrounded by black. Breast metallic dark blue. Rest of under surface blackish-brown spotted with green. Tail deep rich purple. Bill black. Total length,  $4\frac{5}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail, 2 in. Culmen,  $\frac{5}{8}$  in.

*Female* has the entire under surface grayish-brown; and the outer tail feathers are tipped with gray.



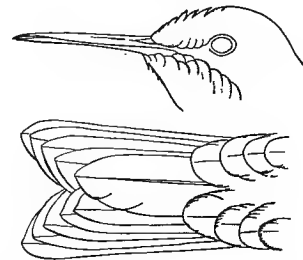
Genus XIV.—OREOPYRA.

*Oreopyra*, GOULD, P. Z. S. (1860), p. 312 (desc. null.)—ID., Intr. Troch., octavo ed., p. 141 (desc.).

TYPE.

*O. leucaspis*, Gould.

Fig. 14.



*Oreopyra calolæma*. ♂ ad. Veragua. Arac.

*Ch.* "Bill longer than the head, straight or very slightly arched; wings long and rigid (?); tail moderately long and forked; tarsi clothed; feet rather small." (Gould, loc. cit.)

Key to the species.

- A. Throat metallic-purple.
- B. Throat white, not metallic.
  - a. Tail black.
  - b. Tail grayish-white.

- 1. *O. calolæma*.
- 2. *O. leucaspis*.
- 3. *O. cinereicauda*.

The males of this genus are clothed in brilliant metallic plumage, one species having a metallic spot upon the throat, while the other two strangely enough have this part pure white. They are of moderate size, of graceful form, and the sexes are entirely different in the coloring of their plumage.

1. *Oreopyra calolæma*.

*Oreopyra calolæma*, SALV., P. Z. S. (1864), p. 584.

*Hab.* Costa Rica (Volcan de Cartago), Veragua.

*Male.* Top of head shining bluish-green. Upper parts dark grass-green. Entire throat metallic violet-red. Auriculars black; white line behind the eye. Breast shining bluish-green. Abdomen ashy-brown. Under tail coverts the same margined with white. Wings purplish-brown. Tail bluish-black. Bill black. Total length, 4 in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper parts grass-green. Entire under parts reddish-buff. Median rectrices dark green; base of lateral ones dark green, remaining parts steel-black, the two outermost feathers tipped with white.

2. *Oreopyra leucaspis*.

*Oreopyra leucaspis*, GOULD, Mon. Troch., vol. iv, pl. 264.—ID., Intr. Troch., octavo ed., p. 141 (1861).

*Metallura castaneiventris*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5 (1855).

*Anthocephala castaneiventris*, GOULD, Mon. Troch., vol. iii, pl. 203.—ID., Intr. Troch., octavo ed., p. 115, ♀.

*Hab.* Chiriqui.

*Male.* Top of head brilliant metallic light green. Upper part dark grass-green. Breast shining bright green. Throat pure white. Abdomen and under tail coverts grayish-brown, the latter margined with grayish-white. Wings purple-brown.

Tail steel-black. Bill black. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper parts grass-green. White line behind the eye. Auriculars black. Entire under parts reddish-buff. Median rectrices bronze-green. Lateral ones bronze-green at base graduating into black, with white tips. Bill black.

### 3. *Oreopyra cinereicauda.*

*Oreopyra cinereicauda*, LAWRE., Ann. N. Y. Lyc. Nat. Hist., vol. viii, p. 485, vol. ix, p. 125.

*Oreopyra castaneiventris*, LAWRE., Ann. N. Y. Lyc. Nat. Hist., vol. ix, p. 124 (partim).

*Hab.* Costa Rica.

*Male.* This species differs from *O. leucaspis* in the coloring of the tail, which is ashy-white. The under tail coverts are also paler. The bill is also longer. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{7}{8}$  in.

The female is exactly like that of *O. leucaspis*, but has a longer bill.

The next genus is composed of species remarkable for their coloration, and the high elevations at which they live. They are robust birds, the majority nearly pure white beneath, and all possessing brilliant throats. The sexes are very different in coloration, and the females of two of the species are so much alike that it is impossible to distinguish them apart, rendering it absolutely necessary that their correct localities should be given, to enable the birds to be satisfactorily determined.

### Genus XV.—OREOTROCHILUS.

*Oreotrochilus*, GOULD, P. Z. S. (1847), p. 10.

*Orotrochilus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 15 (1860).

#### TYPE.

*O. estellæ*, D'Orb.

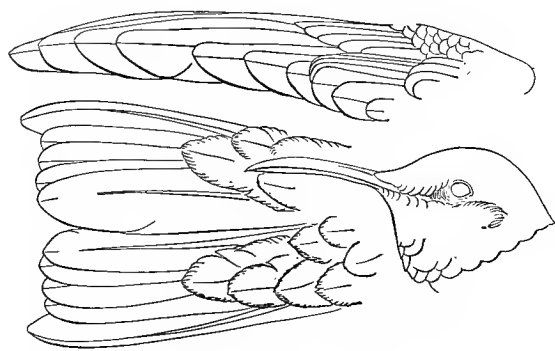
*O. pichincha*, Bourc.

*Ch.* "Bill longer than the head, almost cylindrical, but slightly curved downwards; wings rather large and powerful; tail large and rounded, the feathers narrow, rather pointed and rigid; feet strong, the hind toe and nail about equal in length to the middle toe and nail; tarsi clothed with feathers." (Gould, l. c.)

*Range.* West coast of South America, from Ecuador to Chili, along the Andes at considerable elevations.

Six species are known.

Fig. 15.



*Oreotrochilus pichincha*. ♂. Quito. Whitely.

*Key to the species.*

- A. Under parts white.
- |   |                             |
|---|-----------------------------|
| a. Head and throat shining violet-blue.                 | 1. <i>O. pichincha</i> .    |
| b. Head violet-blue, throat metallic-green.             | 2. <i>O. chimborazo</i> .   |
| c. Head brown, throat metallic-green, abdomen chestnut. | 3. <i>O. estellæ</i> .      |
| d. Head brown, throat green, abdomen steel-blue.        | 4. <i>O. leucopleurus</i> . |
- B. Under parts black, throat metallic-green. 5. *O. melanogaster*.
- C. Under parts deep chestnut, central line of black, throat metallic-green. 6. *O. adelæ*.

**1. Oreotrochilus pichincha.**

*Trochilus pichincha*, BOURC. and MULS., Ann. Acad. Sc., Lyon (1849), p. 427.

*Oreotrochilus jamesonii*, JARD., Contr. Ornith. (1849), p. 42.

*Oreotrochilus pichincha*, BON., Consp. Gen. Av., vol. i, p. 76 (1850).—ID., Rev. and Mag. Zool. (1854), p. 250.

—GOULD, Mon. Troch., vol. ii, pl. 68.—ID., Intr. Troch., octavo ed., p. 63.—REICH., Aufz. der Colib., p. 15 (1853).—ID., Troch. Enum. (1855), p. 12.

*Oreotrochilus pichincha*, CAB. and HEIN., Mus. Hein. Th., iii, p. 15.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 162.

*Hab.* Ecuador, volcanoes of Pichincha and Cotopaxi.

*Male.* Head and throat violet-blue, bounded beneath by a line of black. Upper parts olive-green. Wings purple-brown. Under parts pure white; a line of greenish-black down the centre of abdomen. Under tail coverts olive-green with light brown margins. Upper tail coverts bright green. Median rectrices dark green; outermost ones white at base, greenish-black for the remainder of their length; rest of tail feathers white, margined on outer webs with brownish-black. Bill and feet black. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Entire upper parts olive-green; throat white, each feather tipped with olive, under parts olive-brown, the feathers margined with brownish-white. Median rectrices dark green, remainder greenish-brown, white at base, and a white spot on the inner web at its tip.

**2. Oreotrochilus chimborazo.**

*Trochilus chimborazo*, DELATT., BOURC., Rev. Zool. (1846), p. 305.

*Oreotrochilus chimborazo*, GOULD, Mon. Troch., vol. ii, pl. 69.—ID., Intr. Troch., octavo ed., p. 62.—GRAY, Gen.

Birds, vol. i, p. 104, sp. 3.—REICH., Aufz. der Colib., p. 15.—ID., Troch. Enum., p. 12.—BON., Consp. Gen. Av., vol. i, p. 66.—ID., Rev. and Mag. Zool. (1854), p. 250.

*Oreotrochilus chimborazo*, CAB. and HEIN., Mus. Hein. Th., iii, p. 15 (note 5).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 166.

*Hab.* Ecuador, volcano of Chimborazo.

*Male.* This species differs from the *pichincha* in having a triangular spot of brilliant metallic-green on the throat. In all other respects the two are very similar in color and dimensions.

The female is so much like that of *pichincha* that it is impossible to tell them apart, and an authentic locality is necessary to enable one to arrive at a correct determination.

### 3. *Oreotrochilus estellæ*.

*Trochilus estella*, D'ORB and LAFRES., Syn. Av., no. 31, p. 32 (1838).

*Orthorhynchus estella*, D'ORB, Voy. Amer. Merid., t. iv (1835-44), p. 376, pl. 61, fig. 1.

*Trochilus ciciliæ*, LESS., Rev. Zool. (1839), p. 43.

*Oreotrochilus estellæ*, GOULD, Mon. Troch., vol. ii, pl. 70.—ID., Intr. Troch., octavo ed., p. 63.—BON., Consp.

Gen. Av., vol. i, p. 76.—ID., Rev. and Mag. Zool. (1854), p. 250.—GRAY, Gen. Birds, vol. i, p. 104, sp. 1.

—REICH., Aufz. der Colib., p. 15.—ID., Troch. Enum., p. 12.—ELLIOT, Ibis (1877), p. 142.

*Orotrochilus estellæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 16.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 169.

*Hab.* Bolivia, Peru.

*Male.* Head and upper parts olive-brown; passing to coppery-green on the upper tail coverts. Throat brilliant grass-green, bordered beneath by a line of black. Flanks olive-brown; breast and abdomen white, in the centre of the latter a line of deep chestnut. Under tail coverts olive-brown. Median rectrices dark green with bronze reflections; remainder white, bordered on the outer webs with black. Wings purplish-brown. Bill black. Total length, 5 in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

*Female* differs from the male in having the throat white, spotted with brown; under parts rufous-brown; and the lateral tail feathers white, crossed with a band of green in the centre. Dimensions the same as those of the male.

### 4. *Oreotrochilus leucopleurus*.

*Oreotrochilus leucopleurus*, GOULD, P. Z. S. (1847), p. 10.—ID., Mon. Troch., vol. ii, pl. 71.—ID., Intr. Troch.

octavo ed., p. 63.—GRAY, Gen. Birds, vol. i, p. 104, sp. 2.—REICH., Aufz. der Colib., p. 15 (1853)—ID.,

Troch. Enum., p. 12.—BON., Consp. Gen. Av., vol. i, p. 76 (1850).

*Orotrochilus leucopleurus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 16.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 172.

*Hab.* Chili.

*Male.* This species differs from the *estellæ* mainly by having the centre of the abdomen bluish-black instead of chestnut; and perhaps there is less of the blackish-brown margin on the white lateral rectrices. In dimensions the two species are about the same.

*Female.* The remarks already made regarding the females of *pichincha* and *chimboraço* may be repeated here; as without a knowledge of the locality the female of the present bird cannot be determined from that of *estellæ*.

### 5. *Oreotrochilus melanogaster*.

*Oreotrochilus melanogaster*, GOULD, P. Z. S. (1847), p. 10.—ID., Mon. Troch., vol. ii, pl. 72.—ID., Intr. Troch.,

octavo ed., p. 64.—GRAY, Gen. Birds, vol. i, p. 104.—BON., Consp. Gen. Av., vol. i, p. 76.—REICH., Aufz.

der Colib., p. 15.—ID., Troch. Enum., p. 12.

*Orotrochilus melanogaster*, CAB. and HEIN., Mus. Hein. Th., iii, p. 15 (note 6).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 176.

*Hab.* Peru (Maraynioc, Jelski).

*Male.* Upper parts olive-brown; throat metallic grass-green; under parts bluish-black. Upper tail coverts shining green, under coverts olive-brown margined with

buff. Tail steel-blue with green reflections. Bill and feet black. Total length,  $4\frac{5}{8}$  in. Wing  $2\frac{7}{8}$  in. Tail, 2 in. Culmen,  $\frac{3}{4}$  in.

*Female*. Upper parts light brown with a greenish lustre. Upper tail coverts shining green. Throat white, unspotted. Under parts brownish-white tinged with buff. Under tail coverts buffy-brown. Tail shining green, all the lateral feathers tipped with white.

*Adelæ's Trillie Spar.*

## 6. *Oreotrochilus adelæ*.

*Trochilus adelæ*, D'ORB and LAFRES., Syn. Av. (1838), no. 32, p. 33.

*Orthorhynchus adelæ*, D'ORB, Voy. Amer. Merid. Atl., pl. 61, fig. 2, p. 377, vol. iv.

*Oreotrochilus adelæ*, GOULD, Mon. Troch., vol. ii, pl. 73.—ID., Intr. Troch., octavo ed., p. 64.—GRAY, Gen.

Birds, vol. i, p. 104, sp. 4.—BON., Consp. Gen. Av., vol. i, p. 76.—REICH., Aufz. der Colib., p. 15.—ID.

Troch. Enum., p. 12.—ELLIOT, Ibis (1877), p. 142.

*Orotrochilus adelæ*, CAR. and HEIN., Mus. Hein. Th., iii, p. 15 (note 4).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 174.

*Hab.* Bolivia

*Male*. Upper surface olive-brown. Throat metallic grass-green. Under parts deep chestnut, with a central line of black. Under tail coverts olive-brown edged with buff. Tail cuneate shape; median feathers dark brown, remainder pale buff margined with olive-brown; outer webs almost wholly of this color. Shafts white. Bill and feet black. Total length,  $5\frac{3}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail  $2\frac{1}{8}$  in. Culmen, 1 in.

*Female* differs by having the throat white, spotted with olive-brown; under parts wholly rufous; and the lateral tail feathers buff with a subterminal black bar, and tipped with white on the inner web.

## Genus XVI.—LAMPORNIS.

*Lampornis*, SWAINS., Zool. Journ., vol. iii (1827), p. 358.

*Anthracothorax*, BOIE, Isis (1831), p. 546.

*Smaragdites*, BOIE, Isis (1831), p. 547.

*Floresia*, REICH., Aufz. der Colib. (1853), p. 11.

*Hypophania*, REICH., Aufz. der Colib. (1853), p. 11.

*Margarochrysis*, REICH., Aufz. der Colib. (1853), p. 11.

*Endoxa*, HEIN., Journ. für Ornith. (1868), p. 179.

### TYPE.

*T. mango*, Linn.

*T. violicauda*, Bodd.

*T. dominicus*, Linn.

*T. porphyryrus*, Shaw.

*T. dominicus*, Linn.

*T. dominicus*, Linn.

*T. mango*, Linn.

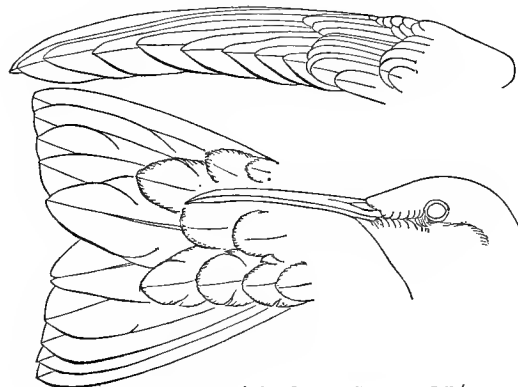
*Ch.* Bill longer than the head, curved; wings long as median rectrices. Tail slightly forked. Feet moderate, tarsi bare. Sexes unlike in plumage.

*Range.* Mexico, Central America, West India Islands of Hayti, Porto Rico, Jamaica, and St. Thomas. Venezuela, Guiana, Brazil, and Columbia.

Eight species are known.

The genus LAMPORNIS, Swainson (l. c.), had for types the *T. mango*, Linn., *T. pella*, Linn., and the *T. niger*, Swain.,

Fig. 16.



*Lampornis violicauda*. ♂. Caracas. Sallé.

Ill. Zool. The second of these is the type of *Topaza*, Gray, the third under its proper name of *FUSCUS*, Vieill., is the type of *FLORISUGA*, Bon., leaving the *T. mango*, Linn. (= *porphyryrus*, Auct.), as the type of *LAMPORNIS*, Swains.

The genus *SMARAGDITES*, Boie (l. c.), is a composite one. The first species cited by him is *Trochilus viridissimus*, but as no author's name is given, it is impossible to say what species is intended. The next is *T. aurulentus*, Vieill. (= *T. dominicus*, Linn.), and this I have adopted as the type of his genus.

*Key to the species.*

- |  |                            |
|--|----------------------------|
| A. Throat black.   |                            |
| a. Under surface black.  |                            |
| a'. The green flanks separated from the black abdomen by a line of blue. | 1. <i>L. violicauda</i> .  |
| b'. Sides of neck metallic purplish-red.                                 | 2. <i>L. mango</i> .       |
| b. Under surface golden-green, centre of abdomen bluish-green.           | 3. <i>L. prevosti</i> .    |
| B. Entire under surface shining green.                                   | 4. <i>L. viridis</i> .     |
| C. Throat metallic-green, breast blue.                                   | 5. <i>L. veraguensis</i> . |
| D. Throat metallic grass-green.  |                            |
| a. Middle of breast and abdomen black, flanks green.                     | 6. <i>L. gramineus</i> .   |
| b. Breast and under surface purplish-black.                              | 7. <i>L. calosoma</i> .    |
| E. Throat metallic yellowish-green, breast and under surface black.      | 8. <i>L. dominicus</i> .   |

Green and black are the principal hues in the plumage of these birds. They are moderate in size, and their metallic colors are chiefly confined to the throat and breast.

### 1. *Lampornis violicauda*.

*Trochilus violicauda*, BODD., Tab. Plan. Enlum. d'Aubent, no. 671, fig. 2 (1783).

*Trochilus albus*, GMEL., Syst. Nat. (1788), vol. i, p. 488, sp. 34.?

*Trochilus punctulatus*, GMEL., Syst. Nat. (1788), vol. i, p. 488, sp. 33. ?—LATH., Ind. Orn., vol. i, p. 306, sp. 15.?

*Trochilus nitidus*, LATH., Ind. Orn., vol. i, p. 305 (1790).

*Trochilus nigricollis, quadricolor, atricapillus, and punctatus*, BONNT., VIEILL., Ency. Méth., pp. 553, sp. 20; 555, sp. 28; 553, sp. 22; 550, sp. 9.

*Trochilus fasciatus*, SHAW, Gen. Zool., vol. viii, p. 303.

*Trochilus lazulus*, LESS., Trait. Orn., p. 290 (1832).

*Trochilus mango*, D'ORB. and LAFRES, Syn. Av., ii, p. 32, sp. 26 (1838).

*Polytmus mango*, GRAY, Gen. Birds, vol. i, p. 107, sp. 10 (1844-49).

*Anthracothorax mango*, REICH., Aufz. der Colib. (1853), p. 11.—ID., Troch. Enum. (1855), p. 8, t. 791, figs. 4839-41.

*Lampornis mango*, GOULD, Mon. Troch., vol. ii, pl. 74.—ID., Intr. Troch., octavo ed., p. 64, et Auct.

*Lampornis iridescens*, GOULD., Intr. Troch., octavo ed., p. 65 (1861).

*Lampornis violicauda*, ELLIOT, Ibis (1872), p. 351, and (1877) p. 141.

*Hab.* Brazil, Guiana, Venezuela, Panama, and Columbia.

*Male.* Upper surface and flanks golden-green. Throat and abdomen black, separated from the green of the flanks by a line of blue; under tail coverts violet-brown, or green varying in different specimens. Median rectrices bronzy-green, lateral ones violet-red, margined with steel-blue. Bill and feet black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{8}$  in.

*Female* differs in having the centre of the throat, breast, and abdomen black, bordered with white. Under tail coverts bronzy-green edged with grayish-white;

median rectrices bronze-green, lateral ones steel-blue, glossed with green on the outer webs, and tipped with white.

*Obs.* I have examined Mr. Gould's type of *L. iridescens*, and in my opinion the difference in color that it exhibits is too slight and unimportant to entitle it to a separate rank.

## 2. *Lampornis mango*.

*Mango-bird*, ALBIN, Birds, vol. iii, p. 45, t. 49, fig. 6.

*Trochilus mango*, LINN., Syst. Nat., p. 191, sp. 10 (1766).—GMEL., Syst. Nat. (1788), p. 491.

*Trochilus porphyurus*, SHAW, Nat. Misc., vol. ix, pl. 333, et Auct.

*Polytmus porphyurus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 20.

*Lampornis mango*, GOSSE, Birds, Jamaica (1847), p. 88.—ELLIOT, Ibis (1872), p. 350.

*Lampornis floresi*, BON., Rev. and Mag. Zool. (1854), p. 250.—ID., Consp. Av., vol. i, p. 72 (1850).

*Floresia porphyrura*, REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 8, t. 795, fig. 4849-50 (1855).

*Anthracothorax porphyurus*, REICH., Troch. Enum., p. 8, pl. 795, fig. 4849-50 (1855).

*Lampornis porphyrura*, CAB. and HEIN., Mus. Hein. Th., iii, p. 19 (1860).

*Endoaxa porphyrura*, HEINE, Journ. für Ornith. (1863), p. 179.

*Lampornis porphyurus*, GOULD, Mon. Troch., vol. ii, pl. 81.—ID., Intr. Troch., octavo ed., p. 67.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 163.

*Hab.* Jamaica.

*Adult.* Upper parts dark olive-brown, becoming greenish on the upper tail coverts, and glossed with purple on the nape. From the bill on each side of the neck is a broad band of metallic-purple, very brilliant. Throat and breast velvety-black, becoming brownish-black on abdomen and flanks. Under tail coverts dark green. Median rectrices brownish-black, lateral ones rich shining purple margined with steel-blue. Bill black. A white spot on each flank. Total length, 5 in. Wing,  $2\frac{3}{4}$  in. Tail, 2 in. Culmen,  $\frac{7}{8}$  in.

Some specimens have the chin green and the throat purplish-green. Mr. Gould says these are females. I have not been able to ascertain that this is a fact from any one who has dissected the specimens.

## 3. *Lampornis prevosti*.

*Trochilus prevosti*, LESS., Nat. Hist. Col., p. 87, pl. 24 (1831).

*Polytmus prevosti*, GRAY, Gen. Birds, vol. i, p. 108, sp. 15.

*Anthracothorax prevosti*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 8, pl. 792, fig. 4842-44 (1855).

*Lampornis prevosti*, GOULD, Mon. Troch., vol. ii, pl. 75.—ID., Intr. Troch., octavo ed., p. 65 (1861).—BON., Consp. Av., vol. i, p. 72 (1850).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 160.—BON., Rev. and Mag. Zool. (1854), p. 250.

*Hab.* Mexico, and Central America to Costa Rica.

*Male.* Upper surface, sides of neck, flanks, and abdomen bright golden-green. Chin and throat velvety-black. Centre of breast and abdomen bluish-green. Vent white. Under tail coverts purple. Median rectrices bronze-green; lateral ones purplish-red or bright violet margined with brownish-black. Bill black. Total length,  $4\frac{7}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen, 1 in.

*Female.* Similar to the female of *L. violicauda*, but the lateral rectrices are chestnut-red with a subterminal bar of steel-blue and tipped with white.

**4. *Lampornis viridis*.**

*Trochilus viridis*, AUD. and VIEILL., Ois. Dor. (1802), vol. i, p. 34, pl. xv.

*Agrytria viridis*, REICH., Troch. Enum., p. 7, pl. 765, figs. 4771-72 (1855).

*Chalybura viridis*, REICH., Aufz. der Colib., p. 10 (1853).

*Lampornis viridis*, GOULD, Mon. Troch., vol. ii, pl. 78.—ID., Intr. Troch., octavo ed., p. 66.—ELLIOT, Ibis (1872), p. 348.—BON., Consp. Av., vol. i, p. 71 (1850).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 172.

*Hab.* Porto Rico.

*Male.* Upper surface bronzy-green. Entire under surface shining grass-green. Wings purplish-brown. Tail deep blue, with green reflections, and edged at tip with white. Bill black. Total length,  $4\frac{1}{8}$  in. Wing,  $2\frac{5}{16}$  in. Tail,  $1\frac{1}{2}$  in. Culmen, 1 in.

*Female.* Head brown. Upper parts golden-green. Under parts grayish-white, tinged with green on the flanks. Median rectrices bronze-green, lateral ones steel-blue on their inner webs, bronzy-brown on the outer, and tipped with white. Bill black.

**5. *Lampornis veraguensis*.**

*Lampornis veraguensis*, GOULD, Mon. Troch., vol. ii, pl. 76.—ID., Intr. Troch., octavo ed., p. 65 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 18 (1860).—BON., Rev. and Mag. Zool. (1854), p. 250.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 146.

*Sericotes veraguensis*, REICH., Aufz. der Colib., p. 11 (1853).

*Anthracothonax (Sericotes) veraguensis*, REICH., Troch. Enum., p. 9, pl. 793, fig. 4848 (1855).

*Hab.* Veragna.

*Male.* Upper surface golden-green. Throat glittering grass-green. Breast shining blue, which color also reaches to the centre of the abdomen, flanks golden-green. Under tail coverts purple. Middle tail feathers bronzy-green, lateral ones bright purple margined with steel-blue. Wings purplish-brown. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{8}$  in.

*Female* has the centre of the throat and abdomen dark green, bordered with white. Lateral tail feathers chestnut, with a subterminal steel-blue bar, and tipped with white. Rest like the male.

**6. *Lampornis gramineus*.**

*Trochilus gramineus*, GMEL., Syst. Nat., vol. i, p. 488 (1788).

*Trochilus maculatus*, GMEL., Syst. Nat., vol. i, p. 488 (1788).

*Trochilus pectoralis*, LATH., Ind. Orn., vol. i, p. 306 (1790).

*Trochilus gularis*, LATH., Ind. Orn., vol. i, p. 563, Juv.

*Trochilus marmoratus*, VIEILL., Ency. Méth., p. 567, Juv.

*Polytmus dominicus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 11 (nec Linn.).

*Lampornis gramineus*, GOULD, Mon. Troch., vol. ii, pl. 77.—ID., Intr. Troch., octavo ed., p. 65.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 148.

*Lampornis graminea*, CAB. and HEIN., Mus. Hein. Th., iii, p. 18 (1860).

*Hab.* Guiana, Venezuela.

*Male.* Upper parts golden-green. Wings purplish-brown. Throat brilliant grass-green; flanks golden-green, with a white spot on each side. Centre of breast and abdomen black. Under tail coverts purplish-green. Median rectrices dark brown



with steel-blue reflections, lateral ones violet, margined and tipped with steel-blue. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $1\frac{1}{16}$  in.

*Female* differs in having the throat white, with the central portion black. Median tail feathers bronzy-green with black tips, lateral ones chestnut with a purple gloss, and a subterminal bluish-black bar and white tips.

The *young male* has the sides of the throat and abdomen chestnut; centre of throat shining green bordered with white; and the centre of abdomen black bordered with white. Tail similar to that of the female.

### 7. *Lampornis calosoma*.

*Chrysolampis chlorolæmus*, ELLIOT, Ann. Mag. Nat. Hist., 4th ser., vol. vi, p. 346 (1870).

*Lampornis calosoma*, ELLIOT, Ibis (1872), p. 351.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 177.

*Hab.* —?

*Male*. Top of head and neck pale metallic silvery-green, in some lights purplish; a black band across the back, rest of upper parts dark green; tail fiery copper color, feathers margined with blackish-purple; throat brilliant emerald-green; under parts purplish-black; spot of white on the flanks; under tail coverts chestnut. Bill black. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in. Description taken from the unique type in my collection.

*Female*. Unknown.

### 8. *Lampornis dominicus*.

*Trochilus dominicus*, LINN., Syst. Nat. (1766), p. 191, ♀.—GMEL., Syst. Nat. (1788), vol. i, p. 489.—LATH., Ind. Orn., t. i, p. 309.

*Trochilus margaritaceus*, GMEL., Syst. Nat., p. 490 (1788), ♀.

*Trochilus aurulentus*, VIEILL., Ois. Dor. (1802), pl. xii.—SHAW., Gen. Zool., t. viii (1811), p. 306.

*Polytmus margaritaceus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 13 (1844-49).

*Lampornis margaritaceus*, BON., Consp. Gen. Av., vol. i, p. 72, sp. 5 (1850).

*Margarochrysis aurulenta*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., t. 784, figs. 4822-23 (1855).

*Hypophania dominica*, REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 9, t. 795, figs. 4845-6.

*Lampornis aurulentus*, GOULD, Mon. Troch., vol. ii, pl. 79.—ID., Intr. Troch., octavo ed., p. 66.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 152.

*Lampornis virginialis*, GOULD, Mon. Troch., vol. ii, pl. 80.—ID., Intr. Troch., octavo ed., p. 66.

*Eulampis aurulentis*, BON., Rev. and Mag. Zool. (1854), p. 250.—BON., Consp. Av., vol. i, p. 71.

*Lampornis dominicus*, ELLIOT, Ibis (1872), p. 349.

*Hab.* St. Thomas, St. Domingo, Porto Rico.

*Male*. Upper surface dark yellowish-green. Throat metallic golden-green. Under surface black, with green flanks, and a spot of white on each. Under tail coverts dark purple. Wings purplish-brown. Median rectrices dark bronzy-green, lateral ones purple-violet bordered with steel-blue. Bill black. Total length, 5 in. Wing,  $2\frac{5}{8}$  in. Tail, 2 in. Culmen,  $\frac{3}{4}$  in.

*Female* differs in having all the under surface gray, and the lateral tail feathers purple-chestnut with a subterminal black bar and white tips.

## Genus XVII.—EULAMPIS.

*Eulampis*, BOIE, Isis (1831), p. 547.

*Culampis*, LESS., Ind. Gen. et Synop. du Genr. Troch., p. vii (1832).

*Sericotes*, REICH., Aufz. der Colib., p. 11 (1853).

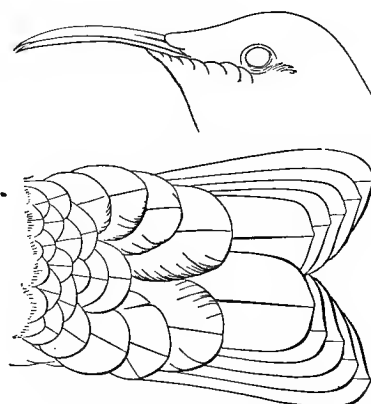
## TYPE.

*T. jugularis*, Linn.

*T. jugularis*, Linn.

*T. holosericeus*, Linn.

Fig. 17.



*Eulampis jugularis*. ♂. 74010. Dominica.

*Ch.* Bill longer than the head; curved; feathers of forehead projecting upon the culmen; nostrils partly covered; wings very long. Tail moderate, even, or slightly forked. Tarsi bare. Sexes alike.

*Range.* Islands of the West Indies.

*Key to the species.*

A. Breast and throat luminous green, bordered beneath with blue.

1. *E. holosericeus*.

B. Breast and throat shining vinous-purple.

2. *E. jugularis*.

The members of this genus are closely allied to those of LAMPORNIS; but, in addition to other characters, they possess luminous upper tail coverts, which render them very conspicuous. They are apparently more robust in form than the majority of the species of LAMPORNIS.

**I. *Eulampis holosericeus*.**

*Trochilus holosericeus*, LINN., Syst. Nat. (1766), vol. i, p. 191, sp. 11.—LATH., Ind. Orn., vol. i, p. 305.—LESS. Colib., p. 76, t. 20.

*Polytmus holosericeus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 12 (1844-49).

*Eulampis holosericeus*, GOULD, Mon. Troch., vol. ii, pl. 83.—ID., Intr. Troch., octavo ed., p. 68.—BOX., Consp. Av., vol. i (1850), p. 72.—ID., Rev. and Mag. Zool. (1854), p. 250.—ELLIOT, Ibis (1872), p. 352.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 134.

*Eulampis chlorolæmus*, GOULD, Mon. Troch., vol. ii, pl. 84.—ID., Intr. Troch., octavo ed., p. 68.—BOX., Rev. and Mag. Zool. (1854), p. 250.

*Sericotes chlorolæmus*, REICH., Aufz. der Colib., p. 11 (1853).

*Sericotes holosericeus*, REICH., Aufz. der Colib., p. 11 (1853).

*Anthracothorax (Sericotes) holosericeus*, REICH., Troch. Enum., p. 9, t. 794, fig. 4847 (1855).

*Anthracothorax chlorolæmus*, REICH., Troch. Enum., p. 9 (1855).

*Lampornis holosericeus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 19 (1860).

*Lampornis chlorolæmus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 19 (note) (1860).

*Eulampis longirostris*, GOULD, Inti. Troch., octavo ed., p. 69 (1861).

*Hab.* St. Thomas, St. Croix, Martinique, Dominica, Santa Lucia.

*Adult.* Upper surface dark green. Wings purplish-brown. Throat and breast bright grass-green, bordered beneath by a patch of shining blue. Rest of under

parts black. Upper and under tail coverts glittering blue, some feathers with green reflections. Bill black. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{8}$  in.

## 2. *Eulampis jugularis*.

*Trochilus jugularis*, LINN., Syst. Nat. (1766), p. 190, sp. 7.—LATH., Ind. Orn. (1790), vol. i, p. 305, sp. 12.

*Trochilus auratus, violaceus, venustissimus, and cyanomelas*, GMEL., Syst. Nat. (1788), vol. i, pp. 487, sp. 29; 488, sp. 41; 490, sp. 37; 498, sp. 62.

*Trochilus cyaneus, granatinus, and bancrofti*, LATH., Ind. Orn. (1790), vol. i, pp. 309, sp. 25; 305, sp. 11; 317, sp. 53.

*Souimanga prasinoptère*, VIEILL, Ois. Dor. (1802), vol. ii, p. 65.

*Certhia prasinoptera*, SPARR., Mus. Carlson, t. 81.

*Trochilus (Culampis) auratus*, LESS., Ind. Gen. Synop. Genr. Troch., p. vii (1831) (Les Trochilidæ).

*Polytmus jugularis*, GRAY, Gen. Birds, vol. i, p. 108, sp. 19 (1844-49).

*Topaza violacea*, GRAY, Gen. Birds, vol. i, p. 110, sp. 2.

*Eulampis jugularis*, GOULD, Mon. Troch., vol. ii, pl. 82.—ID., Intr. Troch., octavo ed., p. 67.—BON., Consp. Gen. Av., vol. i, p. 72 (1850).—ID., Rev. and Mag. Zool. (1854), p. 250.—REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 9, t. 796, figs. 4851-52 (1855).—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 17.—ELLIOT, Ibis (1872), p. 352.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 131.

*Hab.* Islands of Nevis, Martinique, Dominica, and Santa Lucia.

*Adult.* Upper parts velvety-black; wings and their coverts glittering dark green. Chin, throat, and breast shining vinous purple. Abdomen black. Upper and under tail coverts shining bluish-green. Tail dark dull-green. Bill black. Total length,  $4\frac{1}{2}$  in. Wing, 3 in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{8}$  in.

## Genus XVIII.—LAFRESNAYA.

*Calothorax*, GRAY (nec 1840), Gen. of Birds, vol. i, p. 110 (1848).

*Lafresnaya*, BON., Compt. Rend. (1850) p. 380.

*Entima*, CAB. and HEIN., Mus. Hein. Th., iii, p. 51 (1860).

*Euclosia*, MULS. and VERR., Class. Troch. (1865), p. 63.

### TYPE.

*T. flavicaudata*, FRAS.?

*T. flavicaudata*, FRAS.

*T. gayi*, BOURC.

*T. flavicaudata*, FRAS.

*Ch.* Bill weak, slender, much curved, about one-half as long as the body. Wings long, pointed; primaries curving inwards; outer web on the first hardly perceptible, inner webs very narrow. Tail nearly even, feathers pointed. Under tail coverts reaching two-thirds the length of rectrices. Feet moderate, tarsi clothed. Sexes different in plumage.

*Range.* Venezuela, Columbia, and Ecuador.

### Key to the species.

A. Breast green, abdomen black.

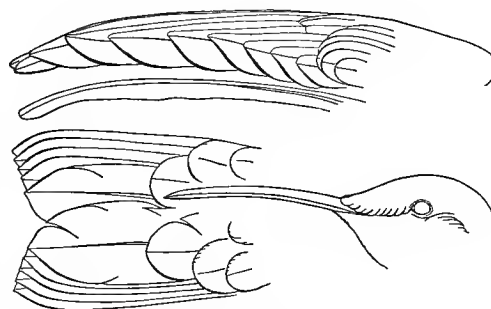
a. Lateral rectrices buff, margined and tipped with bronzy-brown.

b. Lateral rectrices white, tipped with bronze-green.

1. *L. flavicaudata*.

2. *L. gayi*.

Fig. 18.



*Lafresnaya flavicaudata*. ♂. Bogotá. Whitely.

These birds are characterized by a rather stout form, slender curved bills, metallic green breast and black abdomens.

### 1. *Lafresnaya flavicaudata*.

- Trochilus Lafresnayi*, BOISSON, Rev. Zool. (1840), p. 8 (January).  
*Trochilus flavicaudatus*, FRAS., P. Z. S. (1840), p. 18 (February).  
*Calothorax Lafresnayi*, GRAY, Gen. Birds, vol. i, p. 110.  
*Lafresnaya flavicaudatus*, BON., Consp. Gen. Av., vol. i, p. 68 (1850).  
*Lafresnaya flavicaudata*, REICH., Aufz. der Colib. (1853), p. 11.—ID., Troch. Enum., p. 8, pl. 785, figs. 4824-25.  
 —GOULD, Mon. Troch., vol. ii, pl. 85.—ID., Intr. Troch., octavo ed., p. 69.—BON., Rev. and Mag. Zool. (1854), p. 252.  
*Entima Lafresnayi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 51 (1860).  
*Euclosia Lafresnaya*, MULS., Hist. Nat. Troch., vol. ii, p. 187.

*Hab.* Columbia.

*Male.* Entire upper parts dark grass-green. Wings purplish-brown. Throat, breast, and flanks metallic grass-green; abdomen black. Median rectrices shining bronze-green. Lateral feathers buff, margined and tipped with bronzy-brown. Under tail coverts buff, tipped with bronze-green. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen, 1 in.

*Female* has under surface deep buff, spotted on the throat with green. Flanks green; whitish on abdomen. Rest like the male.

### 2. *Lafresnaya gayi*.

- Trochilus gayi*, BOURC. and MULS., Ann. Soc. d'Agr., Lyon (1846), p. 325.  
*Trochilus saulæ*, BOURC. and DELATT., Rev. Zool. (1846), p. 309.  
*Calothorax gayi*, GRAY, Gen. Birds, vol. i, p. 110, sp. 2.  
*Calothorax saulæ*, GRAY, Gen. Birds, vol. i, p. 110, sp. 3.  
*Lafresnaya gayi*, BON., Consp. Gen. Av., vol. i, p. 68.—REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 8, t. 786, fig. 4826-27.—BON., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Mon. Troch., vol. ii, pl. 86.—ID., Intr. Troch., octavo ed., p. 69.  
*Lafresnaya saulæ*, BON., Consp. Av., vol. i, p. 68.—REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum., p. 8, t. 786, fig. 4828-29.—GOULD, Intr. Troch., octavo ed., p. 70.  
*Entima gayi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 51 (1860).  
*Euclosia gayi*, MULS., Hist. Nat. Troch., vol. ii, p. 190.

*Hab.* Venezuela and Ecuador.

*Male.* Precisely like the *L. flavicaudata*, except that the lateral rectrices are white tipped with black or greenish-bronze, and the under tail coverts are also white tipped with green. Dimensions the same.

*Female* has the under surface white spangled with green, rest like the male. The *L. saulæ*, Bourc., cannot be separated from the present species. Bourcier's types are in my collection, and I can see no difference whatever between them and specimens of *L. gayi*. The coloring of the tips of the rectrices varies, and evidently is not a specific character. The species inhabits Venezuela and Ecuador, having rather oddly the *L. flavicaudata* dwelling in Columbia, just between these two localities.

The CHALYBURÆ are distinguished from all known Humming-birds by the great development of their plume-like under tail coverts, which peculiarity is observed

to exist in both sexes, although the color of their plumage is quite different. The males with one exception are clothed in green, which hue is most luminous on the under surface. In the single species that differs from the rest, the under parts are blue. Although this genus is placed immediately after LAFRESNAYA as being the nearest to it of those known, it yet presents certain characters differing so greatly from any found in that genus, that we may reasonably suppose another form yet remains to be discovered, that will take its place between them, and make the chain more complete.

### Genus XIX.—CHALYBURA.

*Chalybura*, REICH., Aufz. der Colib., p. 10 (1853).

*Cyanochloris*, REICH., Aufz. der Colib., p. 10 (1853).

*Hypuroptila*, GOULD, Mon. Troch., pt. vii (1853).—ID., Intr. Troch., octavo ed., p. 72 (1861).

*Methon*, MULS., Cat. Ois. Mouch. (1875), p. 7.

#### TYPE.

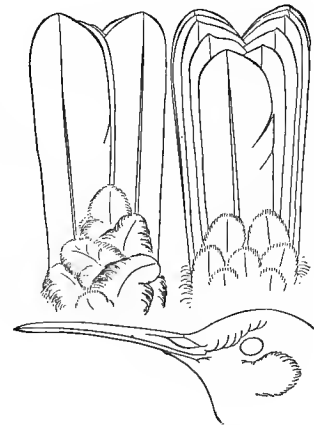
*T. buffoni*, Less.

*T. cæruleiventris*, Gould.

*T. buffoni*, Less.

*T. cæruleiventris*, Gould.

Fig. 19.



*Chalybura buffoni*, ♂ ad. Venezuela.  
Goering.

*Ch.* Bill longer than the head, broad at base, slightly curving towards the tip. Wings long. Tail slightly forked. Under tail coverts greatly developed, plume-like. Sexes unlike in the color of their plumage.

*Range.* From Veragua through Central America, Venezuela, Columbia.

Five species are known.

#### Key to the species.

##### A. Under parts green.

##### a. Under tail coverts white.

a'. Tail bluish-black, sometimes glossed with bronze.

b'. Tail golden-bronze.

c'. Tail bronzy-purple.

##### b. Under tail coverts black.

##### B. Under parts blue.

1. *C. buffoni*.

2. *C. urochrysea*.

3. *C. isauræ*.

4. *C. melanorrhœa*.

5. *C. cæruleiventris*.

### 1. *Chalybura buffoni*.

*Trochilus buffoni*, LESS., Trochil., p. 34, pl. 15 (1831).

*Polytmus buffoni*, GRAY, Gen. Birds, vol. i, p. 108.

*Lampornis buffoni*, BON., Consp. Gen. Av., p. 72.—ID., Rev. and Mag. Zool. (1854), p. 250.—MULS., Hist. Nat. Ois. Mouch., vol. i, p. 170.

*Chalybura buffoni*, REICH., Aufz. der Colib., p. 10 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 20 (1860).—GOULD, Intr. Troch., octavo ed., p. 72 (1861).

*Agyrtria buffoni*, REICH., Troch. Enum., p. 7, t. 766, figs. 4773-74 (1855).

*Hypuroptila buffoni*, GOULD, Mon. Troch., vol. ii, pl. 89.

*Chalybura aeneicauda*, LAW., Proc. Acad. Nat. Sc., Phil. (1865), p. 38 (ex Venezuela).

*Hab.* Venezuela and Columbia.

*Male.* Upper surface bronze-green, becoming a brighter bronze on the upper tail coverts. Entire under surface shining emerald-green. Under tail coverts are pure white, and greatly developed. Wings purple-brown. Tail bluish-black, glossed with bronze, this latter color most conspicuous on the middle feathers. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{3}{4}$  in. Culmen, 1 in. Specimens from Venezuela have the tail feathers frequently very much glossed with bronze, and this style has been named *æneicauda* by Lawrence.

*Female* differs in having the chin grayish-white, rest of under surface gray, the feathers tipped with green. Median rectrices bronze-green, tips blue-black, lateral ones blue-black tipped with white. Rest like the male.

### \*2. *Chalybura urochrysea*.

*Hypuroptila urochrysea*, GOULD, P. Z. S. (1861), p. 198.—ID., Mon. Troch., vol. ii, pl. 90.

*Chalybura urochrysea*, GOULD, Intr. Troch., octavo ed., p. 72 (1861).

*Lampornis urochrysa*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 176.—SALV., P. Z. S. (1867), p. 131.

*Hab.* Panama.

The type, which is unique, differs from the *C. buffoni* chiefly in the coloring of the tail, and as we know that specimens of the bird just named, from Venezuela, have frequently bronzy tail feathers, it is very questionable if the present is really a distinct species.

Mr. Gould's description is as follows:—

Head and upper surface dark-green, becoming of a bronzy-hue on the wing and upper tail covers: wings purplish-brown; tail rich golden-bronze both above and beneath; throat and breast grass-green; abdomen bronzy-green; thighs, vent, and under tail coverts pure white, upper mandible black, lower mandible fleshy-red with a black tip. Tarsi yellow or flesh-color. Total length,  $4\frac{3}{4}$  in. Bill,  $1\frac{1}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{7}{8}$  in.

### 3. *Chalybura isauræ*.

*Hypuroptila isauræ*, GOULD, P. Z. S. (1861), p. 199.

*Chalybura isauræ*, SALV., P. Z. S. (1867), p. 131, ♀.—GOULD, Intr. Troch., octavo ed., p. 72.

*Lampornis isauræ*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 174.

*Hab.* Veragua, Costa Rica (Gould).

Head and back dark grass-green; rump and upper tail coverts purplish. Wings purplish-brown. Throat and breast very dark blue-green; flanks dark mouse-color glossed with green. Under tail coverts white. Tail dark bronze, purplish on the lateral rectrices. Maxilla black; mandible flesh-color, tip black. Feet and tarsi flesh-color. Total length,  $4\frac{5}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen, 1 in. The above is taken from a fine adult male specimen, collected by Arcé in Veragua.

*Female.* Head and upper parts green. Rump and tail shining bronze. Wings brown. Under parts ashy, crissum white. Two lateral rectrices tipped with white. Maxilla brownish, mandible flesh-color, tip brown.

#### 4. *Chalybura melanorrhoa*.

*Chalybura melanorrhoa*, SALV., P. Z. S. (1864), p. 585.  
*Chalybura carmioli*, LAWR., Proc. Acad. Nat. Sci., Phila. (1865), p. 39.  
*Lampornis melanorrhoa*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 174.

*Hab.* Costa Rica, Veragua.

*Male.* Head and upper parts dark grass-green. Rump purplish-bronze. Wings purplish-brown. Under parts very dark shining grass-green. Abdomen dark brown glossed with green. Under tail coverts black. Tail dark bronzy-purple. Maxilla black, mandible flesh-color. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{7}{8}$  in.

#### 5. *Chalybura cæruleiventris*.

*Trochilus cæruleogaster*, GOULD, P. Z. S. (1847), p. 96.  
*Polytmus cæruleogaster*, GRAY, Gen. Birds, vol. i, p. 108, sp. 18.  
*Cyanochloris cæruleiventris*, REICH., Aufz. der Colib., p. 10 (1853).  
*Agyrtria (chalybura) cæruleiventris*, REICH., Troch. Enum., p. 7, pl. 767, figs. 4775-76 (1855).  
*Chalybura cæruleiventris*, CAB. and HEIN., Mus. Hein. Th., iii, p. 20 (1860).  
*Hypuroptila cæruleogaster*, GOULD, Mon. Troch., vol. ii, pl. 91.  
*Chalybura cæruleogaster*, GOULD, Intr. Troch., octavo ed., p. 73 (1861).  
*Lampornis cæruleiventris*, BON., Rev. and Mag. Zool. (1854), p. 250.—ID., Consp. Av., p. 72.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 168.

*Hab.* Columbia.

*Male.* Upper parts dark grass-green. Chin and throat shining green, graduating into a rich dark blue on the breast and abdomen. Flanks and lower parts of abdomen green. Under tail coverts pure white. Tail black, with steel-blue reflections. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail, 2 in. Culmen, 1 in.

*Female.* Differs from the male in having the under surface pale gray. Median rectrices bronzy-green, remainder bluish-black, with the two outermost feathers tipped with white.

#### Genus XX.—FLORISUGA.

*Orthorhynchus*, Ill. Prod. Syst. Mamm., etc., p. 209 (1811) (nec LACEPÈD., 1799-1800). *T. mellivorus*, Linn.  
*Lampornis*, LESS. (nec SWAINS., 1827), Tab. Esp. Ois. Mouch. (1829), p. xxiii. *T. mellivorus*, Linn.  
*Florisuga*, BON., Compt. Rend., p. 382 (1850). *T. mellivorus*, Linn.

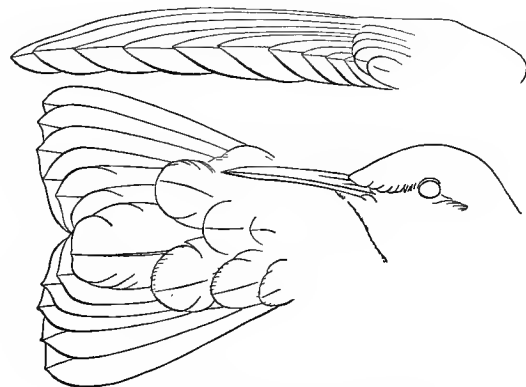
TYPE.

Fig. 20.

*Ch.* Bill strong, nearly straight, about as long as the head. Tail ample, slightly rounded. Wings nearly as long as the rectrices. Upper tail coverts reaching nearly to the tips of the median rectrices. Sexes unlike.

*Range.* Central America from Guatemala, northern parts of South America and the Amazonian region of Brazil; island of Tobago, Columbia, Peru.

But two species are known.



*Florisuga mellivora*. ♂. Bogota. Whitely.

*Key to the species.*

- |  |                          |
|--|--------------------------|
| A. Head and breast blue, back green, nape and abdomen white. | 1. <i>F. mellivora</i> . |
| B. Head and under parts black, back very dark green.         | 2. <i>F. fusca</i> .     |

These birds possess the general form of those composing the genus CHALYBURA, and with rather long under tail coverts; not, however, plume-like as in the others. The plumage is blue, green, and white, or black, and a peculiar feature is the pure white tail tipped with purplish-brown.

**1. *Florisuga mellivora*.**

*Trochilus mellivorus*, LINN., Syst. Nat. (1766), vol. i, p. 193.—GMEL., Syst. Nat., tom. i, p. 499.—LATH., Ind. Orn., vol. i, p. 310, sp. 34.

*Trochilus fimbriatus*, LINN., Syst. Nat. (1766), vol. i, p. 193.

*Mellisuga surinamensis*, STEPH., Gen. Zool., vol. xiv, p. 243, sp. 3.

*Ornismya mellivora*, LESS., Ois. Mouch., p. 90, t. 21-22 (1829).

*Florisuga mellivora*, BON., Consp. Gen. Av., vol. i, p. 73 (1850).—ID., Rev. and Mag. Zool. (1854), p. 253.—GOULD, Mon. Troch., vol. ii, pl. 113.—ID., Intr. Troch., octavo ed., p. 80.—REICH., Troch. Enum., p. 12 (1855).—ID., Aufz. der Colib., p. 14 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 29.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 178.

*Trochilus* (—?), *flabellifera*, GOULD, P. Z. S. (1846), p. 45.

*Topaza mellivora*, GRAY, Gen. Birds, vol. i, p. 110, sp. 6.

*Topaza fimbriata*, GRAY, Gen. Birds, vol. i, p. 110, sp. 7.

*Topaza flabellifera*, GRAY, Gen. Birds, vol. i, p. 110, sp. 8.

*Florisuga flabellifera*, GOULD, Mon. Troch., vol. ii, pl. 114.—ID., Intr. Troch., octavo ed., p. 81.—BON., Consp. Gen. Av., p. 74, sp. 3.—REICH., Aufz. der Colib., p. 14.—ID., Troch. Enum., p. 12.—CAB. and HEIN., Mus. Hein. Th., iii, p. 29 (note).—BON., Rev. and Mag. Zool. (1854), p. 253.

*Hab.* Central America from Guatemala, southward through Columbia and Peru; islands of Tobago and Trinidad; Venezuela, Guiana, and the Amazonian region of Brazil.

*Male.* Head and neck dark shining cobalt-blue. Across the nape of the neck, a cuneate-shaped white band, rest of upper parts dark shining grass-green. Wings purplish-brown. Upper part of breast and flanks shining grass-green. Rest of under parts pure white. Upper tail coverts very long, same color as the back. Tail pure white, feathers margined and tipped with purplish-brown. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{7}{8}$  in.

*Female.* Upper parts bronzy-green, dullest on the crown. Throat and upper part of breast white spotted with dark brown, flanks and upper parts of abdomen grass-green: rest of under parts white. Under tail coverts blackish-brown tipped with white. Tail bronzy-green, with a subterminal bar of deep blue, and the tips white. I have placed the *F. flabellifera* of Gould among the synonyms of this species, as it has no claims whatever to be considered a distinct species, not being even a local variety.

**2. *Florisuga fusca*.**

*Trochilus fuscus*, VIEILL., Nouv. Dict. Hist. Nat. (1817), vol. vii, p. 348.

*Trochilus ater*, PR. MAX., Reis. Bras., vol. i, p. 366; vol. ii, p. 136.

*Trochilus niger*, SWAIN., Zool. Ill., 1st ser., vol. ii, pl. 82.

*Ornismya lugubris*, LESS., Hist. Nat. Ois. Mouch., tom. i, p. 132, pls. 38 ♂, 39 ♀ (1829).

*Trochilus atratus*, LICHT., Doubl., p. 14.



- Trochilus leucopygius*, SPIX., Av. Bras., t. i, pl. 81, fig. 3 (1824).  
*Mellisuga atra*, SHAW, Gen. Zool., t. xiv, p. 243.  
*Topaza atra*, GRAY, Gen. Birds, vol. i, p. 110, sp. 4.  
*Florisuga atra*, BON., Consp. Av., vol. i, p. 74.—GOULD, Mon. Troch., vol. ii, pl. 115.—ID., Intr. Troch., octavo ed., p. 81.  
*Florisuga fusca*, REICH., Aufz. der Colib., p. 14 (1853).—BON., Rev. and Mag. Zool. (1854), p. 253.—ID., Consp. Av., p. 74.—REICH., Troch. Enum., p. 12 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 29.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 183.

*Hab.* Brazil.

*Male.* Head, neck, upper parts of back, and entire under surface, black. Lower part of back and rump very dark grass-green. Upper tail coverts very dark green with purple reflections. Median rectrices dark green with purple reflections (the specimen before me is more purple than green); lateral rectrices white tipped with purplish-brown. Wings light purplish-brown. Bill black. Total length,  $4\frac{2}{3}$  in. Wing,  $3\frac{1}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

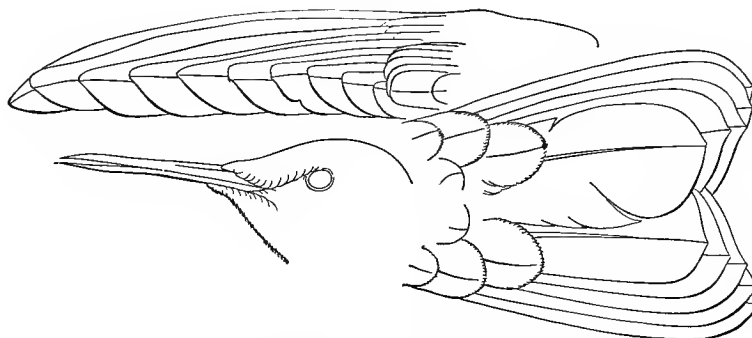
Genus XXI.—PETASOPHORA.

- ✓ *Colibri*, SPIX., Av. Bras. (1824), p. 80.  
*Petasophora*, G. R. GRAY, List of Gen. Birds (1840), p. 13.  
*Coeligena*, TSCHUD. (nec LESS., 1832), Faun. Per. (1844), p. 39, subgen. 3.  
*Lophornis*, TSCHUD. (nec LESS., 1832), Faun. Per. (1844), p. 39, subgen. 6.  
*Praxilla*, REICH., Aufz. der Colib., p. 13 (1853).  
*Colibri*, BON., ex SPIX., Consp. Gen. Av. (1850), p. 69.  
*Telesiella*, REICH., Aufz. der Colib. (1853), p. 13.  
*Telesiella*, CAB., Mus. Hein. Th., iii, p. 27 (1860).  
*Delphinella*, "REICH.," BON., Ann. Scien. Nat. (1854), p. 137.

TYPE.

- T. serrirostris*, Vieill.  
*T. serrirostris*, Vieill.  
*R. anais*, Less.  
*T. serrirostris*, Vieill.  
*R. anais*, Less.  
*T. cyanotis*, Bourc.  
*O. delphinæ*, Less.  
*O. delphinæ*, Less.  
*O. delphinæ*, Less.?

Fig. 21.



*Petasophora anais*, ♂. Antioquia, Columbia. Salmon.

*Ch.* Bill longer than the head, straight, equal in width until just at the tip, where it suddenly contracts to a sharp point. Feathers of the forehead project on to the culmen, covering the nostrils. Wings long, pointed, primaries slightly falcate. Tail broad, ample, and rounded. Feet rather large, strong; tarsi clothed. Hind toe and nail shorter than middle toe and nail. Sexes similar in plumage.

*Range.* Central America, Venezuela, Trinidad, Guiana, Brazil, Columbia, Ecuador, Peru, and Bolivia.

There are six species belonging to this genus.

*Key to the species.*

- A. General plumage green, metallic.
- a. Upper part of throat and chin, ear coverts and abdomen deep blue; lower part of throat and breast light metallic-green. 1. *P. anais*.
  - b. Throat and upper part of breast dark metallic green; ear coverts and abdomen dark blue. 2. *P. thalassina*.
  - c. Ear coverts violet-blue; throat and under parts metallic-green. 3. *P. cyanotis*.
  - d. Ear coverts, chin, and abdomen dark blue, throat with metallic-red reflections. 4. *P. coruscans*.
  - e. Ear coverts metallic purplish-red, under tail coverts white. 5. *P. serrirostris*.
- B. General plumage brown, not metallic.
- a. Ear coverts violet-blue; throat metallic-green. 6. *P. delphinæ*.

The PETASOPHORÆ are a strongly characterized group of birds, the species with one exception having a considerable resemblance to each other. They are of rather large size, distinguished by their metallic-blue ear coverts, metallic-green scaly-like breasts, and broad, ample bluish-green, barred tails. Their natural position in the Family is apparently after FLORISUGA.

**1. Petasophora anais**

*Rhamphodon anais*, LESS., Troch., p. 146, pl. 55 (1831).

*Polytmus anais*, GRAY, Gen. Birds, vol. i, p. 108, sp. 27.

*Trochilus thalassinus*, (nec SWAIN.), JARD., Humm.-B., vol. ii, p. 47.

*Trochilus anais*, JARD., Humm.-B., vol. ii, p. 73.

*Colibri anais*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).

*Praxilla anais*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).

*Petasophora anais*, GOULD, P. Z. S. (1847), p. 8.—ID., Mon. Troch., vol. iv, pl. 224.—ID., Intr. Troch., octavo ed., p. 124.—BON., Rev. and Mag. Zool. (1854), p. 250.—CAB. and HEIN., Mus. Hein. Th., iii, p. 26 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 144.—ELLIOT, Ibis (1876), p. 403.

*Petasophora iolata*, GOULD, P. Z. S. (1847), p. 9.—ID., Mon. Troch., vol. iv, pl. 225.—ID., Intr. Troch., octavo ed., p. 124.—CAB., Mus. Hein. Th., iii, p. 26.

*Polytmus iolata*, GRAY, Gen. Birds, vol. i, p. 108, sp. 28.

*Colibri iolata*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).

*Petasophora rhodotis*, "GOULD," Sauc. Mus. Hein.

*Praxilla iolata*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).

*Hab.* Venezuela, Columbia, Ecuador, Peru, and Bolivia.

*Adult.* Entire upper surface and flanks, shining grass-green. Chin, line under the eye, ear coverts, and centre of the abdomen purplish dark blue. Breast luminous green, each feather with a dark central green streak, giving this part the appearance of being scaly. Under tail coverts dark green margined with buff. Wings purplish-brown. Median rectrices bronze-green; lateral ones bluish-green, and all possessing a subterminal chalybeate bar. Bill black; feet brownish-black. Total length,  $4\frac{5}{8}$ – $5\frac{1}{4}$  in. Wing,  $2\frac{7}{8}$ – $3\frac{1}{4}$  in. Tail,  $2\frac{1}{8}$ – $2\frac{1}{4}$  in. Bill on culmen,  $\frac{7}{8}$  in.

In immature birds the chin is blue, and the feathers of the throat are black, margined with buff and with a few metallic green feathers interspersed. The green feathers of the upper surface and flanks are also margined with grayish-buff. In other respects they resemble the adult. Occasionally melanitic individuals are met with. One before me has the upper surface olive-brown. Chin and stripe under the eye blue-black. Breast luminous olive-green. Tail dark invisible green with a subterminal black bar.

**2. Petasophora thalassina.**

- Trochilus thalassina*, SWAINS., Phil. Mag. (1827), p. 441.  
*Ornismya anais*, LESS., Colib., p. 104 (1831).—ID., Suppl. Ois. Mouch., t. 3.  
*Rhamphodon anais*, LESS., Troch., p. 148, pl. 56 (1831-2).  
*Polytmus thalassinus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 26.  
*Petasophora thalassina*, GOULD, P. Z. S. (1847), p. 8.—ID., Mon. Troch., vol. iv, pl. 227.—ID., Intr. Troch., octavo ed., p. 125.—REICH., Troch. Enum., p. 11 (1855).—BON., Rev. and Mag. Zool. (1854), p. 250.—CAB. and HEIN., Mus. Hein. Th., iii, p. 27 (1860).—MULS., Hist. Nat. Ois. Mouch., p. 148.—ELLIOT, Ibis (1876), p. 404.  
*Colibri thalassina*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).  
*Praxilla thalassina*, REICH., Aufz. der Colib., p. 13 (1853).

*Hab.* Mexico, Guatemala.

*Adult.* Resembles closely the *P. anais*, but besides its smaller size, it may be distinguished from that species, by lacking the dark blue on the chin, this being green like the breast. Total length,  $4\frac{1}{8}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.

**3. Petasophora cyanotis.**

- Trochilus cyanotus*, BOURC., Rev. Zool. (1843), p. 101.—ID., Ann. Sci. Phys., Lyons, tom. vi (1843), p. 41.  
*Polytmus cyanotus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 25.  
*Ornismya anais*, LESS., Troch., p. 151, pl. 57 (1831-2).  
*Petasophora cyanotus*, GOULD, P. Z. S. (1847), p. 8.—ID., Mon. Troch., vol. iv, pl. 228.—REICH., Troch. Enum., p. 11 (1855).  
*Colibri cyanotis*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).  
*Praxilla cyanotis*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).  
*Petasophora cyanotis*, BON., Rev. and Mag. Zool. (1854), p. 251.—GOULD, Intr. Troch., octavo ed., p. 125.—CAB. and HEIN., Mus. Hein. Th., iii, p. 26 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 150.—ELLIOT, Ibis (1876), p. 404.  
*Petasophora cabanidis*, HEINE, Journ. für Ornith. (1863), p. 182.

*Hab.* Costa Rica, Veragua, Venezuela, Columbia, Ecuador, and Peru.

*Adult.* Distinguished from *thalassina* by having no blue upon the abdomen; this part being green like the back. Like *thalassina* the chin is green like the breast. Total length,  $4\frac{5}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail  $2\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

**4. Petasophora coruscans.<sup>1</sup>**

- Trochilus (Petasophora) coruscans*, GOULD, P. Z. S. (1846), p. 44.  
*Polytmus coruscans*, GRAY, Gen. Birds, vol. i, p. 108, sp. 29.  
*Petasophora coruscans*, GOULD, P. Z. S. (1847), p. 9.—ID., Mon. Troch., vol. iv, pl. 226.—ID., Intr. Troch., octavo ed., p. 125.—BON., Rev. and Mag. Zool. (1854), p. 251.—ELLIOT, Ibis (1876), p. 405.  
*Colibri coruscans*, BON., Consp. Gen. Av., p. 69 (1850).  
*Praxilla coruscans*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).

<sup>1</sup> I give a description of the specimen mentioned by me in the Ibis, 1876, p. 405. Upper and under surface shining grass-green, with a faint tinge of blue in the centre of the abdomen. Line under the eye and ear coverts deep blue. Chin greenish-blue. Throat metallic pink. Under tail coverts bright buff. Wings purplish-brown. Tail light bronze-green, with a subterminal blackish-brown bar. Bill and feet black. Total length,  $4\frac{1}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail 2 in. Culmen,  $\frac{3}{4}$  in.

Should this prove eventually to represent a distinct species, I would propose the name of *Petasophora rubrigularis*.

*Hab.* Columbia?.

*Adult.* Resembles the *P. anais*, but has the feathers of the throat shining green tipped with metallic-red, and the breast and centre of abdomen blue. In other respects like *anais*. Total length,  $4\frac{5}{8}$  in. Wing, 3 in. Tail,  $2\frac{1}{2}$  in. Culmen,  $\frac{1\frac{3}{8}}{1\frac{6}}{16}$  in. The type and one specimen in my collection are all that are known of this form.

### 5. *Petasophora serrirostris.*

*Trochilus serrirostris*, VIEILL., Nouv. Dict. Hist. Nat. (1817), vol. 7, p. 359.

*Colibri crispus*, SPIX., Av. Bras. (1824), vol. i, p. 80, t. 81, fig. 1.

*Grypus vieilloti*, STREPH., Gen. Zool., xiv, p. 256.

*Trochilus petasophorus*, PR. MAX., Reis. Bras., tom. ii, p. 191.—ID., Beitr., tom. iv, p. 76.—TSCHUD., Faun. Per., pp. 246–8 (1844).

*Ornismya petasophora*, LESS., Ois. Mouch., p. 37, pl. 1 (1829).—D'ORB. and LAFRES., Syu. Av., ii, p. 28, sp. 12 (1838).

*Polytmus serrirostris*, GRAY, Gen. Birds, vol. i, p. 108, sp. 24.

*Petasophora gouldi*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).

*Petasophora serrirostris*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).—ID., Rev. and Mag. Zool. (1854), p. 250.—GOULD, Mon. Troch., vol. iv, pl. 223.—ID., Intr. Troch., octavo ed., p. 124.—REICH., Aufz. der Colib., p. 13.—ID., Troch. Enum., p. 11.—CAB. and HEIN., Mus. Hein. Th., iii, p. 25.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 153.—ELLIOT, Ibis (1876), p. 406.

*Petasophora chalcotis*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).

*Petasophora crispa*, BURM., Th. Bras., tom. ii, p. 335 (1856).

*Hab.* Brazil, Bolivia (D'Orbigny).

This species has the ear coverts metallic-violet; and can be distinguished from all of the other members of this genus, by its under tail coverts which are pure white. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{1\frac{3}{8}}{16}$  in.

### 6. *Petasophora delphinæ.*

*Ornismya delphinæ*, LESS., Rev. Zool. (1839), p. 44.—ID., Ill. Zool. (1832), pl. 64.

*Polytmus delphinæ*, GRAY, Gen. Birds, vol. i, p. 108, sp. 30.

*Colibri delphinæ*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).

*Telesiella delphinæ*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).

*Petasophora delphinæ*, BON., Rev. and Mag. Zool. (1854), p. 250.—REICH., Troch. Enum., p. 11 (1855).—GOULD, Mon. Troch., vol. iv, pl. 229.—ID., Intr. Troch., octavo ed., p. 125 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 157.—ELLIOT, Ibis (1876), p. 406.

*Telesilla delphinæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 27 (1860).

*Hab.* Central America, Trinidad, Guiana, Venezuela, Columbia, Ecuador, and Peru.

*Adult.* Upper surface dark olive-brown; feathers of the rump and upper tail coverts margined with rufous. Ear coverts purplish-blue. Throat bronzy-green terminating in blue. Under parts light smoke-brown. Under tail coverts rufous with dark centres. Wings purplish-brown. Tail pale bronze-brown, with a sub-terminal dark brown band. Bill and feet black. Total length,  $4\frac{1}{8}$  in. Wing, 3 in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Young* has the throat white with a central spot of metallic-green, and the under parts generally, brownish-white, darkest in the centre of chest and abdomen.

Following PETASOPHORA come the members of PANOPLITES. These, although possessing the same form, differ entirely from each other in plumage. Exhibiting brilliant metallic colors, they yet agree only in having their upper parts green; while the under surface is clothed in strongly contrasted colors of diverse hues.

Two generic names were proposed for the following three species: viz., *Boissonneau*, Reich., and *Panoplites*, Gould, almost simultaneously, though the dates given would make the one first named have priority of about one year. Reichenboch's genus was never defined, and has not been employed by ornithologists except in a few instances. Mr. Gould did not give a definition of his genus until the Introduction to his Monograph of the Trochilidæ was published in 1861. It had, however, been generally accepted for the species he originally intended should be contained in it, and since it has been regularly defined by its author, while the other never has, I have employed the term of PANOPLITES, in place of *Boissonneau*. The three known species being essentially generically the same, the other terms proposed by M. Mulsant do not require any consideration.

Genus XXII.—PANOPLITES.

*Boissonneau*, REICH., Aufz. der Colib., p. 11 (1853).

*Panoplites*, GOULD, Mon. Troch., pt. viii (1854) (desc. null.).—ID., Intr. Mon. Troch., octavo ed., p. 79 (1861) (desc.).

*Alosia*, MULSANT., Cat. Ois. Mouch. (1875), p. 17.

*Galenia*, MULS. and VERR., Class. Troch. (1865), p. 47.

*Callidice*, MULS. and VERR., Class. Troch. (1865), p. 65.

TYPE.

*T. flavescens*, Lodd.

*T. jardini*, Bourc.

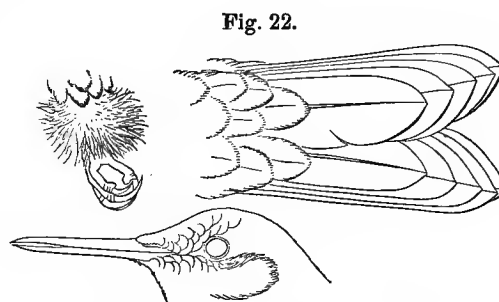
*T. matthewsi*, Bourc.

*T. jardini*, Bourc.

*T. flavescens*, Lodd.

*Ch.* Bill stout, straight, longer than the head. Wings long, pointed. Tail square, when spread, feathers broad. Tarsi clothed. Hind toe as long as the middle one. Sexes similar in plumage.

*Range.* Columbia and Ecuador  
Three species are known.



*Panoplites flavescens*. ♂. Antioquia, Columbia. Salmon.

*Key to the species.*

- A. Upper parts metallic-green.
  - a. Abdomen metallic blue. Lateral rectrices white, margined with purple. 1. *P. jardini*.
  - b. Under surface metallic golden-green. Lateral rectrices buff margined with bronzy-green. 2. *P. flavescens*.
  - c. Under surface deep chestnut-red. 3. *P. matthewsi*.

**1. *Panoplites jardini*.**

*Trochilus jardini*, BOURC., Compt. Rend. (1851), t. xxii, p. 187.

*Florisuga jardini*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12.—BON., Rev. and Mag. Zool. (1854), p. 253.

*Panoplites jardini*, GOULD, Mon. Troch., vol. ii, pl. 110.—ID., Intr. Troch., octavo ed., p. 80.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 233.—CAB. and HEIN., Mus. Hein. Th., iii, p. 74 (note 3).

*Hab.* Ecuador.

*Adult.* Crown shining violet-blue. Rest of head, nape, sides of the neck, black. Upper parts brilliant metallic bluish-green. Wing coverts shining golden-green. Throat, breast, and abdomen shining violet-blue, flanks glittering green. Under tail coverts blackish, tipped with white; upper coverts dark purple. Median rectrices bronzy-purple; lateral ones white margined and tipped with purplish-black. Wings purplish-brown. Bill black. Total length,  $4\frac{2}{3}$  in. Wing, 3 in. Tail, 2 in. Culmen,  $\frac{3}{4}$  in.

## 2. *Panoplites flavescens.*

*Trochilus flavescens*, LODD., Proc. Committ. Corresp. Zool. Soc. (1832), p. 7.

*Ornismya paradisea*, BOISS., Rev. Zool. (1840), p. 6.

*Mellisuga flavescens*, GRAY, Gen. Birds, vol. i, p. 112, sp. 26.

*Amazilia flavescens*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).

*Boissonneaua flavescens*, REICH., Troch. Enum., p. 8, pl. 787, figs. 4830-31.—ID., Aufz. der Colib., p. 11.

*Clytolæma flavescens*, BON., Rev. and Mag. Zool. (1854), p. 254.

*Panoplites flavescens*, GOULD, Mon. Troch., vol. ii, pl. 111.—ID., Intr. Troch., octavo ed., p. 80.—CAB. and HEIN., Mus. Hein. Th., iii, p. 74 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 335.

*Hab.* Columbia and Ecuador.

*Adult.* Crown of head and throat brilliant golden-green. Entire plumage of upper and under surface shining dark green. Thighs white. Under tail coverts pale green margined with buff. Wings purplish-brown, their under coverts rufous. Central tail feathers greenish-bronze, lateral ones light buff, margined and tipped with bronze-green. Bill black. Total length,  $4\frac{1}{4}$ . Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

## 3. *Panoplites matthewsi.*

*Trochilus matthewsi*, BOURC., P. Z. S. (1847), p. 43.

*Mellisuga matthewsi*, GRAY, Gen. Birds, vol. i, p. 112, sp. 27.

*Heliodoxa matthewsi*, REICH., Aufz. der Colib., p. 9 (1853).

*Clytolæma matthewsi*, BON., Rev. and Mag. Zool. (1854), p. 254.

*Boissonneaua matthewsi*, REICH., Troch. Enum., p. 8, pl. 788, figs. 4832-33 (1855).

*Panoplites matthewsi*, GOULD, Mon. Troch., vol. ii, pl. 112.—ID., Intr. Troch., octavo ed., p. 80.—CAB. and HEIN., Mus. Hein. Th., iii, p. 74 (note 2) (1860).

*Clytolæma (Alosia) matthewsi*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 230.

*Hab.* Western Ecuador, Peru.

*Adult.* Head, throat, and upper parts shining golden-green, darkest on the back. Under surface deep chestnut-red. Thighs and under tail coverts rich buff. Wings purplish-brown; their coverts shining grass-green. Central rectrices greenish-bronze, remainder cinnamon tipped with greenish-bronze. Bill black. Total length,  $4\frac{5}{8}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{5}{8}$  in.

An immature individual in my collection, obtained by Whitely at Huasaupilla, Peru, at an elevation of 9000 feet, had the upper surface dull green, and the under surface dark reddish-brown spangled with green. The central rectrices are reddish-bronze, and the rest reddish-buff, margined and tipped with reddish-bronze.

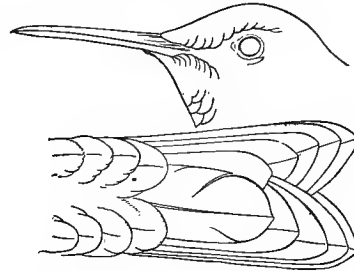
## Genus XXIII.—PHÆOLÆMA.

*Phaiolaima*, REICH., Aufz. der Colib. (1853), p. 9.

TYPE.

*T. rubinoides*, Bourc.

Fig. 23.



*Phaeolæma rubinoides*. ♂ ad. Bogota. Gould.

*Ch.* Bill longer than the head, stout, slightly curved; nostrils covered by frontal plumes; wings long, narrow, and pointed; tail rather short, slightly forked. Tarsi partly covered, feet moderate. Sexes alike in plumage.

*Range.* Columbia and Ecuador.

Two species are known.

*Key to the species.*

- |  |                             |
|--|-----------------------------|
| A. Under surface dark buff, glossed with metallic-green. |                             |
| a. Centre of crown metallic grass-green.                 | 1. <i>T. rubinoides</i> .   |
| b. Entire crown shining grass-green.                     | 2. <i>T. æquatorialis</i> . |

### 1. *Phaeolæma rubinoides*.

*Trochilus rubinoides*, BOURC. and MULS., Ann. Soc. d'Agr., Lyon (1846), p. 322.

*Mellisuga rubinoides*, GRAY, Gen. Birds, vol. i, p. 112.

*Heliomaster rubinoides*, BON., Consp. Gen. Av., p. 70 (1850).

*Phaiolaima rubinoides*, REICH., Aufz. der Colib., p. 9 (1853).—Id., Troch. Enum., pl. 743, figs. 4704-5 (1855).

*Clytolæma rubinoides*, BON., Rev. and Mag. Zool. (1854), p. 254.

*Heliodoxa rubinoides*, REICHENB., Troch. Enum., p. 6, pl. 743, figs. 4704-5 (1855).

*Phaeolæma granadensis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 30 (note) (1860).

*Phaeolæma rubinoides*, GOULD, Mon. Troch., vol. iv, pl. 268.—Id., Intr. Troch., octavo ed., p. 142.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 221.

*Hab.* Columbia.

*Male.* Head dark grass-green, with the front and a line in the centre of the crown brilliant metallic-green. Upper parts dark green. Chin and sides of neck shining green. Centre of throat metallic-purple. Breast dark buff. Under parts dark buff glossed with green. Upper tail coverts coppery-red; under tail coverts olive-green margined with buff. Tail bronzy olive-green. Wings purple. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail, 2 in. Culmen,  $\frac{3}{4}$  in.

*Female* like the male, without metallic throat spot.

### 2. *Phaeolæma æquatorialis*.

*Phaeolæma æquatorialis*, GOULD, Mon. Troch. (1860), vol. iv, pl. 264.—Id., Intr. Troch., octavo ed., p. 143.—CAB. and HEIN., Mus. Hein. Th., iii, p. 31 (note) (1860).

*Phaeolæma rubinoides*, SCLAT., P. Z. S. (1859), p. 145.

*Phaeolæma æquatorialis*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 223.

*Hab.* Ecuador.

*Male.* Precisely like the *P. rubinoides*, though slightly larger in size, and the entire top of the head is a rather dull dark green without the metallic lustre which

is visible on the centre of the crown in the allied species. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{7}{8}$  in. Tail, 2 in. Culmen,  $\frac{7}{8}$  in.

The *female* differs only in not having the metallic throat mark.

### Genus XXIV.—CLYTOLEMA.

*Clytolæma*, GOULD, Intr. Mon. Troch., octavo ed., p. 134, and Mon., pt. vi (1853).  
*Polyplanta*, HEIN., Journ. für Ornith. (1863), p. 132.  
*Heliodoxa*, REICH. (nec GOULD, 1849), Aufz. der Colib., p. 9 (1853).

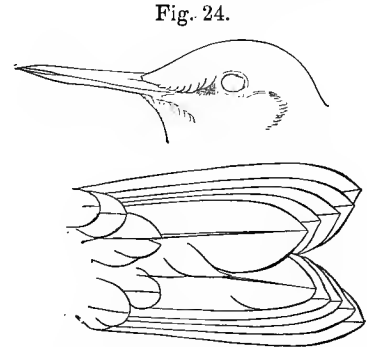
#### TYPE.

*T. rubinea*, Gmel.  
*T. aurescens*, Gould.  
*T. rubineus*, Gmel.

*Ch.* Bill stout, straight, longer than the head; nostrils covered by frontal plumes. Wings long, pointed. Tail forked. Tarsi partly clothed. Hind toe and nail shorter than fore toe and nail. Sexes dissimilar.

*Range.* Brazil, Ecuador, and Peru.

But two species belonging to this genus are known.



*Clytolæma rubinea*. ♂. 24695. Brazil.

#### *Key to the species.*

- |   |                          |
|---|--------------------------|
| A. Throat metallic-red, breast metallic-green.                          | 1. <i>C. rubinea</i> .   |
| B. Chin black, throat metallic-green, upper part of breast dark rufous. | 2. <i>C. aurescens</i> . |

The style of coloration in these two species is very different, and by some has been deemed of sufficient importance to place them in separate genera. In their structural characters, so far as known, they agree, and for the present at all events it is far better to leave them in the present genus. They are closely related to *PHÆOLEMA* and lead on to *IOLÆMA*.

### 1. *Clytolæma rubinea*.

- Trochilus rubineus*, GMEL., Syst. Nat., vol. i, p. 493 (1788).—LATH., Ind. Orn., vol. i, p. 312 (1790).  
*Trochilus obscurus*, GMEL., Syst. Nat. (1788), p. 495, sp. 50, juv.—LATH., Ind. Orn., vol. i, p. 314, sp. 44.  
*Trochilus ruficaudatus*, VIEILL., Nouv. Dict., vol. xxiii, p. 422.  
*Ornismya rubinea*, LESS., Ois. Mouch., p. 146, pls. 44, 45, 46 (1829).  
*Mellisuga rubinea*, GRAY, Gen. Birds, vol. i, p. 112, sp. 22.  
*Heliomaster rubineus*, BON., Consp. Gen. Av. p. 70 (1850).  
*Heliodoxa rubinea*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, t. 744, figs. 4706–9 (1855).  
*Calothorax rubineus*, BURM., Th. Bras., vol. ii, p. 340 (1856).  
*Clytolæma rubinea*, GOULD, Mon. Troch., vol. iv, pl. 249.—ID., Intr. Troch., octavo ed., p. 134.—BON., Rev. and Mag. Zool. (1854), p. 254.—CAB. and HEIN., Mus. Hein. Th., iii, p. 30.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 227.

*Hab.* Brazil.

*Male.* Forehead metallic grass-green, terminating in a point on the crown. Rest of crown and nape bronze-green. Remaining upper surface golden-rufous. Throat metallic-red; breast metallic light green; abdomen and flanks dull green.



Under tail coverts green edged with rufous. Wings purplish-brown; base of inner webs of secondaries rufous. Tail golden-brown, tipped with bronze-green. Bill black. Total length,  $4\frac{7}{8}$  in. Wing, 3 in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper surface grass-green. Under parts rufous. Median rectrices bronze-green, next three deep rufous tipped with bronze, and the outermost pale rufous.

## 2. *Clytolæma aurescens.*

*Trochilus (Lampornis) aurescens*, GOULD, P. Z. S. (1846), p. 88.

*Polytmus aurescens*, GRAY, Gen. Birds, vol. i, p. 108, sp. 23.

*Lampornis aurescens*, BON., Consp. Gen. Av., vol. i, p. 72 (1850).

*Margarochrysis aurescens*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 8 (1855).

*Campylopterus aurescens*, BON., Rev. and Mag. Zool. (1854), p. 250.

*Clytolæma aurescens*, GOULD, Mon. Troch., vol. iv, pl. 250.—ID., Intr. Troch., octavo ed., p. 134.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 225.

*Hab.* Ecuador and Peru.

*Male.* Forehead deep shining blue. All the upper surface and abdomen dark green. Chin black. Throat metallic grass-green. A broad band of deep rufous across the breast. Under and upper tail coverts grass-green. Median rectrices bronze-green; lateral ones chestnut-red tipped with bronze-green. Wings dark purple. Bill black. Total length,  $4\frac{3}{8}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Unknown.

## Genus XXV.—IOLÆMA.

*Ionolaima*, REICH., Aufz. der Colib. (1853), p. 9.

*Ionolæma*, GOULD, Mon. Troch., pt. xiii (1857).

*Iolæma*, GOULD, Intr. Troch., octavo ed., p. 73.

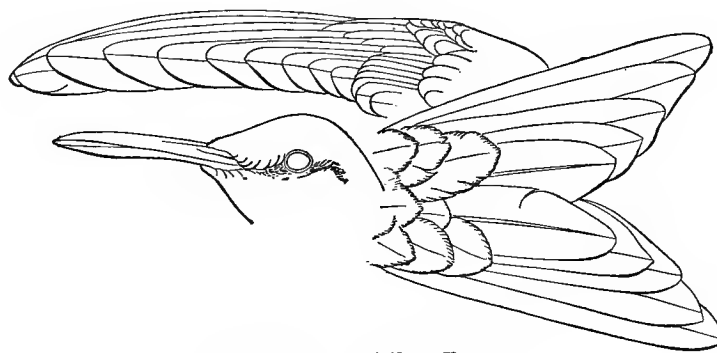
### TYPE.

*T. schreibersii*, Bourc.

*T. schreibersii*, Bourc.

*I. frontalis*, Lawr.

Fig. 25.



*Iolæma frontalis*. ♂. Rio Napo. Verreaux.

*Ch.* Bill stout, longer than the head, straight; nostrils hidden by frontal feathers; wings long, reaching two-thirds the length of tail. Tail long and deeply forked. Tarsi clothed; feet small, hind toe shorter than middle toe. Sexes unlike in plumage.

*Range.* Ecuador, Peru.

8 August, 1878.

I think there are four species belonging to this genus, of which two have been placed together by authors, and one considered the immature dress of the other. They are all large fine birds, distinguished by their luminous throat marks, and generally shining plumage.

*Key to the species.*

- |   |                            |
|---|----------------------------|
| A. No luminous spot on forehead.  |                            |
| a. Centre of throat brilliant metallic-topaz, or flame-color.                         | 1. <i>I. luminosa.</i>     |
| b. Centre of throat metallic violet-purple; buff stripe from gape to beneath the eye. | 2. <i>I. schreibersii.</i> |
| B. Metallic luminous spot on forehead.  |                            |
| a. Breast black.  | 3. <i>I. frontalis.</i>    |
| b. Breast green.  | 4. <i>I. whitelyana.</i>   |

### 1. \**Iolæma luminosa.*

*Iolæma luminosa*, ELLIOT, Ibis (1878), p. 188.

*Hab.* Unknown.

Top of head and nape dull dark green; chin and sides of the throat black; centre of throat most brilliant topaz, changing, according to the light, into a flame-color or a brilliant emerald-green; back bronzy-green, graduating into a rich purplish-red upon the upper tail coverts; breast, flanks, and abdomen brilliant metallic coppery-red; wings dark purple; tail has the median rectrices bronze; lateral ones dark purple, tinged with green upon the outer webs; under tail coverts reddish-bronze, margined with white; bill black; feet brownish-black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail, 2 in. Bill, culmen,  $1\frac{3}{8}$  in., at gape 1 in.

The type of this species, the most beautiful of the genus, is unique, and in Mr. Gould's collection.

### 2. *Iolæma schreibersii.*

*Trochilus schreibersii*, BOURC., P. Z. S. (1845), p. 43.

*Thalurania schreibersii*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—PELZ., Orn. Bras., p. 31.

*Calothorax schreibersii*, GRAY, Gen. Birds, vol. i, p. —.

*Campylopterus schreibersii*, BON., Rev. and Mag. Zool. (1854), p. 250.

*Heliodoxa (Ionolaima) schreibersii*, REICHENB., Troch. Enum. p. 6, pl. 745, fig. 4710-11 (1855).

*Ionolaima schreibersii*, GOULD, Mon. Troch., vol. ii, pl. 93.—REICH., Anz. der Colib., p. 9 (1853).

*Iolæma schreibersii*, GOULD, Intr. Troch., octavo ed., p. 73.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 138.

*Hab.* Ecuador, Rio Napo.

*Male.* This differs from the *I. frontalis*, by having the entire upper part of the head shining grass-green, without any metallic spot on the forehead. Throat and breast as in *frontalis*, but beneath, this is more or less glossed with green upon the abdomen, leaving only the centre black. A buff stripe goes from the gape to beneath the eye.

*Female.* Upper parts bronze-green. Median rectrices bronze, rest steel-blue, two outermost ones tipped with gray. Under surface gray, each feather tipped with green. The dimensions of the two species are the same.

I have kept these apart as I cannot satisfy myself that this bird is only an immature stage of plumage of the *I. frontalis*.

**3. *Iolæma frontalis*.**

*Ionolaima frontalis*, LAWRE, Ann. Lyc. Nat. Hist., N. Y., vol. vi, p. 263.—GOULD, Mon. Troch., vol. ii, pl. 92.  
*Iolæma frontalis*, GOULD, Intr. Troch., octavo ed., p. 73 (1861).

*Hab.* Ecuador, between the head waters of the Napo and Quito (Moore).

*Male.* Front has a brilliant metallic spot of grass-green. Rest of the top of the head and back dark grass-green. Chin and upper part of throat black; rest of throat metallic violet-purple, beneath which is a band of bright metallic-green. Rest of under parts black, flanks dark grass-green. Under tail coverts steel-blue. Upper tail coverts grass-green, lighter than the back. Tail dark brown, when the feathers are separated, with steel-blue reflections. Bill black. Total length,  $5\frac{1}{2}$  in. Wing, 3 in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{7}{8}$  in.

The female I have not seen, but she is probably very similar to that of *I. schreibersi*.

**3. \**Ionolæma whitelyana*.**

*Ioiæma whitelyana*, GOULD, Ann. and Mag. Nat. Hist., 4th ser. (1872), p. 4.—WHITELY, P. Z. S. (1873), p. 188.  
 —MÜLL., Hist. Nat. Ois. Mouch., tom. ii, p. 141.

*Hab.* Peru, Cosnipata, Province of Cusco.

*Male.* "Crown, all the upper surface and flanks deep grass-green; an obscure glittering mark on the forehead; chin, chest, and centre of the abdomen jet-black with a broad gorget of beautiful violet on the throat, the bill, which is stout and straight is black, as are also the legs and toes; the tail and under tail coverts steel-black; primaries and secondaries purplish-brown, the external edge of the outer primary reddish-brown. Total length,  $5\frac{1}{4}$  in. Bill,  $1\frac{1}{8}$  in. Wing 3 in. Tail,  $2\frac{1}{4}$  in." (Goold, l. c.)

**Genus XXVI.—STERNOCLYTA.**

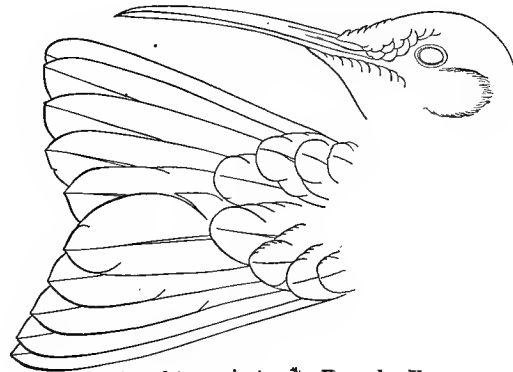
*Sternoclyta*, GOULD, Mon. Troch., pt. xvi (1858).—ID., Intr. Troch. octavo ed., p. 57. *T. cyaneipectus*, Gould.

TYPE.

Fig. 26.

*Ch.* Bill long, stout, curved, longer than the head. Tail large, slightly forked, when open (not rounded as stated by Gould). Wings very long, pointed. Tarsi partly clothed. Feet moderate. Sexes unlike. Size large.

*Range.* Venezuela.



*Sternoclyta cyaneipectus*. ♂. Venezuela. Verreaux.

### 1. *Sternoclyta cyanepectus*.

*Trochilus (Lampornis) cyanopectus*, GOULD, P. Z. S. (1846), p. 88.

*Polytmus cyanopectus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 22.

*Lampornis cyanopectus*, BON., Consp. Gen. Av., p. 72 (1850).

*Sæpiopterus cyanopectus*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 9 (1855).

*Campylopterus cyanopectus*, BON., Rev. and Mag. Zool. (1854), p. 250.

*Sternoclyta cyanepectus*, GOULD, Mon. Troch., vol. ii, pl. 58.—ID., Intr. Troch., octavo ed., p. 57.—CAB. and HEIN., Mus. Hein. Th., iii, p. 13 (note).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 178.

*Hab.* Venezuela.

*Male.* Upper parts and flanks dark grass-green. Wings purplish-brown, base of innermost primaries and secondaries rust-red. Throat brilliant green; breast metallic dark blue. Tail bronzy-brown; outermost feathers slightly tipped with white. Under tail coverts green margined with grayish-white. Maxilla black, mandible blackish-brown. Total length,  $5\frac{1}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $1\frac{1}{4}$  in.

*Female.* Upper parts like the male; under parts gray, feathers tipped with green.

### Genus XXVII.—EUGENES.

*Eugenes*, GOULD, Mon. Troch., pt. xii (1856).—ID., Intr. Troch., octavo ed., p. 57 (desc.) (1861).

TYPE.

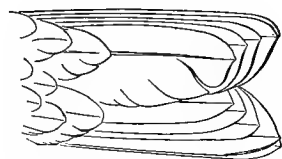
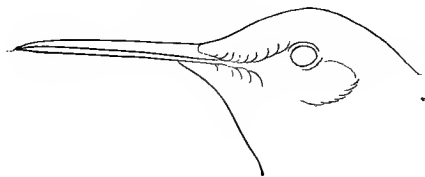
*T. fulgens*, Swains.

Fig. 27.

*Ch.* "Bill longer than the head, straight. Wings long and pointed; tail moderate and very slightly forked; tarsi clothed; feet rather small; hind toe about equal in length to the middle one." (Gould, loc. cit.)

*Range.* Texas, Mexico, Central America to and including Costa Rica.

Two species are known.



*Eugenes fulgens*. ♂. Oaxaca. Boucard.

#### Key to the species.

- A. Breast black, lateral rectrices bronzy-green.  
 B. Breast dark green, lateral rectrices dark bronzy-brown.

1. *E. fulgens*.  
 2. *E. spectabilis*.

### 1. *Eugenes fulgens*.

*Trochilus fulgens*, SWAIN., Phil. Mag. (1827), p. 441.

*Ornismya rivoli*, LESS., Ois. Mouch., p. 48, pl. 4 (1829).

*Mellisuga fulgens*, GRAY, Gen. Birds, vol. i, p. 112, sp. 2.

*Delatiria fulgens*, BON., Consp. Gen. Av., p. 70 (1850).

*Cæligena fulgens*, REICH., Aufz. der Colib., p. 7 (1853)—ID., Troch. Enum., p. 3, t. 686, fig. 4513-14.—BON., Rev. and Mag. Zool. (1854), p. 252 (1855).

*Eugenes fulgens*, GOULD, Mon. Troch., vol. ii, pl. 59.—ID., Intr. Troch., octavo ed., p. 58.—CAB. and HEIN., Mus. Hein. Th., iii, p. 20 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 212.

*Hab.* Texas, Mexico, and Guatemala.

*Male.* Top of head and occiput metallic violet-blue. Upper and under parts shining bronze-green, back and breast black in most lights. Median rectrices bronze-green; remainder bronzy-brown, edged with white. Under tail coverts greenish-gray, fringed with grayish-white. Throat brilliant grass-green. Bill black. Total length,  $4\frac{7}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{7}{8}$  in. Culmen, 1 in.

*Female.* Top of head brown. Upper surface light green. Under surface grayish-brown, feathers tipped with green. Median rectrices dark green; lateral ones green at base, with a subterminal blackish-brown bar, and tips white. A small white spot behind the eye. Bill black.

## 2. *Eugenes spectabilis*.

*Heliomaster spectabilis*, LAWRE., Ann. N. Y. Lyc. Nat. Hist. (1867), vol. 8, p. 472, juv.

*Eugenes spectabilis*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 215, pl. —.

*Hab.* Costa Rica.

*Male.* Forehead dull green. Top of head and occiput brilliant dark violet. Upper parts dark grass-green, back appearing black in certain lights. Wings purple. Throat metallic dark green, bluish in some lights. Under parts dark grass-green, breast never appearing black in any light. Under tail coverts green tipped with buff. Median rectrices dark bronze-green, remainder bronze-green graduating into blackish-brown, and edged with white on the tips. Bill black. Total length,  $5\frac{5}{8}$  in. Wing, 3 in. Tail,  $1\frac{7}{8}$  in. Bill,  $1\frac{1}{2}$  in.

*Young*, or possibly a *female*. Crown dull brown. Entire under parts dull grayish-brown with an ochreous tinge. Flanks dull green, with white pleural spot. Lateral rectrices green at base, a subterminal black bar and tips grayish-white.

## Genus XXVIII.—UROCHROA.

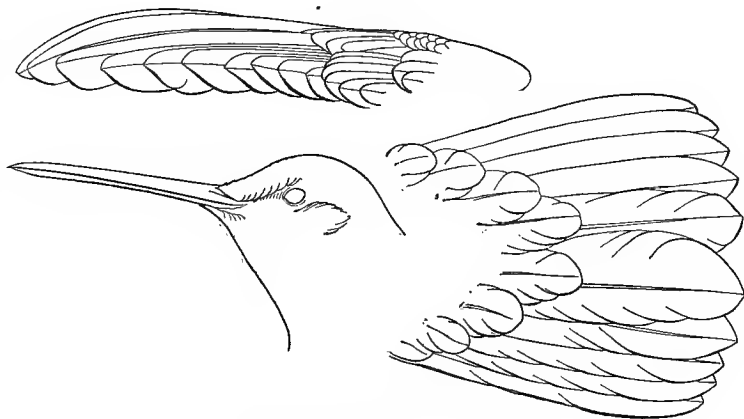
*Urochroa*, GOULD, Mon. Troch., pt. xii (1856).—ID., Intr. Troch., octavo ed., p. 56.

TYPE.  
*T. bougueri*, BOUCR.

Fig. 28.

*Ch.* Bill much longer than the head, straight. Wings reaching nearly to the end of the rectrices. Tail square, feathers pointed at tip; tarsi partly clothed; hind toe as long as the middle toe.

*Range.* Ecuador.



*Urochroa bougueri*, Ecuador. Bourcier.

### 1. *Urochroa bougueri*.

*Trochilus bougueri*, Bourc., Compt. Rend., t. 32, p. 186, juv. (1851).

*Cœligena bougueri*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 3 (1855).—Bon., Rev. and Mag. Zool. (1854), p. 252.

*Urochroa bougueri*, GOULD, Mon. Troch., vol. ii, pl. 57, juv.—ID., Intr. Troch., octavo ed., p. 56 (1861).—MULS., Hist. Nat. Ois. Mouch., vol. i, p. 192, pl. ad.

*Urochroa leucura*, LAWRE., Ann. N. Y. Lyc. Nat. Hist., vol. 8 (1864), p. 43, ad.

*Hab.* Ecuador.

*Adult.* Upper parts grass-green, changing to bronze on the rump and upper tail coverts. Wings purple. Throat and breast metallic dark blue. Flanks shining green. Rest of under surface dark olive-brown. Under tail coverts green edged with white. Median rectrices dark green, remainder white, margined with blackish-brown. Bill black. Total length,  $5\frac{1}{2}$  in. Wing,  $2\frac{7}{8}$  in. Tail 2 in. Culmen,  $1\frac{1}{4}$  in.

Young differ in having a conspicuous reddish-buff stripe from gape to beneath the eye. Upper parts bronzy-green, and outermost rectrices blackish-brown. Blue of the throat less brilliant. Description from type specimen in my collection.

The female is not known.

### Genus XXIX.—EUGENIA.

*Eugenia*, GOULD, P. Z. S. (1855), p. 192.

*Ch.* Bill long, straight, stout. Nostrils covered with feathers. Wings long and pointed. Tail lengthened, much forked; feathers narrow, stiff. Tarsi feathered nearly to the toe. Sexes dissimilar.

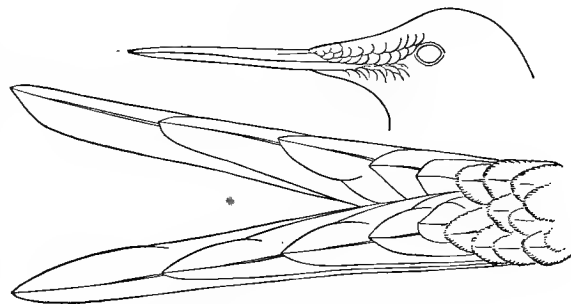
*Range.* Ecuador.

But one species is known of this genus.

TYPE.

*E. imperatrix*, Gould.

Fig. 29.



*Eugenia imperatrix*. ♂ Ansa. Ecuador. Gould.

### 1. *Eugenia imperatrix*.

*Eugenia imperatrix*, GOULD, P. Z. S. (1855), p. 192.—ID., Mon. Troch., vol. iv, pl. 234.—ID., Intr. Troch., octavo ed., p. 130 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 198.

*Hab.* Ecuador.

*Male.* Forehead and chin brilliant metallic-green. Crown and upper parts deep grass-green, very brilliant when viewed from behind. On the centre of throat a spot of metallic-violet. Breast very dark green. Abdomen and under tail coverts luminous greenish-yellow. Wings purple-brown. Tail feathers blackish-brown. Thighs brown. Bill black; feet black. Total length, 6 in. Wing, 3 in. Tail,  $3\frac{1}{8}$  in. Culmen (uncovered), 1 in.

*Female.* Upper parts grass-green; under parts grayish-white spangled with green. Median rectrices olive, lateral ones dark brown. Under tail coverts grass-green. Tarsi white. Total length,  $5\frac{1}{2}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{7}{8}$  in.

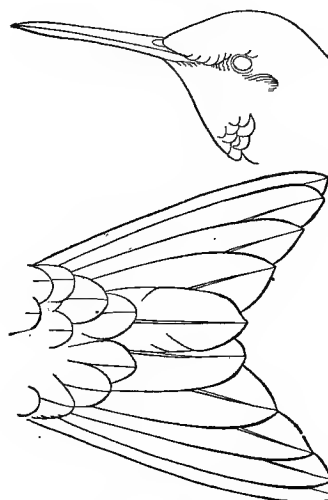
## Genus XXX.—LAMPRASTER.

*Lampraster*, TACZANOWSKI, P. Z. S. (1874), p. 140.

TYPE.

*L. branicki*.

Fig. 30.

*Lampraster branicki*. ♂. (From P. Z. S. 1874.)

*Ch.* Bill longer than the head, straight. Tail as long as the body, greatly forked. Under tail coverts exceed half the length of the rectrices. Tarsi covered with feathers to the toes.

*Range.* Peru.

But one species is known.

1. \**Lampraster branicki*.

*Lampraster branicki*, TACZANOW., P. Z. S. (1874), p. 140, pl. 21, fig. 1.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 200.

*Hab.* Peru.

*Male.* Centre of the crown occupied by a line of brilliant green, which commences at the base of maxilla, and changes to blue in the centre of the head. Upper parts shining grass-green. Throat metallic-rose, changing to violet in certain lights. Chin brilliant green. Breast shining green; lower part of abdomen, under tail coverts, and tarsi pure white. Greater wing coverts grass-green; secondaries rufous at base, blackish-brown on the remaining part. Median rectrices grass-green, lateral ones black, glossed with violet. Maxilla black; mandible flesh-color. Dimensions as given by M. Taczanowski. Total length, 105 mill. Wing, 68. Tail, 40. Bill at gape, 26.

Female is unknown. The type is unique, and is contained in the Museum at Warsaw.

## Genus XXXI.—HELIODOXA.

*Heliodoxa*, GOULD, P. Z. S. (1849), p. 95.

*Leadbeatera*, BON., Consp. Gen. Av. (1850), p. 70.

*Aspasta*, HEIN., Journ. für Ornith. (1863), p. 179.

*Hypolia*, MULS., Cat. Ois. Mouch. (1875), p. 17.

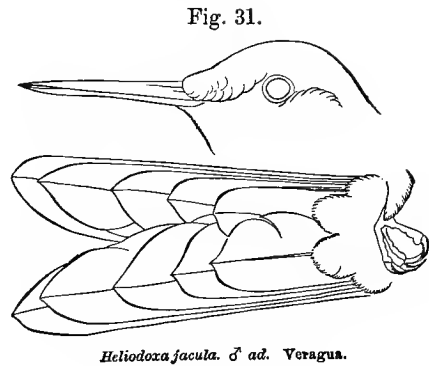
TYPE.

*H. jacula*, Gould.*T. leadbeateri*, Bourc.*T. leadbeateri*, Bourc.*T. leadbeateri*, Bourc.

*Ch.* Bill about as long as head, stout, straight, pointed at tip; feathers of the forehead projecting on to the bill, covering the nostrils; wings long, narrow, and pointed; tail rather long, forked; tarsi clothed to the base of the toes. Sexes dissimilar in plumage.

*Range.* Costa Rica, Veragua, Venezuela, Columbia, Ecuador, and Peru.

I recognize but three species belonging to this genus.



*Key to the species.*

A. Under surface shining metallic-green.

a. Spot of metallic-blue on the throat.

a'. Entire crown metallic grass-green.

b'. Centre of crown metallic grass-green, bordered with black.

b. Throat and breast metallic-green, no spot on the throat.

1. *H. jacula.*

2. *H. jamesoni.*

3. *H. leadbeateri.*

This genus, generally supposed to consist of five species, but which I have reduced to three, comprises birds of rather large size, possessing a plumage of extremely luminous colors, confined, as is usually the case, chiefly to the males. The plumage of the sexes is very different, and the species are distinguished by the presence or absence of a luminous spot on the throat, and by the various shades of green which compose the hues of their dress. They terminate the section of the Family to which they belong.

### 1. *Heliodoxa jacula.*

*Heliodoxa jacula*, GOULD, P. Z. S. (1849), p. 96.—ID., Mon. Troch., vol. ii, pl. 94.—ID., Intr. Troch., octavo ed., p. 74.—CAB. and HEIN., Mus. Hein. Th., iii, p. 22 (note 4) (1860).—MULS., Hist. Nat. Ois. Mouch., tom ii, p. 202.

*Leadbeatera jacula*, BON., Consp. Gen. Av., p. 70 (1850).—REICH., Aufz. der Colib., p. 7 (1853).—BON., Rev. and Mag. Zool. (1854), p. 251.

*Cæligena jacula*, REICH., Troch. Enum., p. 4, t. 688, fig. 4522 (1855).

*Hab.* Costa Rica, Veragua, and Columbia.

*Male.* Crown of the head and under parts brilliant metallic-green. In the centre of the throat a spot of metallic purplish-blue. Back shining grass-green. Wings purplish-brown. Upper tail coverts bronzy-green. Under tail coverts dark brown with green reflections. Tail blue-black. Bill black. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper parts dark grass-green. Under parts white with the tips of all the feathers metallic-green, giving to this part of the plumage a spotted appearance. Tail bluish-black, lateral feathers tipped with white.

Some specimens have a line beneath the eye and the lores reddish-buff.



## 2. *Heliodoxa jamesoni*.

- Trochilus jamesoni*, BOURC., Compt. Rend., t. xxxii, p. 187 (1851).—ID., Rev. and Mag. Zool. (1851), p. 97.  
*Cœligena (Leadbeatera) jamesoni*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4.  
*Leadbeatera jamesoni*, BON., Rev. and Mag. Zool. (1854), p. 251.  
*Heliodoxa jamesoni*, GOULD, Mon. Troch., vol. ii, pl. 95.—ID., Intr. Troch., octavo ed., p. 74.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 204.—CAB. and HEIN., Mus. Hein. Th., iii, p. 22 (note 5).

*Hab.* Ecuador.

This species is almost precisely like the *H. jacula*, but has only the front and a narrow line on the crown metallic-green; the rest of the crown on the sides appearing greenish-black. It is rather larger than the bird named, and has the bill slightly longer. Total length,  $4\frac{5}{8}$  in. Wing, 3 in. Tail,  $2\frac{1}{8}$  in. Culmen, 1 in.

The females of the two species resemble each other so closely that I can give no characters by which they may be distinguished.

## 3. *Heliodoxa leadbeateri*.

- Trochilus leadbeateri*, BOURC., Rev. Zool. (1843), p. 102.  
*Trochilus otero*, TSCHUD., Weigm. Archiv. (1843), p. 390.—ID., Faun. Peruan., p. 249, t. xxiii, fig. 2 (1845-46).  
*Leadbeatera grata*, BON., Consp. Gen. Av., p. 70 (1850).—ID., Rev. and Mag. Zool. (1854), p. 251.—GOULD, Intr. Troch., octavo ed., p. 75 (1861).  
*Leadbeatera otero*, REICH., Aufz. der Colib., p. 7 (1853).—BON., Rev. and Mag. Zool. (1854), p. 251.—GOULD, Intr. Troch., octavo ed., p. 74.  
*Leadbeatera sagitta*, REICH., Aufz. der Colib., p. 7 (1853).  
*Cœligena sagitta*, REICH., Aufz. der Colib., p. 23 (1853).—ID., Troch. Enum., p. 4, t. 689, fig. 4525, and t. 690, figs. 4527-28.  
*Cœligena otero*, REICH., Troch. Enum., p. 3, t. 689, figs. 4523-24 (1855).  
*Heliodoxa leadbeateri*, GOULD, Mon. Troch., vol. ii, pl. 97.—CAB. and HEIN., Mus. Hein. Th., iii, p. 22 (1860).—ELLIOT, Ibis (1876), p. 7.  
*Heliodoxa otero*, GOULD, Mon. Troch., vol. ii, pl. 96.—CAB. and HEIN., Mus. Hein. Th., iii, p. 22 (note 3) (1860).  
*Heliodoxa sagitta*, CAB. and HEIN., Mus. Hein. Th., iii, p. 22 (1860).  
*Leadbeatera splendens*, GOULD, Intr. Troch., octavo ed., p. 74 (1861).  
*Aspasta leadbeateri*, HEIN., Journ. für Ornith. (1863), p. 179.  
*Aspasta splendens*, HEINE., Journ. für Ornith. (1863), p. 180.  
*Aspasta otero*, HEIN., Journ. für Ornith. (1863), p. 180.  
*Hypolia leadbeateri*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 207.  
*Hypolia otero*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 209.  
*Hypolia splendens*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 211 (1876).

*Hab.* Venezuela, Columbia, Peru, and Bolivia.

*Male.* Crown of the head metallic-blue or bluish-green. Nape coppery-red; black when viewed from the front. Upper parts, abdomen, and flanks dark shining grass-green. Throat and breast extremely brilliant metallic-green. Under tail coverts dark olive margined with buffy-white. Upper tail coverts bronze. Median rectrices bronze, lateral ones black. Bill black. Total length,  $5\frac{3}{8}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  to 1 in.

*Female* has the upper parts grass-green, reddish on the nape. Under surface white spangled with green, like the female of *H. jacula*. Lower part of abdomen buff. Central rectrices bronze, lateral ones black tipped with white; under tail coverts pale olive-green, margined with buffy-white.

I have shown in the Ibis (1876, p. 7) how impossible it is to separate this species

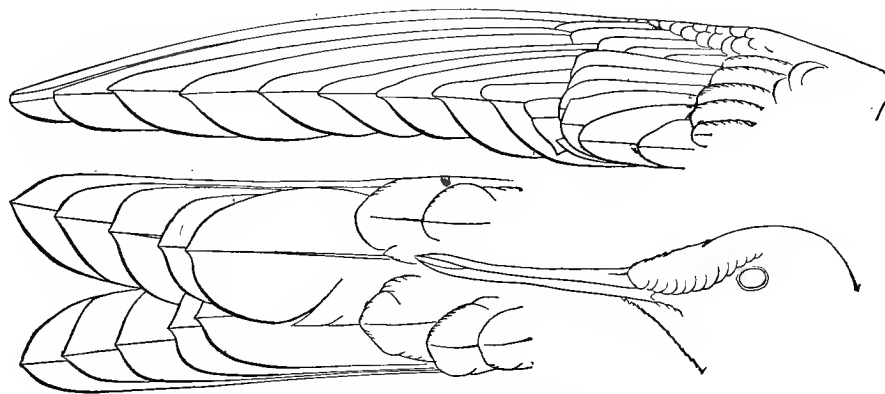
into three as has been attempted by previous writers, both the geographical distribution and the plumage of the specimens proving very conclusively that there is only one species.

### Genus XXXII.—PTEROPHANES.

TYPE.

*Pterophanes*, GOULD, *Intr. Troch.*, octavo ed., p. 105; *Id.*, *Mon. Troch.*, pt. 1 (1850). *O. temminckii*, BOSS.  
*Lepidoria*, MULS. and VERR., *Class. Troch.* (1865), p. 61. *O. temminckii*, BOSS.

Fig. 32.



*Pterophanes temminckii*. ♂. Yungas, Bolivia. Buckley.  
 (Ridge of Cillhuagaza, alt. 12,000 ft.)

*Ch.* Bill cylindrical, longer than the head, slightly curved upward at the point. Wings very large, falcate. Tail ample, forked. Tarsi clothed. Hind toe shorter than middle one. Sexes unlike.

*Range.* Columbia, Ecuador, Peru, and Bolivia.

The present genus contains but a single species, remarkable chiefly for its large size, being exceeded in this respect, by only one other in the Family. Although differing greatly from all the other genera, it still has its closest affinity to those species with stout, straight bills, and naturally finds its place here; although we must wait farther discoveries to enable us to supply the species needed to render its connection with the surrounding genera more close and complete.

#### 1. *Pterophanes temminckii*.

*Ornismya temminckii*, BOISS., *Rev. Zool.* (1839), p. 354.—*Id.*, *Mag. Zool.* (1840), Ois., pl. 14.

*Trochilus cyanopterus*, "LODD.," *FRAS.*, *P. Z. S.* (1840), p. 17.

*Mellisuga temminckii*, GRAY, *Gen. Birds*, vol. i, p. 112, sp. 10.

*Pterophanes temminckii*, GOULD, *Mon. Troch.*, vol. iii, pl. 178.—*Id.*, *Intr. Troch.*, octavo ed., p. 105.—*BON.*, *Consp. Gen. Av.* (1850), vol. i, p. 70.—*Id.*, *Rev. and Mag. Zool.* (1854), p. 251.—*REICH.*, *Anfz. der Colib.*, p. 14.—*Id.*, *Troch. Enum.*, p. 11.—*CAB. and HEIN.*, *Mus. Hein. Th.*, iii, p. 80.—*MULS.*, *Hist. Nat. Ois. Mouch.*, tom. ii, p. 290.

*Lepidoria temminckii*, MULS. and VERR., *Class. Troch.* (1865), p. 61.

*Hab.* Columbia, Ecuador, Peru, and Bolivia.

*Male.* Plumage of the body dark grass-green, black on the back in some lights. Wings deep shining blue, feathers tipped with black. Tail shining olive-green.

Bill black, feet flesh-color. Total length,  $6\frac{1}{2}$  in. Wing,  $4\frac{1}{2}$  in. Tail,  $3\frac{3}{8}$  in. Culmen,  $1\frac{1}{8}$  in.

*Female.* Top of head dark brown, white spot behind the eye. Upper parts bronzy-green, darkest on the rump. Greater wing coverts blue, primaries and secondaries purple-brown. Throat, breast, and abdomen rufous. Under tail coverts dark green. Four central tail feathers bronzy-green, rest black with green reflections, and white tips, the external feathers having the outer webs white. Total length,  $6\frac{1}{2}$  in. Wing, 4 in. Tail, 3 in. Culmen,  $1\frac{1}{8}$  in.

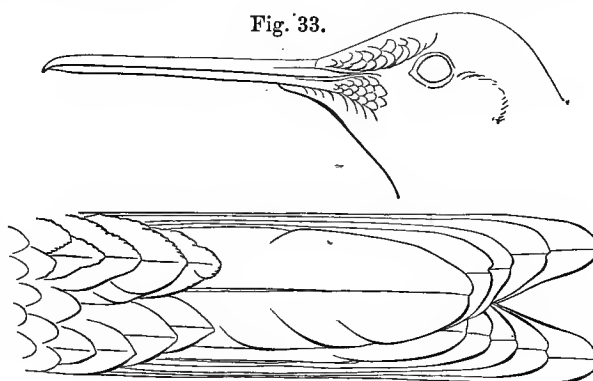
### Genus XXXIII.—PATAGONA.

*Cynanthus*, LESS. (nec SWAINS., 1827), Tabl. Esp. Ois. Mouch. (1829), p. xii.  
*Patagona*, GRAY, List of Genera of Birds (1840), p. 18.  
*Hylocharis*, GRAY, Gen. Birds, vol. i, p. 114 (1848, nec BOIE, 1832).  
*Hypermetra*, CAB. and HEIN., Mus. Hein. Th., iii, p. 80 (1860).

#### TYPE.

*T. gigas*, Vieill.  
*T. gigas*, Vieill.  
*T. gigas*, Vieill.  
*T. gigas*, Vieill.

*Ch.* Size very large. Bill much longer than the head, straight, stout. Feathers of the forehead projecting slightly upon the culmen, hiding the nostrils. Wings very long, reaching nearly to the end of the tail, pointed. Tail long, forked. Feet large, stout; tarsi clothed to the toes. Sexes alike.



*Patagona gigas*. ♂. Tinta, Peru. Whitely.

*Range.* Ecuador, Peru, Bolivia, and Chili.

This genus contains the largest species of Humming-birds known, and the remarks already made upon the genus PTEROPHANES, are equally applicable here. In a general arrangement of the Family, it evidently belongs somewhere in this neighborhood, but we must wait for future discoveries to show us its exact position.

### 1. *Patagona gigas*.

*Trochilus gigas*, VIEILL., Gal. Ois., tom. i, p. 296, pl. 180 (1834).  
*Ornismya (Cynanthus) tristis*, LESS., Ois. Mouch., p. 43, t. 3 (1829).  
*Ornismya gigantea*, D'ORB. and LAFRES., Syn. Av., p. 26, sp. 1 (1838).  
*Patagona gigas*, GRAY, List of Gen. Birds (1840), p. 14.—BON., Consp. Gen. Av., vol. i, p. 75—ID., Rev. and Mag. Zool. (1854), p. 251.—REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 11 (1855).—GOULD, Mon. Troch., vol. iv, pl. 232.—ID., Intr. Troch., octavo ed., p. 127 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 194—ELLIOT, Ibis (1877), p. 134.  
*Hylocharis gigas*, GRAY, Gen. Birds, vol. i, p. 114.  
*Hypermetra gigas*, CAB. and HEIN., Mus. Hein. Th., iii, p. 80 (1860).

*Hab.* West coast of South America from Ecuador into Chili.

*Adult.* Upper surface pale greenish-brown, with a patch of white on the rump. Wings purplish-brown. Throat and abdomen rusty-red, the feathers of the former with a blackish-brown spot at the tip. Breast pale brown, feathers edged with buff. Under tail coverts white. Tail dark brownish-green. Shafts of lateral

feathers white except at the tips. External feather grayish-white all but the tip which is brownish-green. Bill and feet black. Total length,  $8\frac{1}{2}$  in. Wing,  $5\frac{1}{8}$  in. Tail,  $3\frac{3}{4}$  in. Bill,  $1\frac{7}{16}$  in.

#### Genus XXXIV.—DOCIMASTES.

*Mellisuga*, GRAY (nec BRISSON., 1760), Gen. Birds, vol. i, p. 112 (1848).

*Docimastes*, GOULD, Mon. Troch., pt. i (1850).—ID., Intr. Mon. Troch., octavo ed., p. 129 (1861).

*Docimaster*, BON., Consp. Gen. Av., vol. i, p. 74 (1850).

TYPE.

*O. ensifera*, Boiss.

*O. ensifera*, Boiss.

*O. ensifera*, Boiss.

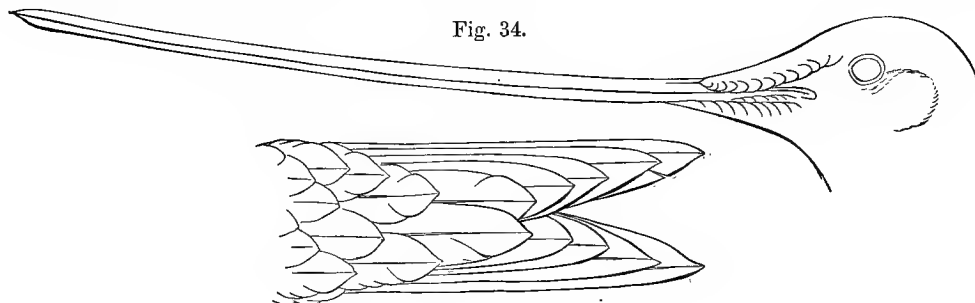


Fig. 34.

*Docimastes ensiferus*. ♂. Ecuador. Gardener.

*Ch.* Bill longer than the body and head, and inclining upwards at the tip. Feathers projecting on to the culmen and gonyms. Nostrils hidden. Bill compressed laterally for three-fourths of its length, when it becomes slightly flattened, and graduates rapidly to a point at the tip. Wings long and pointed. Tail forked. Feet rather small, with the hind toe shorter than the middle toe. Tarsi partly clothed. Sexes unlike in plumage.

*Range.* Columbia, Ecuador, and Peru.

The single species of this genus is remarkable for the extreme length of the bill, which exceeds that of the entire bird. The necessity for this extraordinary development is appreciated when the lengthened tubular flowers are seen, from the bottom of which the species obtains its food, and which could never be reached by a short-billed bird. In size it is a rather large species, the breast being the most luminous portions of the male.

#### 1. *Docimastes ensiferus*.

*Ornismya ensifera*, BOISS., Rev. Zool. (1839), p. 354.—ID., Mag. Zool. (1840), Ois., pl. 15.

*Trochilus derbyanus*, FRAS., P. Z. S. (1840), p. 16.

*Mellisuga ensifera*, GRAY, Gen. Birds, vol. i, p. 112, sp. 1.

*Docimastes ensiferus*, GOULD, Mon. Troch., vol. iv, pl. 233.—ID., Mon. Troch., octavo ed., p. 129.—REICH., Anz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 11 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 77 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 286.

*Docimaster ensiferus*, BON., Consp. Gen. Av., vol. i, p. 74 (1850).—ID., Rev. and Mag. Zool. (1854), p. 251.

*Docimastes schliephaekei*, HEINE, Journ. für Ornith. (1863), p. 215.

*Hab.* Columbia, Ecuador, and Peru.

*Male.* Head coppery-green; throat black, the feathers edged with buff. Upper surface bronzy-green. On either side of the neck and upper part of breast a broad metallic emerald-green band. Flanks bronzy-green. Middle of abdomen pale brown. Wings purplish-brown. Tail bronze. Behind the eye a spot of white.

Bill and feet black. Total length, from  $7\frac{1}{2}$ – $8\frac{5}{8}$  in. Wing,  $3\frac{1}{8}$  in. Tail,  $2\frac{3}{8}$ – $2\frac{5}{8}$  in. Bill on culmen, from 3–4 in.

*Female* differs in having the throat white, each feather with a dark brown central streak. Under surface bronzy-green, each feather margined with white; and also having the metallic-green bands around the throat. Total length,  $7\frac{1}{2}$ – $8\frac{3}{4}$  in. Wing, 3 in. Tail,  $2$ – $2\frac{1}{4}$  in. Culmen,  $3\frac{1}{4}$ – $4\frac{1}{4}$  in.

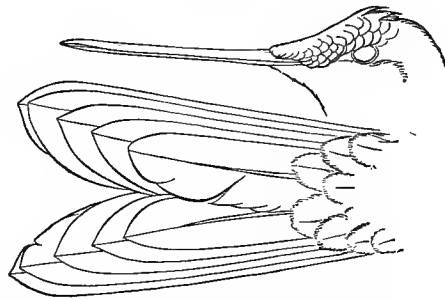
Some of my specimens of females have the bills longer than any of the males, even of those from the same localities.

### Genus XXXV.—DIPHLOGÆNA.

*Diphlogæna*, GOULD, Intr. Mon. Troch., octavo ed., p. 133 (1861), descr.

TYPE.  
*D. iris*.

Fig. 35.



*Diphlogæna hesperus*. ♂. Bolivia. Verreaux.

*Ch.* Bill straight, slender, very long. Wings very long, pointed. Tail long, deeply forked. Tarsi partially clothed. Sexes very dissimilar.

*Range.* Ecuador, Bolivia.  
Two species are known.

#### Key to the species.

- |  |                         |
|--|-------------------------|
| A. Centre of crown metallic-blue, forehead and sides of crown metallic orange-scarlet. |                         |
| a. Back chestnut-red.  | 1. <i>D. iris</i> .     |
| b. Back green.   | 2. <i>D. hesperus</i> . |

Still continuing with the straight long-billed birds, we come now to some of the most gorgeously plumaged species in the family. The present genus contains some that are remarkable for the diverse metallic hues of blue and scarlet observed on the head. The females are entirely different, having a metallic-green and chestnut plumage, and for a long time were deemed to represent a different species.

### 1. \**Diphlogæna iris*.

- Helianthea iris*, GOULD, P. Z. S. (1853), p. 61, pl. fig. 1 ♂.—BON., Rev. and Mag. Zool. (1854), p. 251.  
*Diphlogæna iris*, GOULD, Mon. Troch., vol. iv, pl. 247.—ID., Intr. Troch., octavo ed., p. 133 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 302.  
*Helianthea aurora*, GOULD, P. Z. S. (1853), p. 61, pl. fig. 2 ♀.—BON., Rev. and Mag. Zool. (1854), p. 251.—CAB. and HEIN., Mus. Hein. Th., iii, p. 80 (note 6) (1860).  
*Hypochrysiæ aurora*, REICH., Aufz. der Colib., p. 9.—ID., Troch. Enum., p. 6 (1855) ♀.  
*Hypochrysiæ iris*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, t. 735, figs. 4685–86 (1855).  
*Hypochrysiæ aurora*, REICH., Aufz. der Colib., p. 9, ♀, (1853).  
*Leadbeaterra warszewiczii*, REICH., Aufz. der Colib., ♀, p. 9.—ID., Troch. Enum., p. 6, t. 690, fig. 4526 (1855).  
*Cœligena warszewiczii*, REICH., Aufz. der Colib. (1853), p. 23, ♀.  
*Diphlogæna aurora*, GOULD, Mon. Troch., vol. iv, pl. 248.—ID., Intr. Troch., octavo ed., p. 134, ♀.  
*La Diphlogène aurore*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 303, ♀.

*Hab.* Bolivia.

*Male.* Forehead metallic golden-green, changing to metallic orange-scarlet on the sides of the crown. Centre of crown deep metallic-blue. Occiput and nape velvety-black. Wing coverts bronzy-brown. Wings purplish-brown. Throat and breast glittering grass-green, with a small spot of purplish-blue in the centre. Lower part of back, abdomen, upper and under tail coverts, and tail chestnut-red. Bill black. Total length,  $5\frac{1}{2}$  in. Wing,  $3\frac{3}{16}$  in. Tail,  $2\frac{1}{2}$  in. Culmen,  $1\frac{1}{16}$  in.

*Female.* Crown, throat, and breast metallic-green, brightest on the crown, rest of plumage chestnut-red.

## 2. *Diphlogæna hesperus.*

*Diphlogæna hesperus*, GOULD, Ann. Mag. Nat. Hist. (1865), p. 129.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 304.

*Hab.* Ecuador.

*Male.* Almost precisely like the *D. iris*, but differs in having the back and abdomen green. The tail with its coverts are deep chestnut-red, and the throat is metallic golden-green, with a very small spot of purple in the centre. The dimensions of the two species are the same.

*Female.* Like that of *D. iris*.

## Genus XXXVI.—HELIANTHEA.

*Helianthea*, GOULD, P. Z. S. (1848), p. 11.

*Phemone*, REICH., Aufz. der Colib. (1853), p. 9.

*Hypochrysis*, REICH., Aufz. der Colib. (1853), p. 9.

*Diphlogæna*, MULS. and VERR., Class. Troch. (1865), p. 61 (partim).

*Saturia*, MULS., Catal. Ois. Mouch. (1875), p. 21.

*Calligenia*, MULS., Catal. Ois. Mouch. (1875), p. 20.

TYPE.

*O. typica*, Less.

*O. isaacsoni*, Parzud.

*O. bonaparti*, Boiss.

*O. isaacsoni*, Parzud.

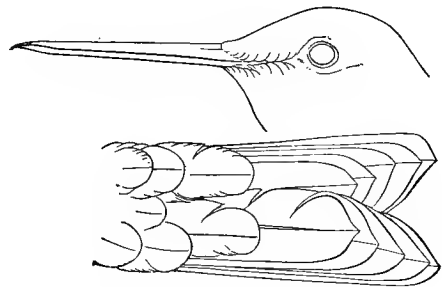
*T. lutitiæ*, Delatt. and Bourc.

*Ch.* Bill very long, straight, cylindrical. Wings long. Tail moderately long, slightly forked. Tarsi feathered. Sexes unlike in plumage.

*Range.* Venezuela, Columbia, Ecuador, Peru, and Bolivia.

Eight species are recognized as belonging to this genus. M. Mulsant has divided the members into various genera, not altogether happily, as he has grouped species together not particularly similar, and separated others that were: viz., *H. eos* and *H. lutitiæ* in *Calligenia*, leaving *H. bonaparti* in *HELIANTHEA*, whereas in every respect this last is closely allied to *H. eos*, which has a luminous rump, contrary to the species of *Calligenia* as restricted by M. Mulsant.

Fig. 36.



*Helianthea typica*. ♂ ad. Bogota. Whitely.

*Key to the species.*

- |  |                           |
|--|---------------------------|
| A. Rump and under parts exceedingly luminous.        |                           |
| a. Tail steel-black, rump metallic-green.            | 1. <i>H. isaacsoni</i> .  |
| b. Tail brownish-black, rump metallic-blue.          | 2. <i>H. typica</i> .     |
| c. Tail green, rump metallic golden-yellow.          | 3. <i>H. bonapartii</i> . |
| d. Tail cinnamon tipped with green.                  | 4. <i>H. eos</i> .        |
| B. Rump not luminous, under parts slightly metallic. |                           |
| a. Tail greenish-brown, yellow patch on secondaries. | 5. <i>H. lutetiæ</i> .    |
| C. Under parts buff.                                 |                           |
| a. Tail rufous, white band across breast.            | 6. <i>H. violifera</i> .  |
| b. Tail bright buff tipped with green, breast green. | 7. <i>H. osculans</i> .   |
| c. Tail with a broad terminal band of green.         | 8. <i>H. dichrourea</i> . |

The Helianthiæ are large fine birds, with luminous foreheads in the majority of the species, and all possess brilliant throats and breasts.

**1. Helianthea isaacsoni.**

- Ornismya isaacsoni*, PARZ., Rev. Zool. (1845), p. 95.  
*Hylocharis isaacsoni*, GRAY, Gen. Birds, vol. i, p. 114 (1844-49).  
*Eriopus isaacsoni*, BON., Consp. Gen. Av., p. 80, sp. 9 (1850).  
*Eriocnemis isaacsoni*, BON., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Mon. Troch., vol. iv. pl. 272.—Id.,  
 Intr. Troch., octavo ed., p. 144 (1861).  
*Phemonoe isaacsoni*, REICH., Aufz. der Colib., p. 9 (1853).—Id., Troch. Enum., p. 6, t. 741, fig. 4700 (1855).  
*Helianthea isaacsoni*, ELLIOT, Ibis (1874), p. 331.  
*Saturia isaacsoni*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 299.

*Hab.* Unknown.

Upper part of head dark metallic-green, a small spot of very luminous light grass-green upon the forehead. Back grass-green inclined to bronze in certain lights. Wings like the back; primaries purplish-brown. Rump and upper tail coverts brilliant metallic grass-green. Entire throat brilliant metallic grass-green. Breast metallic-green, lighter than the throat; rest of under parts metallic coppery-bronze changing in certain lights to red upon the abdomen. Under tail coverts brilliant grass-green. Tail brownish-black with a purple shade. Bill black. Tarsi partly covered with short white feathers. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail, 2 in. Culmen, 1 in.

But two specimens are known. One is in my collection, and one in the Liverpool Museum.

**2. Helianthea typica.**

- Ornismya typica*, LESS., Rev. Zool. (1838), p. 314.  
*Mellisuga helianthea*, GRAY, Gen. Birds, vol. i, p. 112, sp. 6.  
*Helianthea typica*, GOULD, Mon. Troch., vol. iv, pl. 235.—Id., Intr. Troch., octavo ed., p. 130.—ELLIOT, Ibis  
 (1874), p. 332,—et auct.  
*Helianthea porphyrogaster*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 293.

*Hab.* Columbia.

*Male.* Forehead metallic grass-green. Top of head and loreal space velvety-black. Back, wing coverts, chin, and breast very dark green, appearing black in some lights. Centre of throat metallic purplish-blue. Wings purplish-brown. Abdomen

metallic-lilac, very brilliant. Under tail coverts dark maroon. Tail dark olive-green. Upper tail coverts brilliant metallic light green. Bill black. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $1\frac{1}{4}$  in.

*Female.* Above grass-green. Rump metallic purplish-green. Beneath deep buff, feathers of breast tipped with green; those of the abdomen with metallic-crimson. Under tail coverts green tipped with buff. Tail and wings like the male.

*Young.* Throat buff, rest of under parts blackish-brown, streaked with white. Rest of plumage like the female.

### 3. *Helianthea bonapartii*.

*Ornismya bonapartii*, BOISS., Rev. Zool. (1840), p. 6.

*Trochilus aurogaster*, FRAS., P. Z. S. (1840), p. 16.

*Mellisuga bonapartii*, GRAY, Gen. Birds, vol. i, p. 112, sp. 8.

*Hypochrysis bonapartii*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, t. 734, figs. 4683-84.

*Helianthea bonapartii*, GOULD, Mon. Troch., vol. iv, pl. 236.—ID., Intr. Troch., octavo ed., p. 130.—BON.,

Consp. Gen. Av., vol. i, p. 74.—ID., Rev. and Mag. Zool. (1854), p. 251.—CAB. and HEIN., Mus. Hein.

Th., iii, p. 80 (1860).—ELLIOT, Ibis (1874), p. 332.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 295.

*Hab.* Columbia.

*Male.* Forehead metallic dark green. Rest of head, back, throat, and breast deep shining green. Rump and upper tail coverts metallic coppery-red. Middle of throat metallic purplish-blue. Abdomen brilliant metallic coppery-red. Under tail coverts and tail bronze, the former sometimes edged with buff. Wings purple. Bill black. Total length,  $4\frac{7}{8}$  in. Wing, 3 in. Tail,  $2\frac{1}{2}$  in. Culmen,  $1\frac{1}{16}$  in.

*Female.* Above green, becoming metallic coppery-bronze on upper tail coverts. Breast green; throat and abdomen buff, the feathers of the latter tipped with bronzy-red. Under tail coverts bronze margined with buff. Tail bronze. Bill black.

### 4. *Helianthea eos*.

*Helianthea eos*, GOULD, P. Z. S. (1848), p. 11.—ID., Mon. Troch., vol. iv, pl. 237.—ID., Intr. Troch., octavo ed., p. 131.—ELLIOT, Ibis (1874), p. 333.—BON., Consp. Gen. Av., p. 75.—ID., Rev. and Mag. Zool. (1854), p. 251.—CAB. and HEIN., Mus. Hein. Th., iii, p. 79 (note 4) (1860).

*Mellisuga eos*, GRAY, Gen. Birds, vol. iii, app., p. 5.

*Hypochrysis eos*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, t. 733, figs. 4680-82.

*Calligenia eos*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 311.

*Hab.* Merida, Venezuela.

*Male.* Similar to the *H. bonapartii*, but differs in having the breast metallic golden-yellow instead of green. The frontal and gular spots are much larger. Abdomen and flanks metallic flame-color. Tail cinnamon tipped with bronzy-green. Wings purple, secondaries rufous. Total length,  $5\frac{1}{4}$  in. Wing, 3 in. Tail,  $2\frac{1}{8}$  in. Culmen,  $1\frac{1}{8}$  in.

*Female.* Similar to the male, but the colors much less brilliant, and is without the frontal and gular spots. The under parts resemble that of the females of the *H. bonapartii*.



**5. Helianthea lutitiæ.**

*Trochilus lutitiæ*, DELATT. and BOURC., Rev. Zool. (1846), p. 307, sp. 6.

*Mellisuga lutitiæ*, GRAY, Gen. Birds, vol. i, p. 112, sp. 7.

*Helianthea lutitiæ*, GOULD, Mon. Troch., vol. iv, pl. 238.—ID., Intr. Troch., octavo ed., p. 131 (1861).—ELLIOT, Ibis (1874), p. 333.—BON., Consp. Gen. Av., vol. i, p. 74 (1850).—ID., Rev. and Mag. Zool. (1854), p. 251.—REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, t. 736, figs. 4687-88 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 79 (note 3) (1860).

*Calligenia lutitiæ*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 306.

*Hab.* Ecuador, volcano of Puracé, near Popayan.

*Male.* Forehead glittering grass-green. Crown and nape velvety-black. Back black glossed with dark green. Wing coverts dark green. Under surface shining dark grass-green. Wings purplish-brown, secondaries buff. Tail very dark bronzy-brown. Bill black. Total length, 5 in. Wing, 3 in. Tail, 2 in. Culmen,  $1\frac{1}{4}$  in.

*Female.* Wings and tail like the male. Upper and under surface shining grass-green. Throat deep buff. Under tail coverts light buff, tipped with bronzy-green. Bill black. Dimensions similar to those of the male.

**6. Helianthea violifera.**

*Trochilus violifera*, GOULD, P. Z. S. (1846), p. 87.

*Mellisuga violifera*, GRAY, Gen. Birds, vol. i, p. 112, sp. 9.

*Helianthea violifer*, BON., Consp. Gen. Av., p. 75 (1850).

*Helianthea violifera*, GOULD, Mon. Troch., vol. iv, pl. 239.—ID., Intr. Troch., octavo ed., p. 131 (1861).—BON., Rev. and Mag. Zool. (1854), p. 251.—REICH., Aufz. der Colib., p. 9.—ID., Troch. Enum., p. 6.—CAB. and HEIN., Mus. Hein. Th., iii, p. 80 (note 5) (1860).—ELLIOT, Ibis (1874), p. 333.

*Calligenia violifera*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 313.

*Hab.* Bolivia.

*Male.* Top of head dark green, almost black. A small indistinct spot of shining green on the forehead. Back and rump bronzy-green. Throat and breast dark green. A metallic spot on the throat violet-blue. A narrow white band across the breast. Abdomen, upper and under tail coverts light rufous. Tail light rufous, tipped with bronzy-green. Wings purple, outer edge of first primary rufous. Bill black. Total length,  $5\frac{3}{8}$  in. Wing,  $3\frac{1}{8}$  in. Tail,  $2\frac{3}{16}$  in. Culmen,  $1\frac{1}{4}$  in.

*Female.* Resembles the male, but has the throat rufous mottled with green.

**7. Helianthea osculans.**

*Helianthea osculans*, GOULD, P. Z. S. (1871), p. 503.—ELLIOT, Ibis (1874), p. 334.

*Calligenia osculans*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 300.

*Hab.* Peru, Cachupata, 11,000 feet (Whitely).

*Male.* Very similar to the *H. violifera*, but is destitute of the white band across the breast. The green of the breast extends on to the abdomen; the median rectrices have their apical half bronzy-green, and the tips of the lateral feathers have a considerable band of bronze-green. Total length,  $5\frac{3}{8}$  in. Wing, 3 in. Tail,  $2\frac{3}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

*Female* has no frontal nor gular spot. Throat buff spotted with green, rest like the male.

### 8. *Helianthea dichroua*.

*Helianthea dichroua*, TACZANOW., P. Z. S. (1874), p. 138.—ELLIOT, Ibis (1874), p. 334.

*Calligenia dichroua*, MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 309.

*Hab.* Maraynioc, Peru.

*Male.* Closely resembling the *H. osculans*. The under surface, with the exception of the lower portion of abdomen and tail coverts, dark green. The principal difference is in the tail, which has the terminal third part bronze-green, forming a conspicuous apical band. Maxilla black, mandible flesh-color, tip black. Total length,  $5\frac{1}{4}$  in. Wing,  $3\frac{3}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $1\frac{1}{4}$  in. (Type, Taczanowski.)

*Female.* Unknown.

The members of the next genus *BOURCIERIA* are of about the same size as those of the previous one, and present a variety of coloration, from black and white to metallic-greens and other hues. They possess the same long straight bills as are seen among the species of *HELIANTHEA*. I have retained in this genus the species usually separated in the term *LAMPROPYGIA*, as I perceive no generic characters to distinguish them. The only one advanced by any author is that of color, which in my opinion should never be regarded as alone sufficient to establish a genus; and of those who think otherwise, it might be asked how such species as *B. conradi* and *inca* could be placed in the same genus or left with *torquata* and *fulgidigula*, with which, as regards color, they have hardly any relationship whatever.—It is in fact drawing the line very fine, when we separate generically the species of *HELIANTHEA* and those contained in *BOURCIERIA*, and I am not at all assured in my own mind but that every useful purpose would be equally well served by restricting all these species to the same genus. If color must be a generic character, they require many genera; if structural characters are necessary, it is very difficult to find them.

### Genus XXXVII.—*BOURCIERIA*.

*Bourcieria*, BON., Compt. Rend. (1850), p. 380.

*Cæligena*, BON. (nec LESS., 1832), Compt. Rend., p. 382 (1850).

*Homophania*, REICH., Aufz. der Colib. (1853), p. 10.

*Conradinia*, REICH., Aufz. der Colib. (1853), p. 10.

*Lampropygia*, REICH., Aufz. der Colib. (1853), p. 10.

*Polyæna*, HEINE, Journ. für Ornith. (1863), p. 215.

*Eudosia*, MULS., Cat. Ois. Mouch. (1875), p. 20.

*Pilonia*, MULS., Hist. Nat. Ois. Mouch. (1876), vol. iii, p. 4.

#### TYPE.

*T. prunelli*, Bourc.

*O. cæligena*, Less.

*T. prunelli*, Bourc.

*T. conradi*, Bourc.

*T. wilsoni*, Bourc.

*O. torquata*, Boiss.

*D. travièsi*, Muls. and Verr.

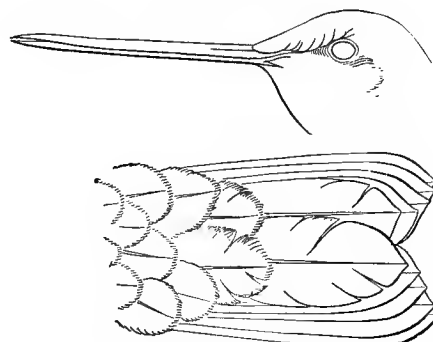
*T. prunelli*, Bourc.

*Ch.* Bill very long, straight, pointed at tip. Tail long, broad, slightly forked. Tarsi bare. Sexes similar in plumage.

*Range.* Venezuela, Columbia, Ecuador, and Peru.

Thirteen species are here recorded.

Fig. 37.

*Bourcieria fulgidigula*. ♂. 32087. Quito.*Key to the species.*

- |  |                            |
|--|----------------------------|
| A. Breast deep buff.   |                            |
| a. Head black, luminous green spot on forehead.                                    | 1. <i>B. inca</i> .        |
| B. Breast pure white.  |                            |
| a. Head metallic grass-green.  | 2. <i>B. conradi</i> .     |
| b. Forehead, sides of head, and nape black.  |                            |
| a'. Throat green.  |                            |
| a''. Crown metallic grass-green.   | 3. <i>B. insectivora</i> . |
| b''. Crown bluish-green.   | 4. <i>B. fulgidigula</i> . |
| b'. Throat black. Crown purple.  | 5. <i>B. torquata</i> .    |
| c. Forehead and crown metallic-blue, tail bronze.                                  | 6. <i>B. traviesi</i> .    |
| C. White crescent-shaped mark on either side of the neck.                          |                            |
| a. General plumage purplish-brown.   |                            |
| a'. Throat bright metallic-purple.   | 7. <i>B. wilsoni</i> .     |
| b'. Throat dark gray, without metallic lustre.                                     | 8. <i>B. purpurea</i> .    |
| b. General plumage black.  |                            |
| a'. Gular spot dark metallic-purple.   | 9. <i>B. assimilis</i> .   |
| b'. Gular spot metallic-green, sometimes with blue reflections.                    | 10. <i>B. prunelli</i> .   |
| D. Without white marks on the sides of the neck; throat without metallic coloring. |                            |
| a. Upper parts coppery-red; tail dark rufous-olive.                                | 11. <i>B. cæligena</i> .   |
| b. Upper parts dark olive, tail bright olive.                                      | 12. <i>B. columbiana</i> . |
| c. Upper parts blackish-brown, tail dark olive, tinged with purple.                | 13. <i>B. boliviana</i> .  |

**1. *Bourcieria inca*.**

*Bourcieria inca*, GOULD, Jard. Contr. Ornith. (1852), p. 136.—*Id.*, Mon. Troch., vol. iv, pl. 254.—*Id.*, Intr. Troch., octavo ed., p. 136 (1851).—BON., Rev. and Mag. Zool. (1854), p. 252.—REICH., Troch. Enum., p. 7, t. 752, figs. 4725-26 (1855).

*Homophania inca*, REICH., Aufz. der Colib., p. 10 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 79 (note) (1860).—MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 322.

*Hab.* Peru and Bolivia.

*Male.* Head jet-black, excepting a luminous metallic emerald-green spot on the forehead, and tips of the throat feathers which are green. A broad band of deep buff crosses the breast, and covers the sides of the neck; all the rest of the upper and under surface glittering metallic grass-green. Upper tail coverts glittering bronzy-green, as are also the median rectrices, lateral ones white tipped with bronzy-green. Wings purplish-brown. Bill black. Total length,  $5\frac{1}{2}$  in. Wing,  $3\frac{1}{3}$  in. Tail,  $2\frac{5}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

*Female*. Feathers of the crown and nape black tipped with green. Throat reddish-buff spotted with brown; breast deep buff; rest of plumage like the male, but not so brilliant.

## 2. *Bourcieria conradi*.

*Trochilus conradi*, BOURC., P. Z. S. (1847), p. 45.

*Mellisuga conradi*, GRAY, Gen. Birds, vol. i, p. 112, sp. 14.

*Bourcieria conradi*, GOULD, Mon. Troch., vol. iv, pl. 253.—ID., Intr. Troch., octavo ed., p. 136.—BON., Rev. and Mag. Zool. (1854), p. 252.—ID., Consp. Gen. Av., p. 73 (1850).

*Conradinia conradi*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 7, pl. 747, figs. 4714–15 (1855).

*Homophania conradi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 73 (note) (1860).—MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 320.

*Hab.* Venezuela.

*Male*. Top of head shining golden-green. Breast white; rest of upper and under surface shining grass-green. Median rectrices bronzy-green, remainder white with their terminal third bronzy-green. Bill black. Total length,  $5\frac{3}{8}$  in. Wing, 3 in. Tail,  $2\frac{1}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

*Female* has the throat buffy-white, rest like the male, but less brilliant, and rectrices tipped with brownish-black.

## 3. *Bourcieria insectivora*.

*Trochilus (Lampornis) insectivorus*, TSCHUD., Faun. Per., p. 248, fig. 1 (1844).

*Bourcieria insectivora*, GOULD, Intr. Troch., octavo ed., p. 135 (1861).—ELLIOT, Ibis (1876), p. 5.

*Homophania insectivora*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 1, ad.

*Hab.* Peru.

*Male*. Head and back of neck jet-black, with the centre of the crown metallic grass-green. Throat metallic-green. Back, upper tail coverts, abdomen, and under tail coverts shining grass-green. Breast pure white. Wings purplish-brown, their coverts like the back. Median rectrices shining grass-green, remainder pure white tipped with green, most extensive on the outermost feather. Bill black. Total length,  $5\frac{1}{8}$  in. Wing,  $3\frac{1}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $1\frac{1}{4}$  in. (Type of adult in my collection.)

*Female*. Entire upper parts and throat shining green. Median rectrices green; rest white, tipped with black, glossed with green. Rest like the male.

## 4. *Bourcieria fulgidigula*.

*Bourcieria fulgidigula*, GOULD, Mon. Troch., vol. iv, pl. 252.—ID., Intr. Troch., octavo ed., p. 135 (1861).—REICH., Troch. Enum., p. 7, pl. 749, figs. 4718–20 (1855).

*Homophania fulgidigula*, CAB. and HEIN., Mus. Hein. Th., iii, p. 73 (note).—MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 318.

*Hab.* Ecuador.

*Male*. Crown bluish-green, rest of head black with green reflections. Chin and throat green. A broad band of white on the breast. Back, abdomen, and tail coverts dark grass-green, the two former black in certain lights. Wings purplish-brown. Median rectrices dark olive-green, rest white tipped with dark olive-green,

most extensive on outermost feather. Bill black. Total length,  $5\frac{1}{4}$  in. Wing, 3 in. Tail, 2 in. Culmen,  $1\frac{1}{4}$  in.

*Female.* Above dark green, brownish on the crown. Throat white spotted with brown. Breast white, rest of under parts brownish-black spotted with green. Wings purplish-brown. Tail like that of the male, but tipped with purplish-black.

### 5. *Bourcieria torquata.*

*Ornismya torquata*, BOISSON, Rev. Zool. (1840), p. 6.

*Mellisuga torquata*, GRAY, Gen. Birds, vol. i, p. 112, sp. 12.

*Bourcieria torquata*, GOULD, Mon. Troch., vol. iv, pl. 251.—ID., Intr. Troch., octavo ed., p. 135.—BON., Consp. Gen. Av., vol. i, p. 73.—ID., Rev. and Mag. Zool. (1854), p. 254.—REICH., Aufz. der Colib., p. 10.—ID., Troch. Enum., p. 7, t. 748, figs. 4716-17.

*Homophania torquata*, CAB. and HEIN., Mus. Hein. Th., iii, p. 79 (1860).—MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 317.

*Hab.* Columbia.

*Male.* Differs from *B. fulgidigula* by having a metallic-blue crown with violet reflections, and a black throat, with but a slight trace of green. In all other respects the two birds are alike. Total length,  $5\frac{1}{4}$  in. Wing, 3 in. Tail, 2 in. Culmen,  $1\frac{1}{8}$  in.

*Female* like that of the previous species.

### 6. *Bourcieria traviesi.*

*Diphlogena (Helianthea) traviesi*, MULS. and VERR., Ann. Soc. Linn., Lyon (1866), p. 199.

*Eudisia traviesi*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 2.

*Hab.* Columbia.

*Male.* Forehead and centre of crown blue graduating into greenish-blue near the occiput; remainder of the upper part of head very dark grass-green, black in some lights. Throat green with a small metallic-violet spot in the centre. A broad white band across the breast. Abdomen, flanks, and under tail coverts glittering grass-green. Upper tail coverts metallic violet-red. Tail dark greenish-bronze. Bill black. Total length, 5 in. Wing,  $2\frac{11}{16}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $1\frac{3}{8}$  in.

Two specimens are known, one in my collection, and one in Count Turati's at Milan.

*Female.* Unknown.

### 7. *Bourcieria wilsoni.*

*Trochilus wilsoni*, DELATT. and BOURC., Rev. Zool. (1846), p. 305.

*Mellisuga wilsoni*, GRAY, Gen. Birds, vol. i, p. 112 (1844-49).

*Celigena wilsoni*, BON., Consp. Gen. Av., p. 73 (1850).

*Bourcieria wilsoni*, BON., Consp. Gen. Av., p. 73 (1850).—ID., Rev. and Mag. Zool. (1854), p. 252.

*Celigena wilsoni*, GOULD, Mon. Troch., vol. iv, pl. 258.

*Lampropygia wilsoni*, REICH., Troch. Enum., p. 7, pl. 751, figs. 4723, 4724.—ID., Aufz. der Colib., p. 10.—GOULD, Intr. Troch., octavo ed., p. 137 (1861).—ELLIOT, Ibis (1876), p. 59.—CAB. and HEIN., Mus. Hein. Th., iii, p. 78 (note) (1860).

*Pilonia wilsoni*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 7.

*Hab.* Columbia, Ecuador.

*Adult.* Upper parts dark bronze-brown; feathers of the rump margined with metallic grass-green. Wings purplish-brown. Throat metallic-purple. On either side of the neck a patch of white. Under surface rufous-brown. Upper tail coverts bronze-brown; under coverts reddish-brown. Tail bronze. Bill black. Total length,  $4\frac{7}{8}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $1\frac{1}{8}$  in.

### 8. \**Bourcieria purpurea*.

*Cæligena purpurea*, GOULD, Mon. Troch., pt. viii, vol. iv, pl. 256.—*Id.*, Intr. Troch., octavo ed., p. 137 (1861).  
REICH., Troch. Enum., p. 3, pl. 753, figs. 4727-28 (1855).  
*Lampropygia purpurea*, CAB. and HEIN., Mus. Hein. Th., iii, p. 78 (note 2) (1860).—ELLIOT, Ibis (1876), p. 59.

*Hab.* Popayan.

“The shoulders bluish-purple; head, neck, back, and wing coverts very dark purple, becoming of a bronzy hue on the lower part of the back and rump, where also the feathers are fringed with metallic grass-green, most conspicuous when the bird is viewed from behind; tail very dark bronzy-purple; wings purplish-brown; on each side of the chest a lunate mark of white; the remainder of the under surface very dark purplish-brown; the feathers of the throat edged with gray, under tail coverts buff.” (Gould, l. c.)

This is most probably only a dark variety of *B. wilsoni*. See my remarks in the Ibis (l. c.).

### 9. *Bourcieria assimilis*.

*Lampropygia* —?, ELLIOT, Ibis (1876), p. 58.

*Hab.* Ecuador?

Top of head blackish-brown; nape black with a bluish gloss. Back black, but viewed from behind iridescent, being metallic-red graduating into golden on the rump. Chin brownish-black; *throat metallic-purple*. On either side of the chest a large patch of white. Under parts black with a purple gloss. Under tail coverts black fringed with white; upper tail coverts dark purple. Tail purplish-black. Bill black. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{7}{8}$  in. Tail, 2 in. Culmen,  $1\frac{1}{16}$  in.

This bird was referred to by me in the Ibis for 1876, but no name was given to it. I now describe it more particularly. Although in its general plumage it is like the *B. prunelli*, the coloring of the throat is very different, approaching that of the *B. wilsoni*.

### 10. *Bourcieria prunelli*.

*Trochilus prunelli*, BOURC. and MULS., Ann. Sc. d'Agric., Lyon (1843), p. 36.

*Mellisuga prunelli*, GRAY, Gen. Birds, vol. i, p. 112.

*Homophania prunelli*, REICH., Aufz. der Colib., p. 10 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 79 (1860).

*Bourcieria prunelli*, BON., Consp. Gen. Av., vol. i, p. 73.—*Id.*, Rev. and Mag. Zool. (1854), p. 252.—REICH., Troch. Enum., p. 7, pl. 750, figs. 4721, 4722.

*Cæligena prunelli*, GOULD, Mon. Troch., vol. iv, pl. 257.

*Lampropygia prunelli*, GOULD, Intr. Troch., octavo ed., p. 137 (1861).—ELLIOT, Ibis (1876), p. 58.

*Pilonia prunelli*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 4.

*Hab.* Columbia.

*Adult.* Head black with a bronzy gloss. Back and upper tail coverts, when viewed from behind, metallic-red changing to golden on the rump. A patch of metallic bluish-green on the throat. A white patch on either side of the breast; under parts purplish-black. Under tail coverts black fringed with white, upper tail coverts purple. Tail purplish-black. Total length,  $4\frac{7}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $1\frac{1}{16}$  in.

### 11. *Bourcieria caeligena.*

*Ornismya caeligena*, LESS., Troch., p. 141, pl. 53 (1832).

*Mellisuga caeligena*, GRAY, Gen. Birds, vol. i, p. 112.

*Caeligena typica*, BON., Consp. Gen. Av., p. 73 (1850).—ID., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Mon. Troch., vol. iv, pl. 255.—REICH., Aufz. der Colib., p. 7.—ID., Troch. Enum., p. 3, t. 686, fig. 4515 (1855).

*Lampropygia caeligena*, CAB. and HEIN., Mus. Hein. Th., iii, p. 78.—GOULD, Intr. Troch., p. 136.—ELLIOT, Ibis (1876), p. 55.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 10.

*Hab.* Venezuela.

*Adult.* Upper part of head, back, and shoulders dark coppery-red, metallic in certain lights. Rump viewed from behind very brilliant metallic-green. Throat white, central portion of feathers blackish-brown. Breast dark gray. Abdomen smoke-color; flanks reddish-bronze. Wings bright purple. Tail dark olive with coppery reflections. Bill black. Total length, 6 in. Wing,  $3\frac{1}{8}$  in. Tail,  $2\frac{1}{4}$  in. Bill,  $1\frac{1}{4}$  in.

### 12. *Bourcieria columbiana.*

*Lampropygia caeligena*, ex Columbia, Auct.

*Lampropygia columbiana*, ELLIOT, Ibis (1876), p. 57.

*Hab.* Columbia.

*Adult.* Top and sides of head and nape olive-brown, with rufous reflections; back same as head, slightly darker. Rump viewed from behind brilliant metallic-green. Wings purple; shoulder olive-brown. Throat white, centre of feathers blackish-brown; upper part of breast smoky-white, darker towards the abdomen, which together with the flanks is very dark rufous-brown. Under tail coverts reddish-brown, central portion of the feathers blackish-brown. Tail olive-brown. Bill black. Feet black. Total length,  $5\frac{1}{2}$  in. Wing, 3 in. Tail, 2 in. Culmen,  $1\frac{1}{16}$  in. Type in my collection.

### 13. *Bourcieria boliviana.*

*Lampropygia boliviana*, GOULD, Intr. Troch., p. 137.—ELLIOT, Ibis (1876), p. 57.—MULS. Hist. Nat. Ois. Mouch., tom. iii, p. 13.

*Hab.* Bolivia.

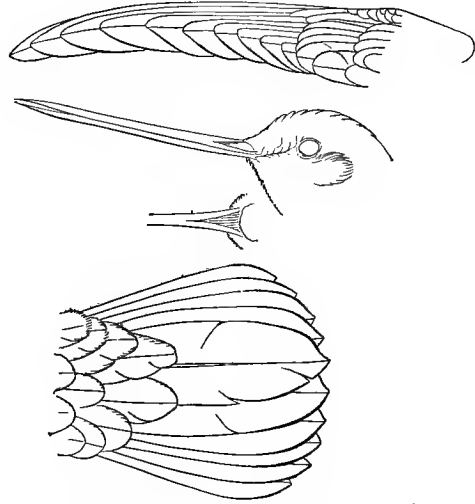
*Adult.* Head and upper parts brownish-black, but when viewed from behind the rump and back are brilliant metallic grass-green. Wings purple. Throat dark brown, feathers margined with white; abdomen and flanks very dark olive-brown, feathers tipped with rufous. Under tail coverts blackish-brown margined with reddish-buff. Tail very dark olive-brown; central feathers glossed with purple. Bill black. Total length,  $5\frac{1}{2}$  in. Wing,  $3\frac{1}{4}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

## Genus XXXVIII.—HEMISTEPHANIA.

## TYPE.

- Doryfera*, GOULD (lege *Doryphora*, nec ILLIG., 1807, Coleopt.), P. Z. S. (1847), p. 95. *T. ludoviciæ*, Bourc.  
*Dorifera*, BON., Consp. Gen. Av. (1849), vol. i, p. 68. *T. ludoviciæ*, Bourc.  
*Hemistephania*, REICH., Aufz. der Colib. (1853), p. 9. *T. ludoviciæ*, Bourc.  
*Doryphora*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 77. *T. ludoviciæ*, Bourc.

Fig. 38.

*Hemistephania ludoviciæ*. ♂. New Granada. Sallé.

*Ch.* Bill very long, straight, slender, sharp pointed. Wings long, outer web of first primary nearly obsolete. Tail much rounded, rectrices broad. Sexes alike in plumage.

*Range.* Veragua, through Columbia into Ecuador.

Five species have been described, one of which is, however, only a large race of another, and is hardly worthy of specific rank.

*Key to the species.*

- |  |                             |
|--|-----------------------------|
| A. Under parts blackish. Forehead metallic-violet.       | 1. <i>H. johannæ</i> .      |
| B. Under parts bronze-green tinged with gray.            | 2. <i>H. ludoviciæ</i> .    |
| a. Forehead metallic grass-green.                        | 3. <i>H. rectirostris</i> . |
| b. Large race of above.                                  | 4. <i>H. euphrosinæ</i> .   |
| c. Forehead metallic bluish-green.                       | 5. <i>H. veraguensis</i> .  |
| C. Under parts very dark green. Forehead metallic-green. |                             |

The term *Doryfera* (lege DORYPHORA), which Gould gave to this group of Humming-birds, having been many years previously employed in Entomology by Illiger, cannot properly be again used, and the next proposed is that of HEMISTEPHANIA, Reich., which is the one to be adopted. The species are small in size, with a rather dull green plumage, and a metallic spot on their foreheads. The bills are long and straight, and the group follows naturally the species of BOURCIERIA.

**1. *Hemistephania johannæ*.**

- Trochilus johannæ*, BOURC., P. Z. S. (1847), p. 45.—ID., Rev. Zool. (1847), p. 257.  
*Trochilus violifrons*, GOULD, P. Z. S. (1847), p. 95.  
*Mellisuga johannæ*, GRAY, Gen. Birds, vol. i, p. 112.  
*Dorifera johannæ*, GOULD, Mon. Troch., vol. ii, pl. 87.—ID., Intr. Troch., octavo ed., p. 71.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 196.  
*Dorifera johannæ*, BON., Consp. Gen. Av., vol. i, p. 68.—ID., Rev. and Mag. Zool. (1854), p. 251.  
*Doryphora johannæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 78 (note).  
*Hemistephania johannæ*, REICH., Troch. Enum., p. 6, pl. 731, figs. 4675-76.—ID., Aufz. der Colib., p. 9.

*Hab.* Columbia.



*Male.* Forehead metallic-violet; dark blue in certain lights. Nape and upper surface bronze-green. Rump and upper tail coverts grayish-blue, but in some specimens the latter are a darker blue than the rump. Under parts black with green reflections. Under tail coverts dark violet-blue. Tail black, glossed slightly with green. Wings purplish-brown. Bill black, feet brown. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $1\frac{1}{8}$  in.

*Female?* differs by having no metallic spot on forehead, which is a dull green. Entire under parts light bronzy-green. Tail black, tipped with gray on the lateral feathers. Under tail coverts bluish-green. Slightly smaller in size than the male. This may be possibly a young male.

## 2. *Hemistephania ludoviciæ.*

*Trochilus ludoviciæ*, BOURC. and MULS., Ann. Soc. d'Agr., Lyon (1847), p. 136.

*Mellisuga ludoviciæ*, GRAY, Gen. Birds, vol. i, p. 112.

*Dorifera ludoviciæ*, BON., Consp. Gen. Av., vol. i, p. 68.—ID., Rev. and Mag. Zool. (1854), p. 251.

*Hemistephania ludoviciæ*, REICH., Anz. der Colib., p. 9.—ID., Troch. Enum., p. 6, t. 731, figs. 4673-74.

*Doryfera ludoviciæ*, GOULD, Mon. Troch., vol. ii, pl. 88.—ID., Intr. Troch., octavo ed., p. 71.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 200.

*Doryphora ludoviciæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 69 (1860).

*Hab.* Columbia.

*Adult.* Forehead metallic grass-green. Crown and nape coppery-bronze. Back dark green, passing into bluish-green on upper tail coverts. Under parts dark brownish-gray, with green reflections. Under tail coverts dark gray with blue reflections. Tail black, tipped with gray, most extensive on the lateral feathers. Wings purple. Total length,  $4\frac{1}{8}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

## 3. *Hemistephania rectirostris.*

*Doryfera rectirostris*, GOULD, Intr. Mon. Troch., octavo ed., p. 71.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 202.

*Doryphora rectirostris*, SCLAT. and SALV., Nomencl. Av., p. 82.

*Hab.* Ecuador.

This is a somewhat larger-sized bird than the *D. ludoviciæ*, with a slightly longer bill. There is no difference in the color of the plumage, and I doubt very much, should the locality be unknown, whether the two birds could always be distinguished. It may be regarded as a race, but hardly as a distinct species. Total length, 5 in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $1\frac{9}{16}$  in.

## 4. *Hemistephania euphrosinæ.*

*Dorifera euphrosinæ*, MULS. and VERR., Ann. Soc. Linn., Lyon, t. xviii (1870-71), p. 319.—MULS., Hist. Nat.

Ois. Mouch., vol. i, pl. 198, pl.

*Doryphora euphrosinæ*, SCLAT. and SALV., Nomencl. Av., p. 82.

*Hab.* Ecuador?

This is a small representative of *ludoviciæ* with a bluish-green forehead. In all other respects it resembles that species, but the small size and peculiar coloration

of the metallic spot induce me to regard it as probably a distinct species. Total length,  $3\frac{5}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $1\frac{1}{16}$  in.

### 5. *Hemistephania veraguensis*.

*Dorifera veraguensis*, SALV., P. Z. S. (1867), p. 154.

*Doryfera veraguensis*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 199.

*Hab.* Veragua.

*Adult.* Forehead metallic-green, darker than that of *ludovicicæ*; nape coppery-red; back shining grass-green, upper tail coverts pale blue. Under parts very dark green, almost black. Under tail coverts dark gray with blue reflections. Tail black tipped with gray. Wings purplish-brown. Bill and feet black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $1\frac{1}{4}$  in.

This bird, which appears to represent a distinct species, can be recognized from *ludovicicæ* by the darker green of the forehead, and the general dark, almost greenish-black hue of the plumage of the body.

The genus HELIOMASTER, in which the next group of birds has generally been placed, was instituted by Bonaparte solely for the *T. furcifer*, Shaw. As that species possesses generic character of quite sufficient importance to entitle it to a separate rank, it has been found necessary to seek another term for the four following species, as the only other one besides HELIOMASTER, which has been given them—*Selaspherus*, Reich.—is almost identical with SELASPHORUS, Swain., already employed for a genus of this Family. I, therefore, propose the generic name of FLORICOLA. These birds are of moderate size, the bills straight, plumage bronzy-green above, with a luminous throat-mark, more or less extensive, and a metallic crown on some of the species. By means of the two succeeding genera, a pretty well connected line is formed to the genus HELIOTRYPHA.

### Genus XXXIX.—FLORICOLA.

*Trochilus*, SWAINS. (nec LINN., 1766), Zool. Journ. (1827), p. 357.

*Trochilus*, BOIE (nec LINN., 1766), Isis' (1831), p. 547.

*Heliomastes* (!), BON., Rev. and Mag. Zool. (1854), p. 251.

*Selaspherus*, REICH., Troch. Enum. (1855), p. 11.

TYPE.

*T. longirostris*, Vieill.

*T. longirostris*, Vieill.

*T. longirostris*, Vieill.

*Ch.* Bill longer than half the body, straight, mandible hooked at the tip; maxilla denuded of feathers at base, which is broad; nostrils exposed. Wings rather long. Tail slightly rounded. Sexes dissimilar.

*Range.* Mexico, Central America, Guiana, Venezuela, Columbia, and Ecuador.

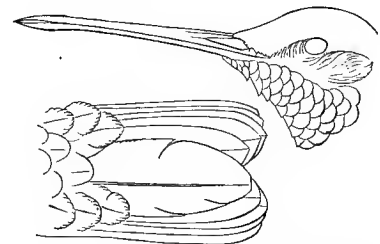


Fig. 39.

*Floricola longirostris*. ♂. Trinidad. Gould.

*Key to the species.*

- |  |                             |
|--|-----------------------------|
| A. Top of head metallic-green. Under tail coverts olive-brown margined with white.                           | 1. <i>F. longirostris</i> . |
| B. Top of head pale metallic-green. Under tail coverts grayish-white.  | 2. <i>F. albicrissa</i> .   |
| C. Top of head not metallic.   |                             |
| a. Throat metallic-scarlet, chin black.  | 3. <i>F. constanti</i> .    |
| b. Lower part of throat metallic-crimson, upper part and chin dark brown, all the feathers tipped with gray. | 4. <i>F. leocadiæ</i> .     |

**1. Floricola longirostris.**

*Trochilus longirostris*, VIEILL., Ois. Dor., t. i, p. 107, pl. 50 (1802).

*Trochilus superbus*, SHAW., Nat. Misc., vol. xiii, pl. 517.

*Ornismya superba*, LESS., Ois. Mouch., p. 40, pl. 2 (1829).

*Ornismya longirostris*, D'ORB. and LAFRES., Syn. Av., ii, p. 29, sp. 15 (1838).

*Mellisuga longirostris*, GRAY, Gen. Birds, vol. i, p. 112, sp. 4.

*Helimaster longirostris*, BON., Consp. Gen. Av., p. 70.—REICH., Troch. Enum. (1855), p. 11.—GOULD, Mon.

Troch., vol. iv, pl. 259.—ID., Intr. Troch., octavo ed. (1861), p. 138.—SALV., P. Z. S. (1867), p. 155.—

ELLIOT, Ibis (1877), p. 138.

*Selasphorus longirostris*, REICH., Aufz. der Colib. (1853), p. 13.

*Helimastes longirostris*, BON., Rev. and Mag. Zool. (1854), p. 251.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 271.

*Helimaster stuartæ*, LAWR., Ann. Lyc. Nat. Hist., N. Y. (1860), p. 291.—GOULD, Intr. Troch., octavo ed., p. 138 (1861).

*Helimaster sclateri*, CAB. and HEIN., Mus. Hein. Th., iii, p. 54 (1860).—GOULD, Intr. Troch., octavo ed., p. 139 (1861).

*Helimaster pallidiceps*, GOULD, Intr. Troch., octavo ed., p. 139 (1861).

*Hab.* Mexico and Central America, Trinidad, Guiana, Venezuela, the valley of the Amazon and Columbia.

Forehead and crown metallic-green, sometimes tinged with blue; chin black. Throat metallic-crimson. Nape and upper surface bronzy-green. Under surface dark gray, whitish in the middle of the abdomen, washed with green on the flanks, and a large white spot on the thighs. Under tail coverts blackish-brown tipped with white. Wings very dark purple-brown. Upper tail coverts light bronze. Median rectrices bronze-green; the lateral ones bronze-green at base, with the remaining portion black, and a spot of white on the tip, largest on the outermost feathers. Along the side of the throat a conspicuous white stripe. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$ . Culmen,  $1\frac{1}{4}$  in.

*Young.* Upper parts light bronze. Throat black with a few metallic feathers on the lower part. Under surface light gray.

*Supposed Female*, like the male, but has the entire throat dull black.

I can perceive no differences sufficient to distinguish the specimens called *stuartæ*, *sclateri*, and *pallidiceps* as distinct from *longirostris*, the characters given by their describers disappearing and blending together in a large series of specimens.

**2. Floricola albicrissa.**

*Helimaster albicrissa*, GOULD, P. Z. S. (1871), p. 504.—SCLAT. and SALV., Nomencl., p. 90.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 274.

*Hab.* Ecuador.

Only to be distinguished from *H. longirostris* by the under tail coverts, which are grayish-white.

### 3. *Floricola constanti*.

*Trochilus constanti*, DELATT., Echo du Mond. Savant. (1843), p. 1069.

*Heliomaster constanti*, GOULD, Mon. Troch., vol. iv, p. 259.—ID., Intr. Troch., octavo ed., p. 140 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 54.

*Selasphorus constanti*, REICH., Aufz. der Colib. (1853), p. 13.—ID., Troch. Enum., p. 11.

*Heliomastes constanti*, BON., Rev. and Mag. Zool. (1854), p. 251.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 269.

*Hab.* Guatemala and Costa Rica.

*Adult.* Entire upper surface pale bronzy-green. Wings light purplish-brown. Chin black, throat metallic-scarlet. Along the side of the throat is a white stripe commencing at the bill. Under surface gray, washed with green on the flanks. A tuft of white feathers on the sides of the rump. Middle of abdomen white. Under tail coverts olive-brown margined with white. Median rectrices bronzy-green, lateral ones green at base, then black with a white spot on the inner webs at tips. Bill black. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $1\frac{1}{4}$  in.

Description of type in my collection.

### 4. *Floricola leocadiæ*.

*Trochilus leocadiæ*, BOURC., Ann. Sc. Nat., Lyon, tom. iv (1852), p. 141.

*Heliomaster pinicola*, GOULD, Mon. Troch., vol. iv, pl. 261.

*Selasphorus longirostris*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).

*Heliomastes leocadiæ*, BON., Rev. and Mag. Zool. (1854), p. 251.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 276.

*Heliomaster leocadiæ*, GOULD, Intr. Troch., octavo ed., p. 140 (1861).

*Hab.* Mexico.

*Adult.* Exactly like the *H. constanti* in its general plumage. The only difference is in the coloration of the throat, which has the upper part and chin blackish-brown, and the lower part metallic-crimson, all the feathers tipped with gray. Total length, 5 in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{9}{16}$  in. Culmen,  $1\frac{1}{4}$  in.

Mr. Gould states (l. c.) that his *H. pinicola* was described in the P. Z. S. for 1853. I have not been able to find it in that volume.

## Genus XL.—LEPIDOLARYNX.

*Lepidolarynx*, REICH., Aufz. der Colib., p. 13 (1853).

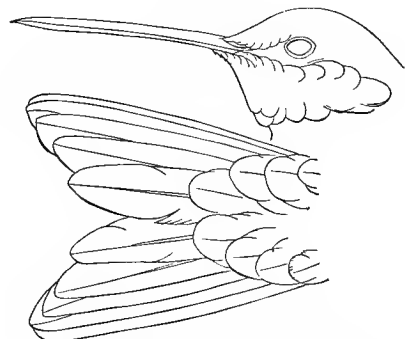
*Ornithomyia*, BON., Rev. and Mag. Zool. (1854), p. 251.

#### TYPE.

*T. mesoleucus*, Temm.

*T. mesoleucus*, Temm.

Fig. 40.



*Lepidolarynx mesoleucus*. ♂ ad. Brazil. Whitely.

*Ch.* Bill straight, twice as long as head. Feathers of the forehead advancing to a point on to the maxilla. Tail slightly forked, rectrices narrow. Sexes different.

*Range.* Brazil.

One species only is known.

**1. Lepidolarynx mesoleucus.**

- Trochilus mesoleucus*, TEMM., Plan. Col., pl. 317, fig. 1, ♂.  
*Trochilus squamosus*, TEMM., Plan. Col., pl. 203, fig. 1, juv.  
*Trochilus mystacinus*, VIEILL., Os. Dor., t. iii, pl. 21, ♂ (inedit.).  
*Mellisuga squamosus*, STEPH., Gen. Zool., vol. xiv, p. 245.  
*Ornismya Temminckii*, LESS., Ois. Mouch., p. 88, pl. 20 (1829), juv.  
*Ornismya mesoleuca*, LESS., Ois. Mouch., p. 110, pl. 29 (1829), ad. ♂.  
*Mellisuga melanoleuca*, GRAY, Gen. Birds, vol. i, p. 112, sp. 15.  
*Heliomaster mesoleucus*, GOULD, Mon. Troch., vol. iv, pl. 262.—BON., Consp. Gen. Av., p. 70.  
*Lepidolarynx mesoleucus*, REICH., Aufz. der Colib., p. 13.—GOULD, Intr. Troch., octavo ed., p. 140.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 283.—REICH., Troch. Enum., p. 11.  
*Ornithomyia mesoleucus*, BON., Rev. and Mag. Zool. (1854), p. 251.  
*Calothorax mesoleucus*, BURM., Th. Bras., vol. ii, p. 339, sp. 1 (1856).  
*Heliomaster squamosus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 53 (1860).

*Hab.* Brazil.

*Male.* Top of head metallic pale green; rest of upper parts bronzy-green. Throat frill, much extended on the sides, metallic-crimson. Under surface very dark green, down the centre an irregular line of white. A tuft of white feathers on the flanks, and a white line beneath the eye. Under tail coverts blackish-purple margined with white. Median rectrices dark bronze-green, remainder purplish-black. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{16}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $1\frac{1}{8}$  in.

*Female.* Upper surface bronzy-green. Feathers on the throat dark olive margined with white; under surface bronze-green, with a median white stripe. Middle rectrices bronze-green, rest bronze-green at base, with the remaining portions black tipped with white. Bill black.

*Young.* Specimen from Bahia has the crown greenish-brown, each feather margined with white. Throat pure white, rest as in the female.

The next genus, HELIOMASTER, was proposed by Bonaparte in the Compt. Rendus for 1850, and the *T. furcifer*, Shaw, cited as the type, no other species being mentioned. In the Consp. Av., HELIOMASTER is made to contain various species, which cannot possibly be grouped together in the same genus; but *furcifer* (called *angelæ*) is placed first. If, as the date would seem to imply, this portion of the Conspectus Avium was published in 1849 (of which I can find no proof), the subsequent article in the Compt. Rendus disposes of the arrangement given, and leaves *furcifer* to represent the genus; but if the Consp. Av. came afterwards, the fact that *furcifer* is placed first in the list indicates that it is still deemed the *type* of HELIOMASTER, to which the species that follow were added. In either case the present species is the only one that can be placed in the genus, there being no other as yet known possessing the same characters. The genus HELIOMASTES!, BON., Rev. and Mag. Zool. (1854), p. 251, is probably a misprint, but as it contains such species as that included in FLORICOLA, Elliot, and CAMPYLOPTERUS!!, Swain., there is nothing left to represent it as a type; and if it is not a misprint, it is too close to HELIOMASTER to be employed without creating confusion. The single species is a very beautiful one, remarkable for the crimson throat surrounded by deep metallic-blue.

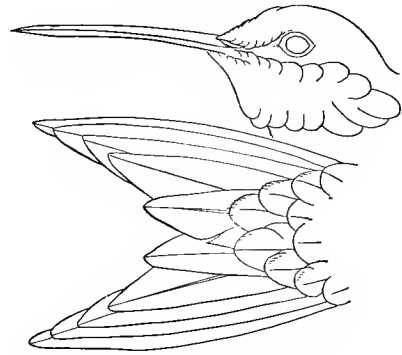
## Genus XLI.—HELIOMASTER.

*Helimaster*, BON., Compt. Rend. (1850), p. 382.  
*Calliperidia*, REICH., Aufz. der Colib. (1853), p. 12.  
*Callopietria*, "REICH.", BON., Ann. Sc. Nat. (1854), p. 137.

## TYPE.

*T. furcifer*, Shaw.  
*T. furcifer*, Shaw.  
*T. furcifer*, Shaw.?

Fig. 41.

*Helimaster furcifer*. ♂ ad. Buenos Ayres.

*Ch.* Bill very long, slender, slightly curved; rectrices rather narrow, pointed; tail deeply forked. Sexes dissimilar.

*Range.* Southern Brazil and Paraguay.

1. *Helimaster furcifer*.

*Trochilus furcifer*, SHAW, Gen. Zool., vol. viii, p. 280.  
*Trochilus caudacutus*, VIEILL., Nouv. Dict. Hist. Nat. (1817), p. 347.  
*Helimaster regis*, SCHREIB., Naturfors. Wien. (1832), Sept.—ID., Isis (1833), p. 533.—PELZ., Ornith. Bras., p. 301.  
*Ornismya angelæ*, LESS., Illust. Zool. (1833), pls. 45, ♂; 46, ♀.—D'ORB. and LAFRES., Syu. Av., ii, p. 28, sp. 11 (1838).  
*Helimaster angelæ*, BON., Compt. Rend. (1850), p. 382.—ID., Consp. Gen. Av., p. 70, vol. i (1850).—GOULD, Mon. Troch., vol. iv, pl. 263.—BURMEIST., Proc. Zool. Soc. (1865), p. 466.  
*Calliperidia angelæ*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10.—GOULD, Intr. Troch., octavo ed., p. 141.—ELLIOT, Ibis (1877), p. 137.  
*Ornithomyia angelæ*, BON., Rev. and Mag. Zool. (1854), p. 251.  
*Campylopterus inornatus*, BURMEIST., Reise durch die la Plata Staat, Band. ii, p. 447 (1861), juv.  
*Calliperidia furcifer*, SCLAT. and SALV., Nomencl., p. 90 (1873).  
*Calliperidia regis*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 278.

*Hab.* Brazil and Paraguay.

*Male.* Top of head pale metallic-green. Upper surface golden-green. Wings purplish-brown. A spot of white behind the eye. Centre of throat metallic-crimson, surrounded by deep metallic-blue. Under surface deep blue. A patch of white on the flanks. Under tail coverts dark green. Tail glossy dark green. Bill black. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{1}{5}$  in. Tail,  $1\frac{3}{4}$  in. Culmen, 1 in.

*Female.* Top of head bronzy-brown. Upper surface golden-bronze. Under surface white. Tail green, terminal portion black, tip of three outer feathers white. Bill black.

## Genus XLII.—HELIOTRYPHA.

*Heliotrypha*, GOULD, Intr. Mon. Troch., octavo ed., p. 131; Mon., pt. (1853).  
*Parzudakia*, REICH., Aufz. der Colib., p. 12 (1853).  
*Heliotryphon*, CAB. and HEIN., Mus. Hein. Th., iii, p. 74 (1860).  
*Nodalina*, MULSANT., Catal. Ois. Mouch. (1875), p. 23.  
*Helymus*, MULSANT., Catal. Ois. Mouch. (1875), p. 23.

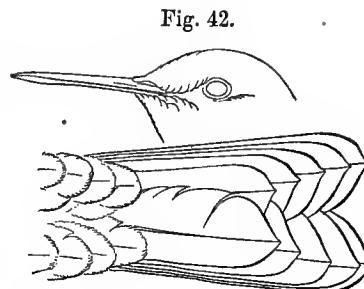
## TYPE.

*T. exortis*, FRAS.  
*T. exortis*, FRAS.  
*T. exortis*, FRAS.  
*H. barrali*, MULS. and VERR.  
*H. micrastur*, GOULD.

*Ch.* Bill long as the head, straight, slender. Wings long. Tail long and forked; tarsi partially clothed. Hind toe shorter than the middle one. Sexes unlike.

*Range.* Columbia and Ecuador.

Four species are here recognized as belonging to this genus.



*Heliotrypha exortis*. ♂ ad. Ecuador. Buckley.

*Key to the species.*

- |   |                          |
|---|--------------------------|
| A. Breast and under parts metallic-green; no white band across the chest. |                          |
| a. Throat metallic purplish-violet; chin with light blue reflections.     | 1. <i>H. viola</i> .     |
| b. Throat metallic pinkish-lilac; chin deep blue, black in some lights.   | 2. <i>H. exortis</i> .   |
| c. Throat metallic flame-color; chin black.                               | 3. <i>H. micrastur</i> . |
| d. Throat and chin pale metallic olive-green.                             | 4. <i>H. barrali</i> .   |

The members of this genus are rather large birds, with straight bills, short in comparison to those of the genera immediately preceding, with ample forked tails, a general green plumage more or less luminous, and bright metallic throats.

### 1. *Heliotrypha viola*.

*Helianthus viola*, GOULD, P. Z. S. (1853), p. 61.

*Rhamphromicron (Parzudakia) viola*, REICH., Aufz. der Colib., p. 12 (1853).—*Id.*, Troch. Enum., p. 10 (1855).

*Heliotrypha viola*, GOULD, Mon. Troch., vol. iv, pl. 241.—*Id.*, Intr. Troch., octavo ed., p. 131.—ELLIOT, Ibis (1876), p. 317.—BON., Rev. and Mag. Zool. (1854), p. 252.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 97.

*Heliotryphon viola*, CAB. and HEIN., Mus. Hein. Th., iii, p. 74 (1860).

*Hab.* Ecuador.

*Male.* Forepart of head metallic dark green. Upper surface, breast, abdomen, and flanks shining dark grass-green. Throat metallic purplish-violet, margined with black, under tail coverts buff, with dark green centres. Four middle tail feathers green; remainder dark purplish-brown. Bill and feet black. Total length,  $4\frac{2}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail to end of lateral feathers,  $2\frac{1}{2}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* General plumage like the male; but has the throat black, spotted with buffy-white.

### 2. *Heliotrypha exortis*.

*Trochilus exortis*, FRAS., P. Z. S. (1840), p. 14.

*Ornismya parzudaki*, DELONG and PARZ. (nec LESS.), Rev. Zool. (1840), p. 72.

*Mellisuga parzudaki*, GRAY, Gen. Birds, vol. i, p. 112, sp. 18.

*Helianthus parzudaki*, BON., Consp. Gen. Av., vol. i, p. 76 (1850).

*Eriopus exortis*, BON., Consp. Gen. Av., p. 80 (1850).

*Parzudakia dispar*, REICH., Aufz. der Colib., p. 12 (1853).—*Id.*, Troch. Enum., p. 10 (1855).

*Heliotrypha parzudaki*, BON., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Mon. Troch., vol. iv, pl. 240.—*Id.*, Intr. Troch., octavo ed., p. 131.—ELLIOT, Ibis (1876), p. 318.

*Heliotryphon parzudaki*, CAB. and HEIN., Mus. Hein. Th., iii, p. 74 (1860).

*Heliotrypha exortis*, ELLIOT, Ibis (1876), p. 318.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 95.

*Hab.* Columbia and Ecuador.

*Male.* A small luminous green spot on the forehead. Chin deep blue; centre

of throat metallic pinkish-violet bounded with black. Entire rest of the plumage of the body shining dark green, most brilliant on the breast. Wings purplish-brown. Under tail coverts white. Median rectrices bronzy-green; lateral ones purplish-black. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Differs from the male by having the forehead metallic-green, and the throat dark brown with a patch of white in the centre.

### 3. *Heliotrypha micrastur.*

*Helianthus micrastur*, GOULD, Ann. and Mag. Nat. Hist. (1872), p. 195.

*Helymus micrastur*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 93.

*Hab.* Ecuador.

*Male.* A luminous dark green spot on forehead. Chin black. Throat intensely brilliant, metallic flame-color, margined on the sides with black. Rest of plumage of the body shining dark green, most brilliant on the breast. Wings purplish-brown. Median rectrices bronzy-green, rest purplish-black. Under tail coverts white. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail 2 in. Culmen,  $\frac{9}{16}$  in.

*Female.* Unknown.

This species, by not having any white band across the breast, and by having the tail much forked, cannot remain in the genus *HELIANGELUS*, where it was placed by Mr. Gould, but properly belongs to the present one, finding its natural position between *H. exortis* and *H. barrali*. The term *Helymus*, proposed for it by M. Mulsant, is entirely unnecessary, as the species possesses no characters that differ generically from the other members of *HELIOTRYPHA*.

### 4. *Heliotrypha barrali.*

*Heliotrypha barrali*, MULS. and VERR., Ann. Soc. Linnéen., Lyon, vol. xvii, p. 106 (1868).

*Helianthus squamigularis*, GOULD, P. Z. S. (1871), p. 503.

*Nodalía barrali*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 100 (1877).

*Hab.* Columbia, Province of Antioquia.

*Male.* Top of head very dark green, almost black in certain lights. Throat pale metallic olive-green, silvery in some lights, margined with a line of black. Rest of plumage of body shining grass-green, most brilliant on the breast. Wings purplish-brown. Median rectrices bronzy-green; lateral ones, blue-black. Under tail coverts green in the centre, remaining parts grayish-white. Bill black. Total length,  $4\frac{3}{8}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Unknown.

Possessing no generic characters differing from those which characterize the species of *HELIOTRYPHA*, the term *Nodalía* of Mulsant is placed among the synonyms as unnecessary. Description taken from the type in my collection.



Genus XLIII.—HELIANGELUS.

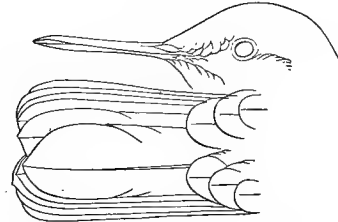
*Heliangelus*, GOULD, Intr. Mon. Troch., octavo ed., p. 132 (1848) (*desc.*).  
*Anactoria*, REICH., Aufz. der Colib., p. 12 (1853).  
*Diotimia*, REICH., Aufz. der Colib., p. 12 (1853).  
*Peratus*, MULS., Catal. Ois. Mouch. (1875), p. 23.

TYPE.  
*O. clarissæ*, De Long.  
*O. amethysticollis*, D'Orb.  
*T. spencei*, Bourc.  
*O. amethysticollis*, D'Orb.

Fig. 43.

*Ch.* Bill as long as the head, straight. Tail ample, slightly rounded. Wings long. Hind toe and nail as long as middle toe and nail. Sexes different.

*Range.* Venezuela, Columbia, Ecuador, and Peru. Five species are known of this genus.



*Heliangelus clarissæ*, ♂. Bogota, Gould.

*Key to the species.*

- |  |                                |
|--|--------------------------------|
| A. Band of white across the breast.  |                                |
| a. Luminous spot on forehead, grass-green.   |                                |
| a'. Median rectrices green, lateral ones black.                                    | 1. <i>H. clarissæ</i> .        |
| b'. All the rectrices blue-black.  | 2. <i>H. strophianus</i> .     |
| b. Luminous spot on forehead, pale glaucous green, lateral rectrices bronzy-brown. | 3. <i>H. spencei</i> .         |
| B. Band across the breast and abdomen buff.  |                                |
| a. Throat metallic-violet.   | 4. <i>H. amethysticollis</i> . |
| b. Throat fiery orange-red.  | 5. <i>H. mavors</i> .          |

These birds are closely allied to those of the genus *HELIOTRYPHA*; they are about the same size, and have a similar plumage, but possess rounded tails, and a conspicuous broad white, or buff band across the breast, beneath the metallic throat.

**1. *Heliangelus clarissæ*.**

*Ornismya clarissæ*, DE LONG, Rev. Zool. (1841), p. 306.  
*Mellisuga clarissæ*, GRAY, Gen. Birds, vol. i, p. 112, sp. 17.  
*Anactoria clarissæ*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).  
*Anactoria libussa*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).  
*Heliangelus clarissæ*, BON., Consp. Gen. Av., p. 76 (1850).—ID., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Mon. Troch., vol. iv, pl. 242.—ID., Intr. Troch., octavo ed., p. 132.—BON., Consp. Gen. Av., p. 76.—CAB. and HEIN., Mus. Hein. Th., iii, p. 75 (1860).—MULS., Hist. Nat. Ois. Mouch., vol. iii (1876), p. 84.  
*Heliangelus taczanowski*, PELZ., Ibis (1877) p. 338, juv. ♂.

*Hab.* Columbia.

*Male.* Luminous dark green spot on the forehead. Chin, lores, and sides of head black. Upper surface and flanks bronzy-green. Throat metallic-violet, beneath which is a narrow band of white, succeeded by one of brilliant grass-green. Abdomen buff, mottled with green. Under tail coverts white. Median rectrices bronzy-green, lateral ones black. Bill black. Total length, 4 in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female* differs chiefly in having the throat black mottled with brown. The feathers of the body less brilliant than those of the male.

Herr von Pelzeln having kindly forwarded to me the type of his *Heliangelus*

*taczanowski*, I ascertained, by comparing it with specimens in my collection, that it was a young male of the present species.

## 2. *Heliangelus strophianus*.

*Trochilus* (—?) *strophianus*, GOULD, P. Z. S. (1846), p. 45.

*Mellisuga strophianus*, GRAY, Gen. Birds, vol. i, p. 112, sp. 39.

*Heliangelus strophianus*, BON., Consp. Gen. Av., vol. i (1850), p. 76.—ID., Rev. and Mag. Zool. (1854), p. 252.

—GOULD, Mon. Troch., vol. iv, pl. 243.—ID., Intr. Troch., octavo ed., p. 132.—MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 86 (1876).

*Anactoria strophiana*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).

*Hab.* Ecuador.

*Male.* Distinguished from the *H. clarissæ*, by having the entire tail steel- or bluish-black, and a slightly shorter bill. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{7}{8}$  in. Tail, 2 in. Culmen,  $\frac{1}{2}$  in.

*Female* similar to that of *H. clarissæ*.

## 3. *Heliangelus spencei*.

*Trochilus spencei*, BOURC., P. Z. S. (1847), p. 46.

*Mellisuga spencei*, GRAY, Gen. Birds, vol. i, p. 112, sp. 41.

*Heliangelus spencei*, BON., Consp. Gen. Av., vol. i (1850), p. 88.—ID., Rev. and Mag. Zool. (1854), p. 252.—

GOULD, Mon. Troch., vol. iv, pl. 243.—ID., Intr. Troch., octavo ed., p. 132.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 88.

*Diotima spencei*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).

*Hab.* Venezuela.

*Male.* Forehead metallic silvery-green. Upper surface, breast, and flanks golden-green. Throat metallic-violet. A band of white across the breast. Middle of abdomen buff. Median rectrices bronzy-green; lateral ones bronzy-brown. Under tail coverts bronze-green in the centre, margined with grayish-white. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Like the male, but with the throat mottled with brown and black.

## 4. *Heliangelus amethysticollis*.

*Orthorhynchus amethysticollis*, D'ORB. and LAFRES., Syn. Av., p. 31 (1838).

*Lampornis amethysticollis*, TSCHUD., Faun. Per., p. 246 (1844).

*Mellisuga amethysticollis*, GRAY, Gen. Birds, vol. i, p. 112, sp. 40.

*Anactoria amethysticollis*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).

*Heliangelus amethysticollis*, BON., Consp. Gen. Av., vol. i (1850), p. 76.—ID., Rev. and Mag. Zool. (1854), p.

252.—GOULD, Mon. Troch., vol. iv, pl. 245.—ID., Intr. Troch., octavo ed., p. 133.—CAB. and HEIN., Mus.

Hein. Th., iii, p. 75 (1860).—MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 90 (1876).—ELLIOT, Ibis (1877), p. 141.

*Hab.* Peru.—Bolivia (Bridges).

*Male.* Forehead metallic dark green. Head, wing coverts, and upper surface dark bronzy-green. Chin black. Throat metallic-violet, beneath which is a band of buff. Flanks and sides of breast bronze-green. Abdomen buff mottled with green. Under tail coverts grayish-white. Median rectrices bronze-green; lateral ones black. Wings purple. Bill black. Total length,  $4\frac{1}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail, 2 in. Culmen,  $\frac{5}{8}$  in.

*Female*. Without the luminous spot on the forehead, and the throat deep buff mottled with brownish-black. Otherwise like the male, but less brilliant.

### 5. *Heliangelus mavors*.

*Heliangelus mavors*, GOULD, P. Z. S. (1848), p. 12.—ID., Mon. Troch., vol. iv, pl. 246.—ID., Intr. Troch., octavo ed., p. 133.—BON., Consp. Gen. Av., p. 76 (1850).—MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 92.—BON., Rev. and Mag. Zool. (1854), p. 252.

*Mellisuga mavors*, GRAY, Gen. Birds, vol. iii, app., p. 5.

*Trochilus mavors*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).

*Hab.* Columbia, Venezuela.

*Male*. Forehead metallic fiery-red; rest of upper surface bronzy-green. A spot of white behind the eye. Lores and sides of neck black. Throat metallic fiery orange-red, beneath which is a broad band of buff. Flanks green. Middle of abdomen deep buff. Under tail coverts grayish-buff. Wings purplish-brown. Median rectrices bronzy-green, rest bronzy-brown, the two outermost ones tipped with white. Bill black. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{5}{8}$  in. Bill,  $\frac{3}{4}$  in.

*Female*. Similar to the male, but with the throat mottled with brown and black.

### Genus XLIV.—UROSTICTE.

*Urosticte*, GOULD, Intr. Troch., octavo ed., p. 110; ex Mon. Troch., pt. vi (1853).

TYPE.

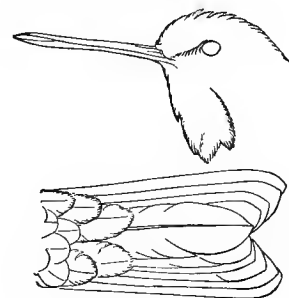
*T. benjamini*, Bourc.

Fig. 44.

*Ch.* Bill longer than the head and straight. Nostrils exposed. Wings moderate and pointed. Tail slightly forked. Hind toe shorter than the middle. Sexes unlike.

*Range*. Ecuador.

Two species only are known.



*Urosticte benjamini* ♂. Ecuador. Whitely.

#### Key to the species.

A. Median rectrices bronzy tipped with white.

a. Throat entirely luminous-green, crissum rufous.

1. *U. ruficrissa*.

b. Throat luminous-green, beneath which is a dark violet spot.

2. *U. benjamini*.

These are small birds, with straight bills like HELIANGELUS, but more slender; a green plumage and brilliant throats.

### 1. *Urosticte ruficrissa*.

*Urosticte ruficrissa*, LAWR., Ann. Lyc. Nat. Hist., N. Y. (1864), vol. viii, p. 44.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 103.

*Hab.* Ecuador.

*Male*. General plumage dark shining green. Throat luminous grass-green. Wings purplish-brown. Under tail coverts rufous. Tail pale bronze-green, with

the four median feathers tipped with white. Bill black, feet brown. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{7}{8}$  in.

*Female.* Exactly like the female of *U. benjamini*, but slightly larger and with a longer bill.

## 2. *Urosticte benjamini*.

*Trochilus benjamini*, BOURC., Compt. Rend. (1851), tom. xxxii, p. 187.

*Urosticte benjamini*, GOULD, Mon. Troch. (pt. vi), vol. iii, pl. 190.—ID., Intr. Troch., octavo ed., p. 110.—BON., Rev. and Mag. Zool. (1854), p. 253.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 101.

*Urosticta benjamini*, REICH., Aufz. der Colib., p. 13 (1853).

*Basilinna benjamini*, REICH., Troch. Enum., p. 11 (1855).

*Hab.* Ecuador.

*Male.* General plumage of body grass-green. Throat luminous green, beneath which is a conspicuous spot of dark violet. Behind the eye a small white spot. Wings purplish-brown. Tail bronzy-purple. Four middle rectrices extensively tipped with white. Bill black; feet brownish. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Young male* differs only in having the throat rufous.

*Female.* Head and upper surface green. White spot behind the eye. Under parts white spangled with green. Tail bronze, all the feathers but the median pair tipped with white. Bill black.

Between UROSTICTE and EUSTEPHANUS, the one we now reach, there is a considerable gap, and there are no species yet known by which we can bridge it over. The three recognized species of EUSTEPHANUS are large birds, the metallic hues of their plumage being confined to the top of the head. In two species the females possess an entirely different dress, and from the fact that their crowns were also metallic they were for a long time supposed to represent a distinct species, which is now known not to be the fact.—These two species are island forms.

## Genus XLV.—EUSTEPHANUS.

*Les Séphaniodes*, LESS., Ind. Gen. et Syn. du Genr. Troch. (1832), p. xxix.

*Eustephanus*, REICH., Syst. Av. Nat., pl. 40 (1849).

*Sephaniodes*, BON., Consp. Gen. Av. (1850), p. 82.

*Thaumaste*, REICH., Aufz. der Colibri., p. 14 (1853).

*Stokosiella*, "REICH.", BON., Ann. Sc. Nat. (1854), p. 138.

### TYPE.

*T. galeritus*, Molin.

*T. galeritus*, Molin.

*T. galeritus*, Molin.

*T. fernandensis*, King.

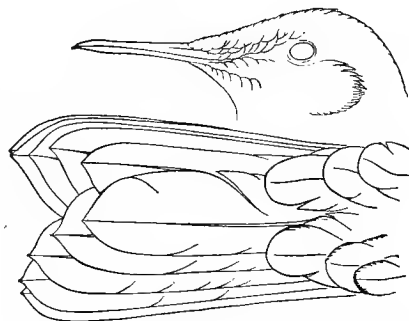
*T. fernandensis*, King.?

*Ch.* Bill short, straight, rather stout, sub-cylindrical, pointed. Nostrils covered with feathers. Wings ample long. Tail rather rounded. Tarsi clothed. Sexes unlike in plumage.

*Range.* Chili, and the islands of Juan Fernandez and Masafuera.

Three species are known.

Fig. 45.



*Eustephanus fernandensis*. ♂. Juan Fernandez. Bridges.

*Key to the species.*

- |  |                             |
|--|-----------------------------|
| A. Under parts brownish-gray spotted with green in both sexes. | 1. <i>E. galeritus</i> .    |
| B. Under parts cinnamon.                                       |                             |
| a. Top of head metallic fiery-red.                             | 2. <i>E. fernandensis</i> . |
| b. Top of head and occiput metallic fiery-red.                 | 3. <i>E. leyboldi</i> .     |

**1. Eustephanus galeritus.**

- Trochilus galeritus*, MOL., Hist. Chili, p. 219.—GMEL., Syst. Nat., vol. i, p. 484, sp. 23.—LATH., Ind. Orn., vol. i, p. 804.—VIEILL., Ency. Méth. p. 532.
- Mellisuga kingii*, VIG., Zool. Journ., vol. iii, p. 432.
- Mellisuga galerita*, GRAY, Gen. Birds, vol. i, p. 113, sp. 93.
- Orthorhynchus sephanioides*, LESS. and GARN., Voy. Coquille, pl. 31, fig. 2.
- Ornismya sephanioides*, D'ORB. and LAFRES., Syn. Av., ii, p. 29, sp. 16.
- Trochilus forficatus*, GOULD (nec LINN.), Voy. Beagle (Birds), pt. iii, p. 110 (1841).
- Sephanoides kingii*, GRAY, List Gen. Birds, p. 19.
- Sephanoides galeritus*, BON., Consp. Gen. Av., vol. i, p. 82 (1850).—ID., Rev. and Mag. Zool. (1854), p. 256.
- Eustephanus galeritus*, REICH., Aufz. der Colib. (1853), p. 14.—ID., Troch. Enum., p. 11 (1855).—GOULD, Mon. Troch., vol. iv, pl. 265.—ID., Intr. Troch., octavo ed., pl. 141.—MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 246.—ELLIOT, Ibis (1877), p. 138.

*Hab.* Chili, Island of Juan Fernandez.

*Male.* Entire top of head metallic orange-red. Upper surface and tail bronzy-green. Wings purple. Throat white, spotted with dark brown. Under surface grayish-brown, spotted with green. Under tail coverts pale bronze-green edged with buffy-white. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Top of head bronze-green instead of metallic orange-red. In all other respects, exactly like the male.

**2. Eustephanus fernandensis.**

- Trochilus fernandensis*, KING, Proc. Com. and Corr. Zool. Soc., pt. i, p. 30, ♂.
- Ornismya cinnamomea*, GERV., Mag. Zool. (1835), pl. 43.
- Ornismya fernandensis*, D'ORB. and LAFRES., Syn. Av., ii, p. 29, sp. 13 (1838).
- Ornismya robinson*, DELATT. and LESS., Rev. Zool. (1839), p. 18.
- Trochilus stokesii*, KING, Proc. Comm. and Corr. Zool. Soc., pt. i, p. 30, ♀ (1830).—LESS., Trochil., p. 135, pl. 50.
- Mellisuga fernandensis*, GRAY, Gen. Birds, vol. i, p. 113, sp. 94.
- Mellisuga stokesii*, GRAY, Gen. Birds, vol. i, p. 113, sp. 95.
- Sephanoides fernandensis*, BON., Consp. Gen. Av., p. 82, vol. i (1850).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 248.—BON., Rev. and Mag. Zool. (1854), p. 256.
- Eustephanus fernandensis*, REICH., Aufz. der Colib., p. 14.—ID., Troch. Enum., p. 11 (1855).—GOULD, Mon. Troch., vol. iv, pl. 267.—ID., Intr. Troch., octavo ed., p. 142.—CAB. and HEIN., Mus. Hein. Th., iii, p. 76.
- ELLIOT, Ibis (1877), p. 137, ♂.
- Thaumaste stokesii*, REICH., Aufz. der Colib., p. 14 (1853).—ID., Troch. Enum., p. 12 (1855).
- Sephanoides stokesii*, BON., Consp. Gen. Av., p. 82, vol. i.—ID., Rev. and Mag. Zool. (1854), p. 256.
- Eustephanus stokesii*, CAB. and HEIN., Mus. Hein. Th., iii, p. 75 (1860).—GOULD, Mon. Troch., vol. iv, pl. 266.—ID., Intr. Troch., octavo ed., p. 142, ♀.

*Hab.* Island of Juan Fernandez.

*Male.* Top of head metallic fiery-red. Wings purplish-brown. Vent buffy-white. Entire rest of plumage of body, and the tail dark cinnamon-red. Bill black. Total length,  $5\frac{1}{4}$  in. Wing,  $3\frac{3}{16}$  in. Tail,  $3\frac{5}{16}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Top of head metallic bluish-green. Upper surface and wing coverts dark bronze-green. Wings purplish-brown. Under surface white, spangled with metallic bluish-green on the throat and flanks. Under tail coverts white with green centres. Median rectrices and outer webs of lateral ones dark grass-green. Inner webs white. Total length,  $4\frac{5}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{5}{8}$  in.

### 3. *Eustephanus leyboldi*.

*Eustephanus leyboldi*, GOULD, Ann. Mag. Nat. Hist. (1870), p. 406.—MULS., Hist. Nat. Ois. Mouch., vol. ii, p. 251.

*Hab.* Island of Mas-a-fuera.

*Male.* Precisely like the *E. fernandensis*, with the exception that the metallic-red of the crown extends over the occiput. Total length,  $5\frac{1}{4}$  in. Wing,  $3\frac{3}{16}$  in. Tail,  $2\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Similar to the female of *E. fernandensis*, but differs chiefly in the tail feathers, which have the basal portion of the inner webs and all the outer webs green, leaving only the apical part of the inner ones white. The spots on the throat are bronzy and disposed in lines, and not generally dispersed as in the female of *E. fernandensis*.

### Genus XLVI.—TOPAZA.

*Polytmus*, BOIE (nec BRISS., 1760), Isis, p. 545 (1831).

*Topaza*, GRAY, List of Genera of Birds (1840), p. 13.

*Lampornis*, REICH, (nec SWAINS., 1827), Syst. Av. Nat. (1849), t. 39.

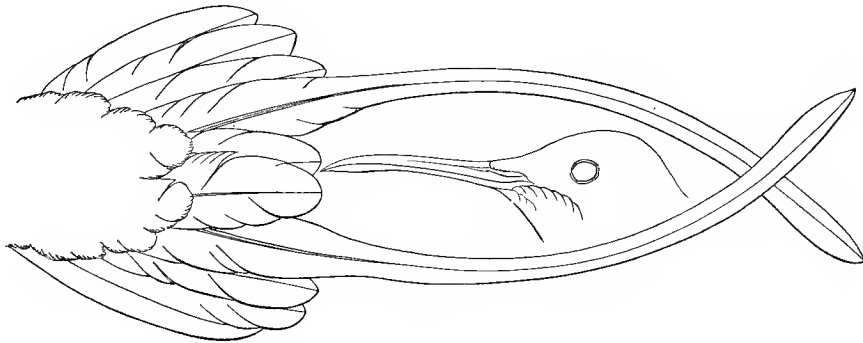
#### TYPE.

*T. pella*, Linn.

*T. pella*, Linn.

*T. pella*, Linn.

Fig. 46.



*Topaza pella*. ♂ ad. Cayenne. Bourcier.

*Ch.* Bill stout, curved, longer than the head. Wings long. Tail rounded, feathers on either side of central pair, narrow and elongated far beyond the rest, crossing each other at the tips of the other rectrices. Tarsi bare, feet rather large.

*Range.* Trinidad, Cayenne, and head waters of the Amazon, Rio Negro. Two species are known.

*Key to the species.*

- A. Throat metallic-green, body metallic-red.
- a. Tail. Lateral feathers deep buff. 1. *T. pella*.
  - b. Tail. Lateral feathers deep purple. 2. *T. pyra*.

Between this genus and the last there is also a gap, which we are not yet able to fill. The two species of the present one are among the most brilliantly plumaged of the Family, and are also remarkable for their peculiarly formed tails. The sexes are very unlike, but the female also exhibits metallic hues in her dress.

**1. *Topaza pella*.**

*Trochilus pella*, LINN., Syst. Nat., vol. i, p. 189 (1766), et Auct.

*Trochilus paradiseus*, LINN., Syst. Nat., vol. i, p. 189 (1766).

*Lampornis pella*, JARD., Nat. Lib. Humming-birds, vol. ii, p. 155.

*Topaza pella*, GRAY, List Gen. Birds, p. 13 (1840).—ID., Gen. Birds, vol. i, p. 109.—GOULD, Mon. Troch., vol. ii, pl. 66.—ID., Intr. Troch., octavo ed., p. 61.—REICH., Aufz. der Colib., p. 11.—ID., Troch. Enum. p. 9, t. 797, figs. 4853-55.—BON., Rev. and Mag. Zool. (1854), p. 250.—ID., Consp. Gen. Av., p. 73 (1850).—CAB. and HEIN., Mus. Hein. Th., iii, p. 16 (1860).

*Hab.* Cayenne, Trinidad, Brazil, river Amazon.

*Male.* Head, lores, and a line encircling the throat black. Back shining dark red changing to orange-red on the rump. Throat metallic greenish-yellow, with a topaz hue in the centre. Rest of lower parts shining crimson. Upper tail coverts light bronze-green. Under coverts golden-green. Median rectrices dark bronze-green; next two on either side dark purple, those next the median greatly elongated, and very narrow beyond the tips of the other feathers; remaining lateral rectrices reddish-buff. Bill black, feet white. Length,  $5\frac{1}{2}$  in. Wing,  $3\frac{1}{8}$  in. Tail, 2 in. Culmen, 1 in. Lateral rectrices stretch beyond the others 3 in., making total length,  $8\frac{1}{2}$  in.

*Female.* Entirely green, with metallic-red throat. Median rectrices grass-green tipped with black, two next dark purple, remainder, blackish at base tipped with buff. Middle rectrices rather pointed. Tail rounded. Total length,  $5\frac{1}{2}$  in. Wing, 3 in. Tail 2 in. Bill on culmen,  $\frac{7}{8}$  in.

**2. *Topaza pyra*.**

*Trochilus (Topaza) pyra*, GOULD, P. Z. S. (1846), p. 85.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 128.

*Topaza pyra*, GRAY, Gen. Birds, vol. i, p. 110.—GOULD, Mon. Troch., vol. ii, pl. 67.—ID., Intr. Troch., octavo ed., p. 62.—REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 9, t. 798, figs. 4856-57 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 16 (note) (1860).—BON., Consp. Gen. Av., vol. i, p. 73 (1850).—ID., Rev. and Mag. Zool. (1854), p. 250.

*Hab.* Rio Negro.

*Male.* Differs from *T. pella* by having the entire head, cheeks, and a broad band across upper part of throat velvety-black. Throat pale luminous green, bright orange-yellow in the centre. Median rectrices shining green; remainder deep purple. In size the two species are about the same.

In different specimens the colors of the body vary, some being shining crimson-

red like *pella*, while others are a brilliant orange-red. I do not consider that this difference has any specific value.

*Female* similar to that of *T. pella*, but has the lateral rectrices dark violet, the inner webs of the external feather rufous, and the median pair are greenish-bronze at the base, passing into a violet-black at the tip.

### Genus XLVII.—AITHURUS.

#### TYPE.

- |  |                              |
|--|------------------------------|
| <i>Phæthornis</i> , LESS. (nec SWAINS., 1827), Tab. Esp. Ois. Mouch., p. xviii (1829).     | <i>O. cephalatra</i> , Less. |
| <i>Polythmus</i> , LESS. (nec BRISS., 1760), Ind. Gen. Synop. Genr. Troch., p. xvi (1832). | <i>O. cephalatra</i> , Less. |
| <i>Trochilus</i> , GRAY (nec LINN., 1748), List of Gen. Birds, p. 14 (1840).               | <i>O. cephalatra</i> , Less. |
| <i>Polytmus</i> , REICH. (nec BRISS., 1760), Syst. Av. Nat., pl. 39 (1849).                | <i>O. cephalatra</i> , Less. |
| <i>Aithurus</i> , CAB. and HEIN., Mus. Hein. Th., iii, p. 50 (1860).                       | <i>O. cephalatra</i> , Less. |

Fig. 47.



*Aithurus polytmus*. ♂. Jamaica. Dresser.

*Ch.* Bill curved, wide at base, longer than head. Lateral rectrices next the outermost one on either side, lengthened nearly three times that of the other feathers. Tail deeply forked. Head crested. Sexes unlike.

*Range.* Island of Jamaica.

The species of this genus, by its singularly shaped tail, is apparently allied to those of the genus *TOPAZA*, and naturally finds its place here. It is a bird of moderate size, though from the length of the rectrices it appears larger than it really is.

### 1. *Aithurus polytmus*.

- Trochilus polytmus*, LINN., Syst. Nat. (1766), vol. i, p. 189.—GMEL., Syst. Nat. (1788), vol. i, p. 486.—LATH., Ind. Orn., vol. i, p. 302.—GOSSE, B. Jamaica, p. 97.—GOULD, Mon. Troch., vol. ii, pl. 98.
- Black-capped Humming-bird*, LATH., Gen. Syn., vol. ii, p. 748 (1790).—SHAW., Gen. Zool., vol. viii, p. 281.
- Ornismya cephalatra*, LESS., Ois. Mouch., p. 78, pl. 17 (1829).
- Trochilus maria*, HILL, Ann. Mag. Nat. Hist. (1849), vol. iii, p. 258.—GOSSE, Ill. B. of Jam., pl. 22.
- Polytmus cephalatra*, BON., Consp. Gen. Av., p. 72 (1850).
- Polytmus cephalater*, BON., Rev. and Mag. Zool. (1854), p. 254.
- Aithurus polytmus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 50 (1860).—GOULD, Intr. Troch., octavo ed., p. 75.

*Hab.* Island of Jamaica.

*Male.* Crown of head and nape velvety-black. Upper surface dark green. Wings purplish-brown. Entire under parts lustrous emerald-green. Under tail



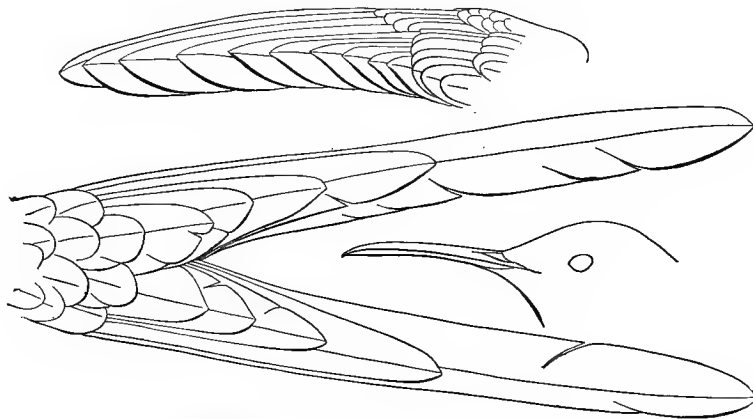
coverts blue-black. Tail deep black. Bill red. Total length, 9 in. Wing,  $2\frac{5}{8}$  in. Tail,  $6\frac{1}{2}$  in. Culmen,  $\frac{7}{8}$  in.

*Female.* Top of head brown. Upper parts grass-green. Under surface white, flanks green. Tail, middle feathers bronze-green, next one black, bronze-green on outer web, remainder black tipped with white.

### Genus XLVIII.—HYLONYMPHA.

*Hylonympha*, GOULD, Ann. and Mag. Nat. Hist., 4th ser., vol. xii (1873), p. 429. TYPE.  
*H. macrocerca*, Gould.

Fig. 48.



*Hylonympha macrocerca*. ♂. Northern Brazil. Whitely.

*Ch.* Bill longer than the head, stout, slightly curved; feathers of forehead projecting forwards and covering the nostrils; wings long, narrow, reaching to the fork of the tail. Tail very long, deeply forked, the external rectrix twice the length of the one next to it, very broad, narrowing to a point, the edges of the webs curving slightly downwards. Feet small, tarsi partly clothed.

*Range.* Northern Brazil.

One species is known.

The curious bird comprised in this genus, apparently connects the last one with THALURANIA. It is a large species, with a coloring similar to that of *T. glaucopsis*.

#### 1. *Hylonympha macrocerca*.

*Hylonympha macrocerca*, GOULD, Ann. and Mag. Nat. Hist. (1873), vol. xii, p. 429.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 75.

*Hab.* Northern Brazil.

*Male.* Forehead and crown, metallic violet-blue, nape black, dark green when viewed from behind. Upper parts very dark green, appearing velvety-black in certain lights on the centre of the back, lightest on the rump and upper tail coverts. Throat and breast metallic emerald-green; flanks dark green; abdomen black washed with green; thighs and under tail coverts brownish-black. Tail steel-blue.

Bill black. Total length,  $7\frac{3}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail, external feather, 5 in. Culmen,  $\frac{7}{8}$  in. Outer tail-feather at the widest part  $\frac{7}{16}$  in.

Another specimen not quite so mature, has the chin white, caused by the base of the feathers showing conspicuously, and those of the upper part of the breast are just turning into the luminous green of the throat. The tail is shorter, and the rectrices are narrower than those of the example described above, having a total length of  $4\frac{3}{16}$  in., and a width at the broadest part of the external feather of  $\frac{6}{16}$  in. In other respects the dimensions are the same.

*Female.* Unknown.

### Genus XLIX.—THALURANIA.

*Mellisuga*, BOIE (1831), Isis, p. 545 (nec BRISS., 1760).

*Thalurania*, GOULD, P. Z. S. (1848), p. 13.

*Glaucopis*, BURM. (nec HUBN., 1816), Th. Bras. (1856), p. 333, 2d pt.

TYPE.

*T. furcatus*, Gmel.

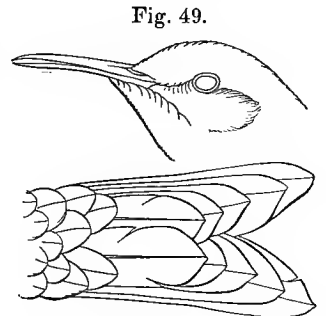
*T. nigro-fasciata*, Gould.

*T. glaucopis*, Gmel.

*Ch.* Bill longer than the head, curved. Wings short; tail large, more or less forked. Tarsi clothed with feathers. Sexes dissimilar.

*Range.* Tres Marias Islands, Costa Rica, Veragua, to and including Ecuador on the west coast; the islands of Dominica and Trinidad; also Guiana, Venezuela, and northern Brazil on the east.

Eleven species are here recognized as belonging to this genus. They are a strongly marked group, moderate in size, and graceful in form, with a plumage of green, or green and blue in the males, with metallic hues on the crown or throat, sometimes on both. Females have a plain plumage.



*Thalurania glaucopis*. ♂. Brazil. Gould.

#### Key to the species.

- |  |                              |
|--|------------------------------|
| A. Top of the head purplish-blue.                          |                              |
| a. Entire under parts green.                               | 1. <i>T. glaucopis</i> .     |
| b. Abdomen prussian-blue.                                  | 2. <i>T. columbica</i> .     |
| B. Top of the head dull green.                             |                              |
| a. Under parts rich purple. Tail much forked.              | 3. <i>T. furcata</i> .       |
| b. Under parts purplish-blue. Tail slightly forked.        | 4. <i>T. furcatoides</i> .   |
| c. Under parts prussian-blue.                              | 5. <i>T. nigrofasciata</i> . |
| d. Diminutive of species <i>c</i> .                        | 6. <i>T. jelski</i> .        |
| e. Back blue. Tail very long, deeply forked.               | 7. <i>T. watertoni</i> .     |
| C. Top of the head and back jet-black.                     |                              |
| Size large. Tail deeply forked; under parts prussian-blue. | 8. <i>T. refulgens</i> .     |
| D. Top of the head brilliant metallic-green.               |                              |
| Back green, under parts prussian-blue.                     | 9. <i>T. eriphile</i> .      |
| Under parts green.   | 10. <i>T. hypochlora</i> .   |
| E. Head and neck deep rich cobalt-blue.                    |                              |
| Body brilliant metallic-green. Tail forked.                | 11. <i>T. bicolor</i> .      |

**1. Thalurania glaucopsis.]**

*Trochilus glaucopsis*, GMEL., Syst. Nat., vol. i, p. 497 (1788).

*Trochilus frontalis*, LATH., Ind. Orn., vol. i, p. 318 (1790).

*Ornismya glaucopsis*, LESS., Ois. Mouch., p. 175, pls. 58, 59 (1829).

*Polytmus glaucopsis*, GRAY, Gen. Birds, vol. i, p. 108, sp. 58.

*Celigena glaucopsis*, REICH., Troch. Enum., p. 3, t. 685, figs. 4509-10 (1855).

*Thalurania glaucopsis*, GOULD, Mon. Troch., vol. ii, pl. 99.—ID., Intr. Troch., octavo ed., p. 76.—BON., Consp. Gen. Av., p. 77.—ID., Rev. and Mag. Zool. (1854), p. 254.—REICH., Aufz. der Colib., p. 7.—CAB. and HEIN., Mus. Hein. Th., iii, p. 23.—SALV. and ELLIOT, Ibis (1873), p. 355.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 59.

*Glaucopsis frontalis*, BURMEIST., Th. Bras., 2d pt., p. 333, sp. 1 (1856).

*Thalurania luciae*, LAWRE., Ann. Lyc. Nat. Hist. N. Y. (1862), vol. vii, p. 2.—SALV. and ELLIOT, Ibis (1873), p. 355.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 62.

*Hab.* Brazil, Tres Marias Islands.

*Male.* Centre of the crown metallic purplish-blue. Upper surface dark grass-green, brightest on the upper tail coverts. Entire under surface shining yellowish-green. Tail steel-blue. Wings purple. Bill black. Total length,  $4\frac{3}{8}$  in. Wing,  $2\frac{3}{16}$  in. Tail, 2 in. Culmen,  $\frac{5}{8}$  in.

*Female.* Head and nape bronzy-green, rest of upper surface bright green. Under parts gray, washed with green on the flanks. Median rectrices and base of lateral ones shining green, the remaining portions of lateral ones black tipped with white.

**2. Thalurania columbica.**

*Ornismya columbica*, BOURC. and MULS., Rev. Zool. (1843), p. 2.

*Polytmus columbicus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 60.

*Thalurania venusta*, GOULD, P. Z. S. (1850), p. 163.—ID., Mon. Troch., vol. ii, pl. 105.—ID., Intr. Troch., octavo ed., p. 78.—BON., Rev. and Mag. Zool. (1854), p. 254.—REICH., Aufz. der Colib., p. 7.—ID., Troch. Enum., p. 3, pl. 683, figs. 4504-5.—CAB. and HEIN., Mus. Hein. Th., iii, p. 24.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 63.

*Thalurania columbiana*, GOULD, P. Z. S. (1852), p. 8.

*Celigena columbica*, REICH., Troch. Enum., p. 3, t. 685, figs. 4511-12 (1855).

*Thalurania columbica*, GOULD, Mon. Troch., vol. ii, pl. 106.—ID., Intr. Troch., octavo ed., p. 78.—REICH., Aufz. der Colib., p. 7.—SALV. and ELLIOT, P. Z. S. (1873), p. 355.

*Thalurania puella*, BON., Rev. and Mag. Zool. (1854), p. 254.—REICH., Aufz. der Colib., p. 7.—ID., Troch. Enum., p. 3 (1855).

*Hab.* Costa Rica, Veragua, Panama, Columbia.

*Male.* Crown of head and a band across the back, wing coverts, abdomen, and under tail coverts dark ultramarine blue. Nape and upper part of back, black in some lights, deep green in others. Lower part of back green. Upper tail coverts and tail black glossed with steel-blue. Throat and breast shining emerald-green. Bill black. Total length,  $3\frac{5}{8}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Above golden-green; beneath gray. Tail green at base, rest steel-blue, lateral feathers tipped with white.

**3. Thalurania furcata.**

*Trochilus furcatus*, GMEL., Syst. Nat. (1788), vol. i, p. 486.—LATH., Ind. Ornith., vol. i, p. 304 (1790).

*Ornismya furcata*, LESS., Hist. Nat. Ois. Mouch., p. 82, pl. 18 (1829).

*Polytmus furcatus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 61.

*Cœligena (Thalurania) gyrrinno*, REICH., Enum., p. 3, pl. 682, figs. 4500-1.

*Thalurania furcata*, GOULD, Mon. Troch., vol. ii, pl. 101.—ID., Intr. Troch., octavo ed., p. 77.—BON., Consp. Gen. Av., vol. i, p. 76.—ID., Rev. and Mag. Zool. (1854), p. 254.—REICH., Aufz. der Colib., p. 7.—CAB. and HEIN., Mus. Hein. Th., iii, p. 24.—SALV. and ELLIOT, Ibis (1873), p. 356.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 71.

*Thalurania subfurcata*, HEIN., Journ. für Ornith. (1863), p. 181.

*Hab.* Guiana.

*Male.* Head dull green, black in certain lights; upper parts of back brilliant purple; rest of back and upper tail coverts grass-green. Throat and upper part of breast luminous grass-green. Under parts brilliant purple like the back. Upper and under tail coverts dark green. Tail blue-black. Maxilla black. Mandible brownish-black. Total length,  $3\frac{3}{4}$  in. Wing,  $1\frac{7}{8}$  in. Tail  $1\frac{1}{2}$  in. Culmen  $\frac{5}{8}$  in.

*Female.* Upper parts grass-green; beneath gray. Median rectrices green, lateral ones bluish-black tipped with white.

#### 4. *Thalurania furcatoides*.

*Thalurania furcatoides*, GOULD, Mon. Troch., pt. xvi (text to *T. furcata*).—ID., Intr. Troch., octavo ed., p. 357 (1861).—SALV. and ELLIOT, Ibis (1873), p. 357.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 73.

*Thalurania forcifata*, CAB. and HEIN., Mus. Hein. Th., iii, p. 24 (1860).

*Hab.* Para.

This species only differs from the *T. furcata* in having a shorter and less forked tail. It is the lower Amazonian form of the species just named.

#### 5. *Thalurania nigrofasciata*.

*Ornismya furcata*, D'ORB. and LAFRES. (nec GMEL.), Syn. Av., ii, p. 27, sp. 6 (1838).

*Trochilus* (—?), *nigrofasciatus*, GOULD, P. Z. S. (1846), p. 89.

*Thalurania viridipectus*, GOULD, P. Z. S. (1848), p. 13.—BON., Consp. Gen. Av., p. 76.—ID., Rev. and Mag. Zool. (1854), p. 254.

*Polytmus nigrofasciatus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 62.

*Saucerottia viridipectus*, REICH., Aufz. der Colib., p. 7 (1853).

*Cœligena nigrofasciata*, REICH., Troch. Enum., p. 3, t. 684, fig. 4506 (1855).

*Cœligena viridipectus*, REICH., Troch. Enum., p. 3 (1855).

*Thalurania nigrofasciata*, BON., Consp. Gen. Av. (1850), vol. i, p. 76.—REICH., Aufz. der Colib. (1853), p. 7.—BON., Rev. and Mag. Zool. (1854), p. 254.—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 23.—GOULD, Mon. Troch., vol. ii, pl. 104.—ID., Intr. Troch., octavo ed., p. 78 (1861).—SALV. and ELLIOT, Ibis (1873), p. 357.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 75.—ELLIOT, Ibis (1877), p. 135.

*Thalurania tschudi*, GOULD, P. Z. S. (1860), p. 312.—ID., Intr. Troch., octavo ed. (1861), p. 78, et Auct.

*Hab.* Ecuador and Peru.

*Male.* Head and nape bronze, back shining green. Throat metallic emerald-green, truncated or extending on to the breast, and sometimes bordered with black. Rest of under parts and shoulders prussian-blue. Under tail coverts blue-black. Tail steel-blue. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper parts shining grass-green; under surface gray. Tail green at base, remaining part steel-blue, with the lateral feathers tipped with white. Dimensions as in the male.

**6. \*Thalurania jelskii.**

*Thalurania jelskii*, TACZANOW., P. Z. S. (1874), p. 138, sp. 19.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 70.

*Hab.* Peru.

This is a diminutive of the *T. nigrofasciata*; and there is absolutely no difference between the two except in size. The rectrices of *T. jelskii* are narrow, but not more so than accords with its dimensions. I compared the type with specimens of *nigrofasciata*, and could distinguish no difference, save that the *T. jelskii* was a little smaller. The type is in the Museum at Warsaw.

**7. \*Thalurania watertoni.**

*Trochilus watertoni*, BOURC., P. Z. S. (1847), p. 44.—ID., Rev. Zool. (1847), p. 256.

*Polytmus watertoni*, GRAY, Gen. Birds, vol. i, p. 108.

*Thalurania watertoni*, BON., Consp. Gen. Av., vol. i, p. 76 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.—GOULD, Mon. Troch., vol. ii, pl. 100.—ID., Intr. Troch., octavo ed., p. 76 (1861).—SALV. and ELLIOT, Ibis (1873), p. 358.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 78.

*Thalurania whatertoni*, REICH., Aufz. der Colib., p. 7 (1853).

*Calligena whatertoni*, REICH., Troch. Enum., p. 3 (1855).

*Hab.* British Guiana.

*Male.* Crown and nape greenish-bronze; middle of back and flanks metallic-blue; rest of back green; upper tail coverts purple. Throat, breast, and centre of abdomen metallic grass-green. Wings dark purple. Tail and its under coverts steel-blue. Bill black. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $2\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper parts dark green; under parts gray. A specimen of a female was in the collection of the late Ed. Verreaux, and is now I suppose in the possession of Count H. Turati at Milan.

**8. Thalurania refulgens.**

*Thalurania refulgens*, GOULD, P. Z. S. (1852), p. 9.—ID., Mon. Troch., vol. ii, pl. 102.—ID., Intr. Troch., octavo ed., p. 77.—REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 3.—BON., Rev. and Mag. Zool. (1854), p. 254.—SALV. and ELLIOT, Ibis (1873), p. 358.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 79.

*Hab.* Trinidad.

*Male.* Top of head velvety-black, bronze when viewed from behind. Middle of back, abdomen, and flanks shining purplish-blue. Lower part of back and rump dark green. Tail and under coverts steel-black. Entire throat metallic emerald-green. Wings purplish-brown. Bill black. Tail much forked. Total length,  $4\frac{5}{8}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female* unknown to me.

**9. Thalurania eriphile.**

*Ornismya eriphile*, LESS., Hist. Colib., p. 148, pl. 25.—ID., Ois. Mouch. Supp., p. 148, t. 25.

*Trochilus fannyi*, BOURC. and DELATT., Rev. Zool. (1846), p. 310.

*Polytmus eriphile*, GRAY, Gen. Birds, vol. i, p. 108, sp. 64.

*Hylocharis fannyi*, GRAY, Gen. Birds, vol. i, p. 114, sp. 20.

*Thalurania verticeps*, GOULD, Jard. Contr. Ornith. (1851), pl. 107.

- Thalurania eriphila*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.  
*Thalurania lydia*, REICH., Aufz. der Colib., p. 7 (1853).  
*Riccordia verticeps*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 4, t. 705, fig. 4590.  
*Cœligena fannyi*, REICH., Troch. Enum., p. 3, t. 683, figs. 4502-3 (1855).  
*Chloristes verticeps*, REICH., Troch. Enum., p. 4, t. 705, fig. 4590 (1855).  
*Cœligena (Thalurania) eriphyle*, REICH., Troch. Enum., p. 3, t. 684, figs. 4507-8 (1855).  
*Thalurania eriphile*, GOULD, Mon. Troch., vol. ii, pl. 108.—ID., Intr. Troch., octavo ed., p. 79.—REICH., Aufz. der Colib., p. 7 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 23 (1860).—SALV. and ELLIOT, Ibis (1873), p. 359.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 67.  
*Thalurania verticeps*, GOULD, Mon. Troch., vol. ii, pl. 107.—ID., Intr. Troch., octavo ed., p. 78.  
*Glaucopsis-eriphile*, BURM., Th. Bras., vol. ii, p. 334, sp. 2 (1856).  
*Thalurania fanny*, CAB. and HEIN., Mus. Hein. Th., iii, p. 23 (1860).  
*Thalurania fannia*, GOULD, Intr. Troch., octavo ed., p. 78 (1861).

*Hab.* Brazil, Ecuador, and Columbia.

*Male.* Anterior part of head and throat, metallic emerald-green. Back of head and upper parts bronzy-green. Shoulders, abdomen, and flanks dark blue, glossed with violet in some lights. Under tail coverts greenish-blue. Wings purplish-brown. Tail steel-blue. Bill black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper parts shining green; under parts gray. Median rectrices grass-green, rest deep blue tipped with white. Bill black.

### 10. *Thalurania hypochlora*.

- Thalurania hypochlora*, GOULD, P. Z. S. (1870), p. 104.—SALV. and ELLIOT, Ibis (1873), p. 360.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 66.

*Hab.* Citado in Ecuador.

*Male.* Top of head and entire under parts metallic emerald-green. Upper parts shining grass-green, becoming bluish-green on the upper tail coverts. Under tail coverts blue-black. Tail steel-black. Wings purplish-brown. Bill black. Total length, 4 in. Wing,  $2\frac{3}{16}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper parts shining bronzy-green. Under parts gray. Median rectrices shining grass-green, lateral ones green at base, then deep blue, and tipped with white. The blue color increases in extent as it goes towards the outermost feathers. Total length,  $3\frac{1}{4}$  in. Wing  $1\frac{3}{4}$  in. Tail,  $1\frac{1}{16}$  in. Culmen,  $\frac{5}{8}$  in.

### 11. *Thalurania bicolor*.

- Trochilus bicolor*, GMEL., Syst. Nat., vol. i (1788), p. 496, sp. 51.—VIEILL., Ois. Dor., p. 75, t. 36 (1802).—ID., Ency. Méth., p. 571, sp. 81.  
*Ornismya wagleri*, LESS., Hist. Ois. Mouch., p. 203, pl. 73 (1829).  
*Hylocharis wagleri*, GRAY, Gen. Birds, vol. i, p. 114.  
*Cœligena wagleri*, REICH., Troch. Enum., p. 3, t. 702, fig. 4576-77 (1855).  
*Thalurania wagleri*, GOULD, Mon. Troch., vol. ii, pl. 109.—ID., Intr. Troch., octavo ed., p. 79.—REICH., Aufz. der Colib., p. 7.—BON., Consp. Gen. Av., vol. i, p. 77.—ID., Rev. and Mag. Zool. (1854), p. 254.—CAB. and HEIN., Mus. Hein. Th., iii, p. 24.—SALV. and ELLIOT, Ibis (1873), p. 360.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 81.—LAWR., Ann. N. Y. Acad. Sc. (1877), vol. i, p. 46.

*Hab.* Brazil; Dominica (Ober.).

*Male.* Top of head, face, and throat deep cobalt-blue. Upper surface shining dark green; under surface metallic grass-green, lighter than the back. Tail with

its upper and under coverts steel-blue. Wings dark purplish-brown. Maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Upper parts bronzy-green, darkest on crown of the head. Upper tail coverts bluish-green. Entire under parts grayish-white, spangled with green on the flanks. Tail, two outermost rectrices dark-gray at base, remaining part steel-blue tipped with white, rest of feathers shining green with the terminal third steel-blue. Maxilla dark brown; mandible flesh-color.

It matters little which group or division we place next, as a gap occurs here, and there is no form known that will connect the last genus with any of those that remain. There is no arrangement of this Family possible that will not exhibit great gaps, although they are much fewer than they were a few years since. The species of the next genus is the smallest known among the Humming-birds, plain in plumage, and without any metallic hues.

#### Genus L.—MELLISUGA.

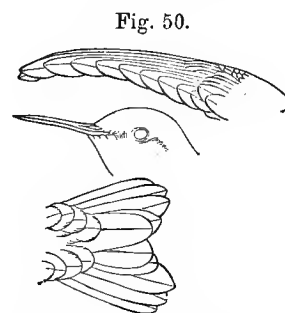
*Mellisuga*, BRISS., Ornith., tom. iii, p. 695 (1760).  
*Dyrinia*, MULS. and VERR., Class. Troch. (1865), p. 88.

TYPE.  
*T. minimus*, Linn.  
*T. minimus*, Linn.

*Ch.* Bill straight, shorter than the head, rather wide at base, graduating to a point. Wings long, and primaries narrow. Tail very slightly forked, short. Sexes alike. Size minute.

*Range.* Jamaica, St. Domingo.

But one species of this genus is known.



*Mellisuga minima*. ♂. Jamaica. Sallé.

#### 1. *Mellisuga minima*.

- Trochilus minimus*, LINN., Syst. Nat. (1766), vol. i, p. 193.—GMEL., Syst. Nat. (1788), tom. i, p. 500.—LATH., Ind. Orn., vol. i, p. 320 (1790).  
*Le plus petit oiseau-mouche*, BUFF., Plan. Enlum., 276, fig. 1.  
*Trochilus minutulus*, VIELL., Ois. Am. Sept., tom. ii, p. 73 (1807).  
*Trochilus vieillotii*, SHAW, Gen. Zool., vol. viii, p. 347.  
*Ornismya minima*, LESS., Ois. Mouch., pl. 79, ♀ (1829).  
*Mellisuga humilis*, GOSSE., B. Jamaica, p. 127 (1847).  
*Trochilus catherinæ*, SALLÉ., Rev. Zool. (1849), p. 498.  
*Hylocharis nigra*, GRAY, Gen. Birds, vol. i, p. 114, sp. 16.  
*Hylocharis niger*, BON., Consp. Gen. Av., vol. i, p. 81 (1850).  
*Mellisuga minima*, BON., Consp. Gen. Av. (1850), vol. i, p. 81.—ID., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 133.—ID., Intr. Troch., octavo ed., p. 87.—REICH., Aufz. der Colib., p. 6.—ID., Troch. Enum., p. 3, t. 680, figs. 4490–93.—ELLIOT, Ibis (1872), p. 354.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 82 (1877).  
*Dyrinia minima*, MULS. and VERR., Class. Troch. (1865), p. 88.

*Hab.* Jamaica, St. Domingo.

*Male.* Upper surface and flanks shining green. Under parts white; throat spotted with brown, abdomen and under tail coverts tipped with green. Tail black; bill black. Total length,  $2\frac{3}{8}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Like the male. Throat without spots. Tail green at base, rest black, the lateral feathers tipped with white.

### Genus LI.—MICROCHERA.

*Microchera*, GOULD, Intr. Mon. Troch., octavo ed., p. 82 (1861) (descr.).

*Ch.* Size minute. Bill long as the head, slender, straight. Feathers of forehead project on to the culmen. Nostrils covered. Wings long, primaries rather broad. Tail short, square. Tarsi clothed. Sexes dissimilar.

The species of this genus are remarkable for their pure white crowns, a character entirely unknown among the other members of the Family.

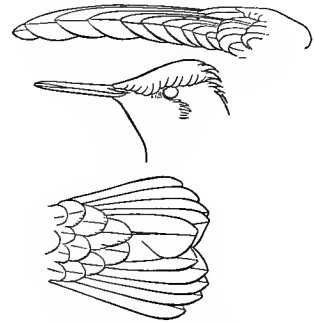
*Range.* Costa Rica, Nicaragua, and Veragua in Central America.

Two species only are known belonging to this genus.

TYPE.

*M. albocoronata.*

Fig. 51.



*Microchera albocoronata*, ♂.  
Veragua. Verreaux.

#### Key to the species.

A. Top of head pure white.

- a. General plumage bluish-black with coppery reflections.
- b. General plumage shining purple.

- 1. *M. albocoronata.*
- 2. *M. parvirostris.*

### 1. *Microchera albocoronata.*

*Mellisuga albocoronata*, LAWRE., Ann. N. Y. Lyc. Nat. Hist., vol. vi (1855), p. 137, pl. 4.

*Microchera albocoronata*, GOULD, Mon. Troch. (1858), vol. ii, pl. 116.—ID., Intr. Troch., octavo ed., p. 82.—FRANTZ., Journ. für Ornith. (1869), p. 315.—MULS. Hist. Nat. Ois. Mouch., vol. iii, p. 134 (1876).

*Hab.* Veragua.

*Male.* Front and crown silky-white. Chin dull greenish. General plumage bluish-black, with coppery reflections. Wings purple. Median rectrices bronzy-green, lateral ones white at base, then a band of blue-black and tips white. Under tail coverts white. Maxilla black, mandible brownish. Total length,  $2\frac{1}{2}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Upper surface bronzy-green. Under surface white. Tail like that of the male, except the blue-black on the lateral feathers is much narrower and the white on the tips more extensive.

### 2. *Microchera parvirostris.*

*Microchera parvirostris*, LAWRE., Ann. N. Y. Lyc. Nat. Hist. (1870), p. 122, ♀.—MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 137.—SALV., P. Z. S. (1867), p. 171.



*Hab.* Costa Rica, Nicaragua.

*Male.* Top of head white, throat dull green. General plumage shining reddish-purple. Median rectrices light bronze; lateral ones white at base, rest brownish-black, edged with white. Bill black. Wings purple. Total length,  $2\frac{1}{2}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Like that of *M. albocoronata*. Above bronzy-green, beneath white. Middle rectrices bronze-green, rest white with a subterminal black bar. Bill black.

## Genus LII.—TROCHILUS.

*Trochilus*, LINN., Syst. Nat. (1766), vol. i, p. 189.  
*Cynanthus*, BOIE, Isis (1831) (nec SWAINSON, 1837), p. 547.  
*Colubris*, REICH., Syst. Av. Nat., pl. 40 (1849).  
*Archilochus*, REICH., Troch. Enum., p. 10 (1855).  
*Ornismya*, MULS. and VERR., Class. Troch. (1865), p. 91.

### TYPE.

*T. colubris*, Linn.  
*T. colubris*, Linn.  
*T. colubris*, Linn.  
*T. alexandri*, Bourc.  
*T. alexandri*, Bourc.

*Ch.* Bill straight, slender, long as the head. Wings short. Tail forked, rectrices pointed. Nostrils hidden by frontal feathers. Sexes unlike in plumage.

*Range.* North America from the Saskatchewan River, to Veragua in Central America, islands of Cuba, Bermuda, and the Bahamas.

This genus, as established by Linnæus, was a composite one, comprising species of various forms, all of which have been included in distinct genera, with the exception of *T. colubris*, which remains as the type. The species are small in size, with luminous throats, but otherwise the plumage is not brilliant.

Only two species are retained in the genus.

### Key to the species.

- |  |                          |
|--|--------------------------|
| A. Throat metallic ruby-red.                                   | 1. <i>T. colubris</i> .  |
| B. Throat black, bounded beneath by a band of metallic-purple. | 2. <i>T. alexandri</i> . |

## 1. *Trochilus colubris*.

*Trochilus colubris*, LINN., Syst. Nat., tom. i, p. 191 (1766).—WILSON, Am. Orn., vol. ii, p. 26, pl. 10, figs. 3, 4.—VIEILL., Ency. Méth. Orn., vol. ii, p. 569.—AUD., B. Amer., vol. i, pl. 47.—SWAINSON, Faun. Bor. Amer., vol. ii, p. 323 (1832).—GOULD, Mon. Troch., vol. iii, pl. 131.—ID., Intr. Troch., octavo ed., p. 86.—BONAP., Consp. Gen. Av., p. 81.—ID., Rev. and Mag. Zool. (1854), p. 252.—REICH., Aufz. der Colib., p. 12.—ID., Troch. Enum., p. 10.—CAB. and HEIN., Mus. Hein. Th., iii, p. 57 (1860).—ELLIOT, Ibis (1872), p. 354.

*Mellisuga colubris*, STEPH., Shaw. Gen. Zool., vol. xiv, p. 247.

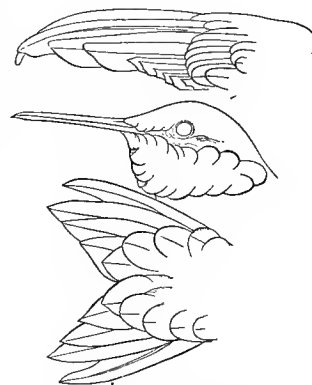
*Mellisuga colubris*, GRAY, Gen. Birds, vol. i, p. 113.

*Ornismya colubris*, LESS., Ois. Mouch., pp. xvi, 151, pl. 48 (1829).—ID., Trochil., p. 1, pl. (1831).—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 52 (1877).

*Cynanthus colubris*, JARD., Nat. Libr. Humming-Birds, vol. ii, p. 143.

*Hab.* Eastern North America, Mexico, Central America to Veragua; Cuba, Bahamas, and Bermudas of the West Indies.

Fig. 52.

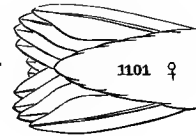


*Trochilus colubris*. ♂. Washington, D.C.  
J. K. Townsend.

*Male.* Entire upper parts and flanks bronzy-green. Chin black; throat metallic ruby-red. Breast and under parts white, the latter tinged with green. Median rectrices golden-green, lateral ones purplish-brown. Bill black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $1\frac{5}{8}$  in.

*Female.* Above golden-green; beneath white. Tail—median rectrices green, lateral ones green at base, then black with white tips.

Fig. 53.



## 2. *Trochilus alexandri.*

*Trochilus alexandri*, BOURC. and MULS., Ann. Soc. Scien., Lyon (1846), tom. ix, p. 330.—CASS., Ill. B. Calif., p. 141, pl. 22.—BON., Cousp. Gen. Av., p. 81, vol. i.—ID., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Mon. Troch., vol. iii, pl. 132.—ID., Intr. Troch., octavo ed., p. 87.—CAB. and HEIN., Mus. Hein. Th., iii, p. 57 (1860).

*Mellisuga alexandri*, GRAY, Gen. Birds, vol. i, p. 113.

*Selasphorus alexandri*, REICH., Troch. Enum., p. 10 (1855).

*Archilochus alexandri*, REICH., Troch. Enum., p. 10 (1855).

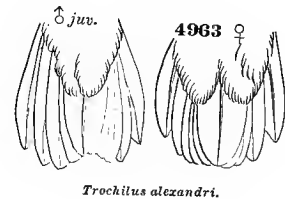
*Ornismya alexandri*, MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 61 (1877).

*Hab.* California and Mexico.

*Male.* Top of head dark brown. Upper parts bronzy-green. Wings purplish-brown. Throat black bounded beneath by a brilliant band of metallic-purple. Breast white, rest of under parts bronzy-gray. Median rectrices bronzy-green, lateral ones black glossed with green. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $1\frac{1}{6}$  in. Description taken from a specimen collected at Sacramento, California, by Dr. A. L. Hermann, now in my collection.

*Female.* Top of head brown. Upper surface bronzy-green; under surface grayish-white. Central tail feathers bronze-green, lateral ones greenish-gray at base, then black with white tips. Bill black.

Fig. 54.



## Genus LIII.—CALYPTE.

*Calypte*, GOULD, Intr. Troch., octavo ed., p. 87 (1861), descr.

*Leucaria*, MULS., Cat. Ois. Mouch. (1875), p. 31.

TYPE.

*O. costæ*, BOURC.

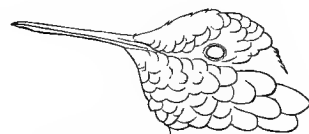
*O. costæ*, BOURC.

*Ch.* "Bill longer than the head; straight or slightly arched; tail rather short, the three outer feathers stiff, narrow, and slightly incurved; tarsi clothed, feet small, hind and fore toes nearly equal in length." (Gould, l. c.)

*Range.* Mexico and the island of Cuba.

The species of this genus have the head and face of the males brilliantly metallic, and the feathers of the throat are elongated at the sides. They are small in size.

Fig. 55.



*Calypte annæ*. ♂. California. Verreaux.

*Key to the species.*

- A. Head and throat luminous.
- a. Head and throat metallic-lilac. 1. *C. costæ*.
  - b. Head and throat metallic-crimson.
    - a'. Upper surface golden-green. 2. *C. annæ*.
    - b'. Upper surface greenish-blue. 3. *C. helenæ*.

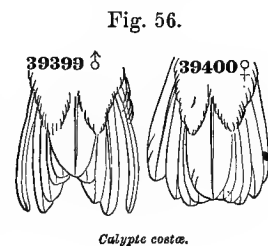
**1. *Calypte costæ*.**

*Ornismya costæ*, BOURC., Rev. Zool. (1839), p. 294.—ID., Ann. Soc. Sci., Lyon (1840), p. 225, pl. 2.  
*Mellisuga costæ*, GRAY, Gen. Birds, vol. i, p. 113.  
*Selasphorus costæ*, BON., Consp. Gen. Av., p. 82 (1850).—ID., Rev. and Mag. Zool. (1854), p. 257.  
*Atthis costæ*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).  
*Calypte costæ*, GOULD, Mon. Troch., vol. iii, pl. 134.—ID., Intr. Troch., octavo ed., p. 88 (1861).  
*Leucaria costæ*, MULS., Cat. Ois. Mouch. (1875), p. 31.—ID., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 69.

*Hab.* Mexico, California.

*Male.* Head, throat, and elongated neck feathers metallic-lilac. Upper surface golden-green. Under surface white, washed with green on the flanks. Tail green, two outer rectrices brownish-gray with dark tips. Bill black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{3}{4}$  in. Tail, 1 in. Culmen,  $\frac{5}{8}$  in.

*Female.* Above golden-green, beneath white, throat with a few brown spots. Median rectrices green, lateral ones gray at base, then black with white tips. Bill black.



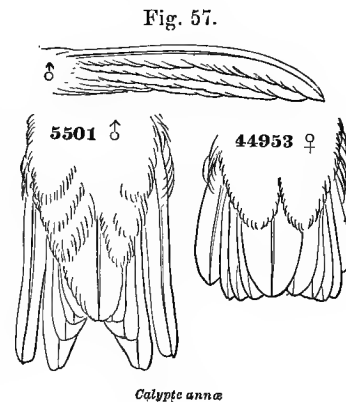
**2. *Calypte annæ*.**

*Ornismya annæ*, LESS., Ois. Mouch., p. 205, pl. 74 (1829).  
*Trochilus anna*, AUD., B. Amer., vol. iv, pl. 425.—ID., Orn. Bieg., vol. v, p. 238.—REICH., Troch. Enum., p. 10.  
*Trochilus icterocephalus*, NUTT., Man. Ornith., vol. i, p. 712.  
*Mellisuga anna*, GRAY, Gen. Birds, vol. i, p. 113.  
*Selasphorus anna*, BON., Consp. Gen. Av., p. 82 (1850).—ID., Rev. and Mag. Zool. (1854), p. 257.  
*Atthis anna*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).  
*Calypte annæ*, GOULD, Mon. Troch., vol. iii, pl. 135.—ID., Intr. Troch., octavo ed., p. 88.—CAB. and HEIN., Mus. Hein. Th., iii, p. 55 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 73 (1877).

*Hab.* Mexico and California.

*Male.* Head, throat, and elongated feathers of the neck, metallic-crimson. Upper surface golden-green. Under surface gray washed with green. Under tail coverts green edged with gray. Median rectrices golden-green, lateral ones dark brown, with pale margins. Bill black. Total length,  $3\frac{3}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Head grayish-brown. Upper parts golden-green; beneath gray washed with green. Middle tail feathers golden-green; lateral ones gray at base, then golden-green and then black, the two outer feathers tipped with white. Bill black.



3. \**Calypte helenæ*.

*Orthorhynchus helenæ*, LAMBEYE, Aves Isle de Cuba, p. 70, pl. x, fig. 2 (1850).

*Orthorhynchus boothi*, GUNDEL, Journ. für Ornith. (1856), p. 99.

*Calypte helenæ*, GOULD, Mon. Troch., vol. iii, pl. 136.—ID., Intr. Troch., octavo ed., p. 88 (1861).—ELLIOT, Ibis (1872), p. 354.—GUNDEL, Journ. für Ornith. (1874), p. 144.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 77 (1877).

*Hab.* Cuba.

*Male.* Head, throat, and feathers of the neck metallic-crimson. Upper parts and flanks greenish-blue. Under surface white. Tail deep greenish-blue. Wings purplish-brown. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Head brown. Upper parts dark green, changing into bluish-green on the lower part of the back. Under surface grayish-white. Median rectrices dark bluish-green; lateral ones bluish-green at base, rest black tipped with white. Bill black.

## Genus LIV.—SELASPHORUS.

*Selasphorus*, SWAIN., Faun. Bor. Amer., vol. ii, p. 496 (1831).

*Ch.* "Stature small Bill subulate and very straight. Feathers of the neck elongated. Wings short, feeble, the quills narrowed and sometimes pointed. Tail moderate graduated, the feathers attenuated towards the end, their tips mucronate." (Swains, l. c.)

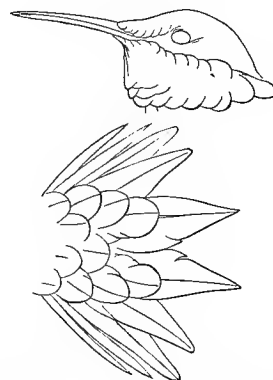
*Range.* Western North America from Nootka Sound to Mexico and into Veragua, Central America.

Eight species are recognized belonging to this genus. They are of small size, with very brilliant throats, and cuneate shaped tails, the rectrices in the majority of the species being rather narrow and pointed. One species has a silvery throat

TYPE.

*T. rufus*, Gmel.

Fig. 58.



*Selasphorus rufus*. ♂. California. Mr. Woods.

*Key to the species.*

- |  |                            |
|--|----------------------------|
| A. Head and throat metallic-scarlet.   | 1. <i>S. floresii</i> .    |
| B. Throat metallic amethystine-red.  | 2. <i>S. platycercus</i> . |
| a. Size large. Under parts gray.   | 3. <i>S. ardens</i> .      |
| b. Size small. Flanks and abdomen dark green.  | 4. <i>S. flammula</i> .    |
| C. Throat metallic rose-red.   | 5. <i>S. rufus</i> .       |
| D. Throat metallic fiery-red. Rectrices narrow, pointed.   | 6. <i>S. scintilla</i> .   |
| a. Sides of head and neck, and rump, rufous, back bronzy-green.  | 7. <i>S. henshawi</i> .    |
| b. Sides of head and neck bronzy-green like the back. Diminutive of <i>a</i> .   | 8. <i>S. torridus</i> .    |
| E. Throat glittering orange. Rectrices broad, lateral ones next to median pair with a well-developed notch on inner web. |                            |
| F. Throat pale lilac-red, in some lights silvery-gray.   |                            |

### 1. \**Selasphorus floresii*.

*Selasphorus floresii*, GOULD, Mon. Troch., vol. iii, pl. 139.—ID., Intr. Troch., octavo ed., p. 89.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 98 (1877).

*Hab.* Bolanos, Mexico (Floresi).

*Male.* Crown and throat metallic-scarlet with violet reflections. Upper surface and flanks bronzy-green; under surface grayish-white. Wings purplish-brown. Median rectrices green with purple reflections; lateral feathers have the outer webs purple, inner webs deep reddish-buff. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{3}{4}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Unknown.

This bird is remarkable for having the top of the head, as well as the throat, metallic, and in this respect is allied to the members of the genus *Calypte*, but the coloring of the tail is more that of *Selasphorus*. It appears to be intermediate between the two genera. The type in Mr. Loddige's collection still remains unique.

### 2. *Selasphorus platycercus*.

*Trochilus platycercus*, SWAIN., Ann. Phil. (1827), p. 441.

*Ornismya tricolor*, LESS., Ois. Mouch. (1829), p. 125, pl. 14.—ID., Trochil., p. 156, pl. 60 (1831).

*Ornismya montana*, LESS., Trochil., pp. 161, 163, pls. 63, 64 (1831).

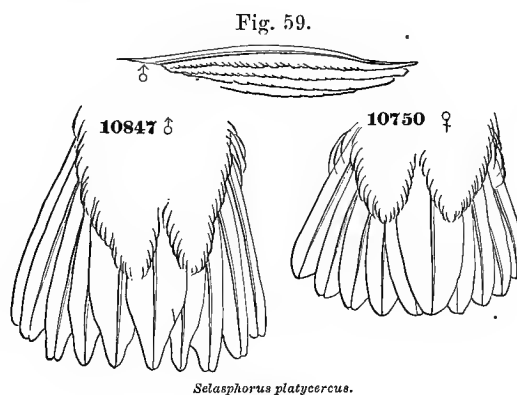
*Mellisuga platycerca*, GRAY, Gen. Birds, vol. i, p. 113, sp. 78.

*Selasphorus platycercus*, BON., Consp. Gen. Av., p. 82 (1850).—ID., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 140.—ID., Intr. Troch., octavo ed., p. 89.—REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 10 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 56 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 94 (1877).

*Hab.* Guatemala, Mexico, Rocky Mountains to Utah in North America.

*Male.* Upper surface and flanks bronzy-green. Spot of white behind the eye. Throat metallic amethystine-red. Breast white, rest of under parts gray, with the centres of under tail coverts brownish. Median rectrices bronzy-green; lateral ones blackish-brown, margined with rufous, most conspicuous on the inner webs. Bill black. Total length,  $3\frac{5}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Above bronzy-green; beneath white, throat spotted with brown. Middle tail feathers bronzy-green, lateral ones deep buff at base, remaining portions black with white tips. Bill black. Flanks and under tail coverts, sometimes tinged with buff.



### 3. *Selasphorus ardens*.

*Selasphorus ardens*, SALV., P. Z. S. (1870), p. 209.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 103 (1877).

*Hab.* Veragua.

*Male.* Upper parts dark bronzy-green. Lores and ear coverts rufous, the latter mixed with black. Throat metallic amethystine-red. Breast, middle of abdomen, and under tail coverts white. Flanks dark green, which color almost meets on the upper part of breast. Tail purplish-black, both webs of middle feathers and inner webs of lateral ones margined with rufous. Wings purplish-brown. Bill black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Upper parts bronzy-green, margined with rufous on the sides of lower part of back and rump. Throat buffy-white, spotted with brown. Breast white. Under parts buff. Middle tail feathers bronzy-green, lateral ones buff with a black bar across their central part. Bill black.

### 4. *Selasphorus flammula*.

*Selasphorus flammula*, SALV., P. Z. S. (1864), p. 586, sp. 16.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 99 (1877).

*Hab.* Costa Rica and Veragua.

*Male.* Upper parts shining grass-green. Throat metallic rose-red. Breast and middle of abdomen white. Flanks buff mixed with green. Wings purplish-brown. Under tail coverts white. Tail purplish-black margined with rufous, the central pair slightly washed with green on outer webs. Maxilla black, mandible flesh-color, tip black. Total length,  $2\frac{7}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Upper parts bronzy-green, brownish upon the head. Flanks buff. Throat, breast, and abdomen white; the throat spotted with dark brown. Under tail coverts buff edged with white. Wings purplish-brown. Four central rectrices grass-green, edged on outer webs with rufous; remainder black tipped with buffy-white. Bill and feet black. In size same as the male.

### 5. *Selasphorus rufus*.

*Trochilus ruber*, LINN., Syst. Nat. (1766), vol. i, p. 193, sp. 21.—LATH., Ind. Orn., vol. i, p. 315, sp. 48.—VIEILL.

Ency. Méth., p. 573, sp. 74.

*Trochilus rufus*, GMEL., Syst. Nat., vol. i, p. 497 (1788).

*Ruff-necked Humming-Bird*, LATH., Gen. Syn. (1781), vol. ii, p. 785, pl. 35.

*Trochilus collaris*, LATH., Ind. Orn., vol. i, p. 318, sp. 59 (1790).

*Ornismya saisin*, LESS., Hist. Nat. Ois. Mouch., p. 190, pls. 66, 67 (1829).

*Trochilus (Selasphorus) rufus*, SWAINS., Faun. Bor. Amer., vol. ii, p. 324 (1832).

*Mellisuga rubra*, GRAY, Gen. Birds, vol. i, p. 113, sp. 60.

*Selasphorus rufus*, AUD., B. Amer., octavo ed., vol. iv, p. 200.—BAIRD, B. N. Amer. (1860), p. 134.—GOULD,

Mon. Troch., vol. iii, pl. 137 (partim).—ID., Intr. Troch., octavo ed., p. 88.—CAB. and HEIN., Mus. Hein.

Th., iii, p. 56 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 106 (1877), partim.

*Selasphorus ruber*, BON., Consp. Gen. Av., p. 82, vol. i (1850).—ID., Rev. and Mag. Zool. (1854), p. 256.—

REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 10 (1855).

*Selasphorus alleni*, HENSHAW, Bull. Nutt. Ornith. Club (1877), vol. ii, p. 54.

*Hab.* Pacific coast of North America from California to Nootka Sound.

*Male.* Top of head and back bronzy-green, dullest on the forehead. Sides of the head, rump, flanks, abdomen, and under tail coverts rufous. A gorget of metallic

feathers, covering all the throat and extending on to the sides of the neck, brilliant coppery-red with brassy-reflections in certain lights. Upper part of breast white. Wings purplish-brown. Tail short, cuneate, all the feathers acutely pointed. Median rectrices rather broad, lateral ones narrowing rapidly to the outermost which is extremely attenuated. Bill straight, black. Total length,  $3\frac{3}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Above green. Throat white spotted with metallic-red. Under parts white, washed with rufous on the flanks and abdomen. Under tail coverts buffy-white. Median rectrices green, lateral ones rufous at base, then green and then black tipped with white. Bill black.

Fig. 60.



### 6. *Selasphorus scintilla*.

*Trochilus (Selasphorus) scintilla*, GOULD, P. Z. S. (1850), p. 162.

*Selasphorus scintilla*, GOULD, Mon. Troch., vol. iii, pl. 138.—ID., Intr. Troch., octavo ed., p. 89.—REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 10 (1855).—BON., Rev. and Mag. Zool. (1854), p. 257.—CAB. and HEIN., Mus. Hein. Th., iii, p. 56 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 104 (1877).

*Hab.* Costa Rica and Veragua.

*Male.* This species is a diminutive of *S. rufus*. The upper parts are a darker green, and there is no rufous on the sides of the back. Throat and under parts like *S. rufus*. Tail rufous with a median line of purplish-black on the central feathers, external ones rufous on inner web, purplish-black on the outer. Maxilla black, mandible flesh-color at base, rest black. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{1}{4}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Head blackish-brown; upper parts golden-green. Throat white spotted with buff, rest of under parts like the male. Median rectrices bronze-green margined with rufous, lateral ones rufous, with a subterminal black bar. Bill black.

### 7. *Selasphorus henshawi*.

*Trochilus rufus*, HENSH., Bull. Nutt. Ornith. Club (1877), vol. ii, p. 54.

*Selasphorus henshawi*, ELLIOT, Bull. Nutt. Ornith. Club (1877), vol. ii, p. —

*Hab.* Mexico, northwards along the Pacific coast to Sitka.

*Male.* Top of head metallic-green; upper parts cinnamon, but some specimens have green feathers intermixed with the rufous ones on the back. Throat metallic-orange, not brilliant as in the other species. Breast and centre of abdomen white; flanks and under tail coverts rufous. Tail rufous tipped with dark brown; feathers pointed at tip, median pair broad, lateral ones growing narrower to the outermost which is the most attenuated. On the inner web near the tip of the rectrices next the median pair is a well-

Fig. 61.



developed notch. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in. (Type of *S. henshawi* in my collection.)

*Female.* Entire upper parts shining grass-green, dullest on the crown. Throat white spotted with brown. Under parts white, washed with rufous on the breast and flanks. Under tail coverts buff. Median rectrices green; lateral ones rufous at base, then a band of metallic-green, succeeded by a subterminal broad black bar, and tips white. Bill black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{5}{8}$  in. Young males are similar to the females, with a few metallic spots on the throat.

### 8. *Selasphorus torridus*.

*Selasphorus torridus*, SALV., P. Z. S. (1870), p. 208.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 101 (1877).

*Hab.* Veragua, Volcano of Chiriqui.

*Male.* Upper parts dark shining grass-green. Throat shining lilac-red, silvery in certain lights. Feathers on the sides of the neck elongated, same color as the throat. Breast and middle of abdomen white. Flanks green. Under tail coverts buffy-white. Median rectrices bronze-green; lateral ones purplish-black, all except the two outer ones margined with rufous. Wings purplish-brown. Maxilla black, mandible flesh-color, tip black. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Head brownish, upper parts green. Under parts whitish, feathers of the throat spotted with brown. Flanks rufous. Tail black, base of three outer feathers rufous and tips white, next two margined with rufous; middle feathers green.

### Genus LV.—CATHARMA.

*Catharma*, ELLIOT, Ibis (1876), p. 400.

*Ch.* Bill longer than the head, broad at base, pointed at tip. Wings long, reaching beyond the centre of the tail, which is extremely short and almost square.

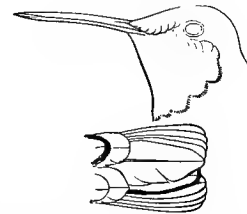
*Range.* Guiana, Merida, in Venezuela (Berlepsch in Litt.).

But one species is known, with the form of that of the next genus, and the plumage of a CALLIPHLOX.

It is a small bird, and until very lately was confounded with another species. See my remarks on the genus in the Ibis, 1876, p. 400.

TYPE.  
*O. orthura*, Less.

Fig. 62.



*Catharma orthura*. ♂ Cayenne, Parzudaki.

### 1. *Catharma orthura*.

*Ornismya orthura*, LESS., Hist. Nat. Trochil., pp. 85, 88, pls. 28, 29 (1831).

*Trochilus orthurus*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).

*Tryphaena orthura*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Catharma orthura*, ELLIOT, Ibis (1876), p. 400.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 66 (1877).



*Hab.* Guiana, Venezuela.

*Male.* Entire upper parts dark shining grass-green. Behind the eye a small white spot. Throat metallic amethystine-red, rather dull, beneath which is a band of grayish-white extending up the sides of the neck; rest of under parts gray tinged with green, lightest in the centre of abdomen. Median rectrices bronze-green, lateral ones green at base, rest black, with a faint indication of white at the tip. Wings purplish-brown. Bill black. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{5}{8}$  in. (Type in my collection.)

*Young male.* Above golden green. Throat white spotted with metallic-red, and bounded beneath with a band of green, followed by another of white. Under parts deep buff, washed with green on lower part of breast. Middle rectrices bronze-green, lateral ones green at base, rest black tipped with white. (Type in my collection.)

*Female.* Above dark green. Ear coverts, cheeks, and a line around lower part of the throat blackish-brown. Throat white spotted with brown. A band of white across the breast, beneath which is another of dark brown. Rest of under parts rufous. Central rectrices bronze-green, lateral ones bronze-green with an apical black band. Under tail coverts pale bronze-green, margined with gray. Wings purple. Bill and feet black. Dimensions as in the male.

#### Genus LVI.—ATTHIS.

*Atthis*, REICHENB., Aufz. der Colib. (1853), p. 12

TYPE.  
*O. heloisæ*, Less. and Delatt.

*Ch.* Bill about as long as the head, straight, rather flat on culmen. Wings nearly as long as the tail, which is much rounded and short. Feathers on the side of the throat much elongated.

*Range.* Mexico and Guatemala.

Two species only are known, closely allied in structure to the preceding one, but very different in the coloring of their plumage.

#### Key to the species.

- A. Gorget elongated; metallic purplish-red or reddish-violet.
- a. First primary of male very narrow, end abruptly attenuated. 1. *A. heloisæ*, Less. and Del.
  - b. First primary of male uniform, end not attenuated. 2. *A. ellioti*, Ridg.

#### 1. *Atthis heloisæ*.

*Ornismya heloisæ*, LESS. and DELATT., Rev. Zool. (1839), p. 15.

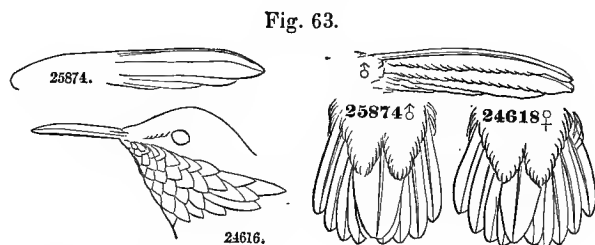
*Mellisuga heloisæ*, GRAY, Gen. Birds, vol. i, p. 113, sp. 62.

*Tryphæna heloisæ*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Selasphorus heloisæ*, GOULD, Mon. Troch., vol. iii, pl. 141.

*Atthis heloisæ*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).—GOULD, Intr. Troch. octavo ed., p. 89 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 91 (1877).

15 September, 1878.



*Atthis heloisæ*. ♂. Jalapa. Dr. Heermann.

*Hab.* Mexico.

*Male.* Upper parts golden-green. Throat metallic reddish-violet, the feathers on the side elongated. Beneath the throat a band of grayish-white. Flanks buff spotted with green. Centre of abdomen white. Under tail coverts buffy-white. Median rectrices shining grass-green; lateral ones buff at base, succeeded by a bar of black, tipped with white. Wings purplish-brown, outer primary abruptly attenuated. Bill black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{3}{8}$  in. Tail, 1 in. Culmen,  $\frac{1}{2}$  in.

*Female* resembles the male, but has the throat white spotted with brown.

## 2. *Atthis ellioti*.

*Atthis heloisæ*, ex Guatemala, Auct.

*Atthis ellioti*, Ridgw., Proc. U. S. Nat. Mus. (1878), p. 9.

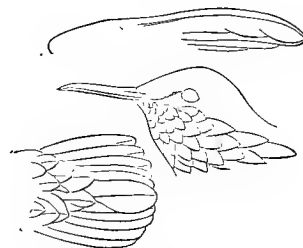
*Hab.* Guatemala.

*Male.* Upper parts shining green, less golden than in the preceding species. Throat metallic reddish-purple, with slight violet reflections. Beneath the throat a band of white. Flanks rufous glossed with green. Middle of abdomen, crissum, and under tail coverts white, the last two tinged with rufous. Tail rufous-cinnamon at base, succeeded on the lateral feathers by a broad black band, and the tips white. The median pair of rectrices, black above the cinnamon, glossed with metallic grass-green, this hue strongest on the central portion along the shaft. Wings purplish; the outer primary uniform, not attenuated. Bill and feet black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{3}{8}$  in. Tail, 1 in. Culmen,  $\frac{3}{8}$  in.

*Female* like that of *A. heloisæ*.

Though closely resembling each other in their general appearance, the ADULT MALES of the two species of this genus can easily be distinguished by the shape of the first primary.

Fig. 64.



*Atthis ellioti*, ♂. Guatemala, Bourcier.

## Genus LVII.—STELLULA.

*Stellula*, GOULD, Intr. Troch., octavo ed., p. 90 (1861).

*Stellura*, MULS. and VERR., Class. Troch. (1865), p. 88.

*Ch.* "Bill longer than the head, straight and pointed; wings moderately long and sickle-shaped; first primary rigid; tail short and truncate; feet small, claws diminutive and curved."

*Range.* Mexico.

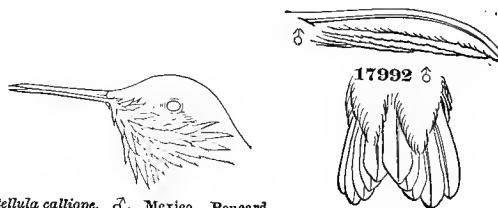
One species only is known, small in size, with a bright throat, but not luminous.

TYPE.

*T. calliope*, Gould.

*T. calliope*, Gould.

Fig. 65.



*Stellula calliope*, ♂. Mexico. Boucard.

**I. *Stellula calliope*.**

*Trochilus (Calothorax) calliope*, GOULD, P. Z. S. (1847), p. 11.

*Calothorax calliope*, GRAY, Gen. Birds, vol. i, p. 113.—BON., Consp. Gen. Av. (1850), vol. i, p. 85.—ID., Rev. and Mag. Zool. (1854), p. 257.—REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 10 (1855).  
GOULD, Mon. Troch., vol. iii, pl. 143.

*Stellula calliope*, GOULD, Intr. Troch., octavo ed., p. 90 (1861).

*Stellura calliope*, MULS. and VERR., Class. Troch. (1865), p. 88.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 87 (1877).

*Hab.* Mexico.

*Male.* Upper parts dull bronzy-green. Wings and tail pale purplish-brown. Feathers of the throat elongated, metallic-pink with white bases; flanks bronzy-green; rest of under parts white. Bill black, base of mandible flesh-color. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{1}{2}$  in. Tail, 1 in. Culmen,  $\frac{1}{2}$  in.

*Female.* Above golden-green; below buffy-white, throat speckled with brown. Tail greenish-gray at base, rest black, two outermost feathers tipped with white.

**Genus LVIII.—RHODOPIS.**

*Rhodopis*, REICH., Aufz. der Colib., p. 13 (1853).

TYPE.  
*O. vesper*, Less.

*Ch.* Bill nearly twice as long as the head, curved for its entire length, and wide at base. Frontal feathers projecting on to the culmen hiding the nostrils. Wings long, reaching beyond the middle of tail. Tail very deeply forked, feathers graduated to their tips, which are pointed. Tarsi clothed. Sexes similar.

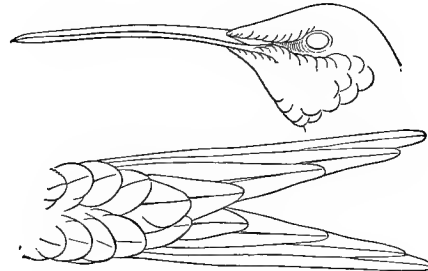
*Range.* Peru and Chili.

The species of this genus are of large size comparatively, with deeply forked tails, and narrow rectrices. Throat of brilliant hues.

*Key to the species.*

- |  |                            |
|--|----------------------------|
| A. Size large. Throat metallic-amethyst in centre, purplish-blue on sides. | 1. <i>R. vesper</i> .      |
| B. Size small. Throat of a paler hue than that of <i>R. vesper</i> .       | 2. <i>R. atacamensis</i> . |

Fig. 66.



*Rhodopis vesper*. ♂. Arequipa, Peru. Whitely.

**I. *Rhodopis vesper*.**

*Ornismya vesper*, LESS., Ois. Mouch., p. 85, pl. 19 (1829).—ID., Trochil., p. 33, pl. 6 (1831).—ID., Rev. Zool. (1838), p. 14.—D'ORB. and LAFRES., Syn. Av., ii, p. 28, sp. 10 (1838).

*Calothorax vesper*, GRAY, Gen. Birds, vol. i, p. 110, sp. 13.

*Thaumastura vesper*, BON., Compt. Rend., p. 383 (1850).—ID., Consp. Gen. Av. (1850), vol. i, p. 85.

*Lucifer vesper*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Rhodopis vesper*, GOULD, Mon., Troch., vol. iii, pl. 154.—ID., Intr. Troch., octavo ed., p. 94 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 55 (note) (1860).—ELLIOT, Ibis (1877), p. 137.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 23 (1877).

*Rhodopis vespera*, REICH., Aufz. der Colib., p. 13 (1853).

*Calliphlox vespera*, REICH., Troch. Enum., p. 10 (1855).

*Hab.* Peru.

*Male.* Upper surface bronzy-green with a brownish shade. Rump rufous. Throat metallic amethystine-red changing to a purple-blue in certain lights. Under surface grayish-white, washed with green on the flanks. Median rectrices olive-green, lateral ones purplish-brown. Wings purplish-brown. Bill black. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $1\frac{3}{8}$  in.

*Female.* Upper parts like the male, but paler. Central tail feathers and bases of the lateral ones bronzy-green; those next the central ones tipped with black, rest with white tips and subterminal black bar. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{9}{16}$  in. Culmen,  $1\frac{5}{16}$  in.

## 2. \**Rhodopis atacamensis.*

*Rhodopis atacamensis*, LEYB., Ann. Univer. Santiago de Chili (1869), p.—MARTENS, Journ. für Ornith. (1875), p. 442.

*Hab.* Chili.

This bird is a small form of the *R. vesper*, with a paler colored throat. As the type is the only specimen I have seen, and is the only one that has been procured, so far as I know, it is difficult for me to say if it should really be considered as a distinct species.

## Genus LIX.—HELIACTIN.

*Heliactin*, BOIE, Isis (1831), p. 546.

*Heliactinia*, REICH., Aufz. der Colib., p. 12 (1853).

*Heliactinus*, BURMEIST., Th. Bras., tom. ii, p. 356 (1854-56).

TYPE.

*T. cornuta*, PR. MAX.

*T. cornuta*, PR. MAX.

*T. cornuta*, PR. MAX.

*Ch.* Bill longer than the head, slender, terminating in a sharp point. On either side of head a tuft of feathers forming a short elevated crest. Wings long, pointed. Four median rectrices longest, broad at base, and graduating to a point. Tarsi bare. Sexes unlike.

*Range.* Brazil.

This is one of those aberrant forms that unfortunately are so frequently met with among the Trochilidæ. It is not in fact particularly related to any other genus, and the single species possesses characters not found elsewhere. I however place it here, which is probably not far from its rightful position.—The species is peculiar for the brilliant tufts on each side of the head.

Fig. 67.



*Heliactin cornuta*. ♂ Minas Geraes, Brazil. Verdey.

## 1. *Heliactin cornuta.*

*Trochilus cornutus*, PR. MAX., Beit. zur Naturg. von Bras., p. 99.

*Trochilus dilophus*, VIEILL., Ency. Méth., vol. ii, p. 573.

*Trochilus bilophus*, TEMM., Plan. Col., pl. 18, fig. 3.—LESS., Man. Ornith., tom. ii, p. 76.

*Mellisuga cornuta*, GRAY, Gen. Birds, vol. i, p. 113, sp. 67.

*Mellisuga bilopha*, STEPH., Gen. Zool., vol. xiv, p. 251, pl. 30.

*Ornismya chrysolopha*, LESS., Ois. Mouch., p. 55, t. 7-8 (1829); Suppl., p. 162, t. 32 (1831).

*Heliactin cornuta*, BOIE, Isis (1831), p. 546.—GOULD, Mon. Troch., vol. iv, pl. 212.—ID., Intr. Troch., octavo ed., p. 120.—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 64.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 4 (1877).

*Heliactin cornutus*, BON., Consp. Gen. Av., p. 85 (1850).—ID., Rev. and Mag. Zool. (1854), p. 256.

*Heliactinia chrysolopha*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 9 (1855).

*Heliactinus cornutus*, BURM., Th. Bras., vol. ii, p. 356.

*Hab.* Brazil.

*Male.* Forehead and crown shining greenish-blue. Above the eyes a tuft of lengthened feathers, fiery-crimson at base changing to greenish-yellow at tip. Upper parts bronzy-green. Throat velvety-black. Flanks and abdomen bronzy-green. Rest of under parts pure white. Median rectrices olive-green, lateral ones white edged with olive-brown. Bill and feet black. Length,  $4\frac{1}{4}$  in. Wing, 2 in. Tail,  $2\frac{1}{2}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Upper surface and flanks bronzy-green. Throat and abdomen buffy-white. Median rectrices bronzy-green, lateral ones bronzy-green at base changing to black, apical half white. Bill black, feet brown.

We now come to various genera, whose species are peculiar for their strangely shaped tails, the feathers of which are generally narrow and pointed. In the next genus, CALOTHORAX, the members of which are small in size, the outer rectrix is shorter than the one next to it, and the four central rectrices are almost hidden beneath the upper tail coverts. The metallic hues are confined to the throat, and are very brilliant.

#### Genus LX.—CALOTHORAX.

*Calothorax*, GRAY, Gen. Birds (1840), p. 13.

*Lucifer*, REICH., Syn. Av. Natur., pl. 39 (1849).

*Manilia*, MULS. and VERR., Class. Troch. (1865), p. 86.

*Cyanopogon*, "REICH.," BON., Ann. Soc. Nat. (1854), p. 138.

#### TYPE.

*C. lucifer*, Swains.

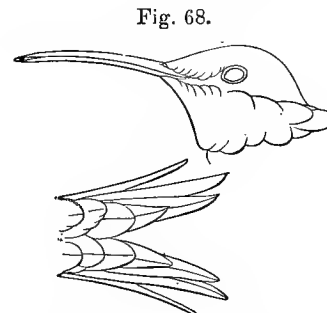
*C. lucifer*, Swains.

*C. pulchra*, Gould.

*C. lucifer*, Swains.

*Ch.* Bill long, slender, curved throughout its length, broad at base; nostrils hidden by frontal plumes. Wings moderate, pointed. Tail forked, outermost rectrix on either side shortest, sometimes consisting of but little more than the shaft, the webs being extremely narrow. Tarsi short and partially clothed. Feet small. Sexes unlike.

*Range.* Mexico; abundant in the vicinity of Jalapa, Cordova, and Oaxaca.



*Calothorax lucifer*. ♂. Mexico. Whately.

#### Key to the species.

A. Throat metallic lilaceous-purple.

- |  |                                |
|--|--------------------------------|
| a. Outermost tail feather of uniform breadth like the other rectrices.     | 1. <i>C. pulchra</i> , Gould.  |
| b. Outermost tail feather filiform, almost bare of web, ending in a point. | 2. <i>C. lucifer</i> , Swains. |

### 1. *Calothorax pulchra*.

*Calothorax pulchra*, GOULD, Ann. Mag. Nat. Hist., 3d ser., vol. iv, p. 97.—ID., Mon. Troch., vol. iii, pl. 144.—ID., Intr. Troch., octavo ed., p. 91 (1861).

*Manilia pulchra*, MULS., Cat. Ois. Mouch. (1875), p. 30.—ID., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 30.

*Hab.* Oaxaca, Mexico.

*Male.* Upper surface bronzy-green. Wings purplish-black. Throat metallic lilaceous-purple, feathers elongated on the sides. Flanks bronzy-green. Breast, centre of abdomen, and under tail coverts white. Tail dark purplish-brown, feathers of uniform width. Bill black. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Top of head dull brown; rest of upper surface bronzy-green. Lores black. Under surface deep buff. Median rectrices bronze-green; next on either side green tipped with black; remainder buff at base, then crossed by a black bar, and the tips white. Bill black. Wings purplish-brown. Total length, 3 in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

### 2. *Calothorax lucifer*.

*Cynanthus lucifer*, SWAINS., Phil. Mag. (1827), p. 442.

*Ornismya cyanopogon*, LESS., Ois. Mouch., p. 50, pl. 5 (1829).—ID., Supp., pp. 117, 119, pls. 9; 10.

*Trochilus simplex*, LESS., Trait. Orn., p. 291 (1831).—ID., Hist. Nat. Colib., p. 86, pl. 23, ♀.

*Calothorax lucifer*, GRAY, Gen. Birds, vol. i, p. 110.—BON., Consp. Gen. Av. (1850), vol. i, p. 85.—CAB. and HEIN., Mus. Hein. Th., iii, p. 55 (1860).—MULS., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 26.

*Calothorax cyanopogon*, GRAY, Gen. Birds (1840), p. 13.—GOULD, Mon. Troch., vol. iii, pl. 143.—ID., Intr. Troch., octavo ed., p. 90 (1861).

*Lucifer cyanopogon*, REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 10 (1855).—BON., Rev. and Mag. Zool. (1854), p. 257.

*Hab.* Jalapa and Cordova, Mexico.

*Male.* A little larger in size than the *C. pulchra*, but in the color of its plumage almost precisely like that species. It can always be distinguished by the outermost rectrices, which are filiform in shape, almost denuded of webs and pointed. Total length,  $3\frac{1}{4}$  in. Wing,  $\frac{1}{2}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female* like that of *C. pulchra*, except the tail, which has the lateral feathers greenish at base instead of buff, then black and tipped with white. Bill black. Total length, 3 in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

The members of the next genus ACESTRURA are even smaller than those of the last, and the males have equally brilliant throats. Their tails are very singular, the two outermost rectrices being filamentous, the shafts having hardly any webs attached; the one next to these is the longest, rather broad at base and pointed at tip; and the two middle ones are very short, projecting but a short distance beyond the coverts. The tail of the female is entirely different, being rounded and the feathers rather broad and even.

## Genus LXI.—ACESTRURA.

*Acestrura*, GOULD, Intr. Troch., octavo ed., p. 91 (1861).  
*Polymnia*, MULS. and VERR., Class. Troch. (1865), p. 91.  
*Myrmia*, MULS., Cat. Ois. Mouch. (1875), p. 32.

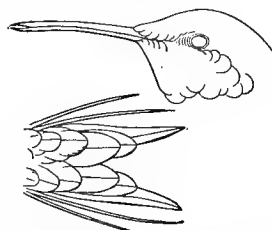
## TYPE.

*O. mulsanti*, Bourc.  
*O. mulsanti*, Bourc.  
*C. micrurus*, Gould.

*Ch.* Bill longer than the head, slightly arched. Median rectrices very short; the two outer ones filamentous and shorter than the third. Wings small; tarsi clothed; feet small. Sexes unlike.

*Range.* Venezuela, Columbia, Ecuador, Peru, and Bolivia.

Fig. 69.

*Acestrura mulsanti*. ♂. Rio Napo. Whitely.*Key to the species.*

- |  |                                 |
|--|---------------------------------|
| A. Throat luminous, violet-red.                              |                                 |
| a. Feathers of the neck not prolonged.                       |                                 |
| a'. Breast and abdomen white.                                | 1. <i>O. mulsanti</i> , Bourc.  |
| b'. Breast gray, abdomen green.                              | 2. <i>C. decoratus</i> , Gould. |
| b. Feathers of the neck elongated, abdomen and flanks green. | 3. <i>O. heliodori</i> , Bourc. |
| B. Throat metallic-amethyst; under surface buff.             | 4. <i>C. micrura</i> , Gould.   |

**1. *Acestrura mulsanti*.**

*Ornismya mulsanti*, BOURC., Ann. Sci. Phys., Lyon (1842), tom. v, p. 342, pl. xx.  
*Ornismya cyanopogon*, D'ORB. and LAFRES. (nec LESS., 1829), Syn. Av., ii, p. 28, sp. 9 (1838).  
*Mellisuga mulsanti*, GRAY, Gen. Birds, vol. i, p. 113, sp. 63.  
*Calothorax mulsanti*, BON., Consp. Gen. Av. (1850), vol. i, p. 85.—ID., Rev. and Mag. Zool. (1854), p. 257.—  
 REICH., Aufz. der Colib., p. 13 (1853).—GOULD, Mon. Troch., vol. iii, pl. 145  
*Lucifer mulsanti*, REICH., Troch. Enum., p. 10 (1855).  
*Acestrura mulsanti*, GOULD, Intr. Troch., octavo ed., p. 91.—ELLIOT, Ibis (1877), p. 136.  
*Chaetocercus mulsanti*, CAB. and HEIN., Mus. Hein. Th., iii, p. 60 (1860).  
*Acestrura mulsanti*, MULS., Hist. Nat. Ois. Monch., tom. iv, p. 118 (1877).

*Hab.* Columbia, Ecuador, and Peru.

*Male.* Upper surface and flanks shining dark grass-green. Wings dark purple. Throat metallic violet-red. Line behind the eye, chin, breast, abdomen, under tail coverts, and a tuft behind the thigh pure white. Tail purplish-black. Bill black. Total length,  $3\frac{3}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Above bronzy-green. Throat white; a patch of dark green on the sides of the neck. Flanks dark green. Rest of under parts reddish-buff. Tail reddish-buff with a subterminal black bar. Bill black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{1}{8}$  in.

**2. \**Acestrura decorata*.**

*Calothorax decoratus*, GOULD, P. Z. S. (1860), p. 309.—ID., Mon. Troch., vol. iii, pl. 146.  
*Acestrura decorata*, GOULD, Intr. Troch., octavo ed., p. 91.

*Hab.* Columbia?.

Precisely like the following species (*A. heliodori*); but the feathers of the throat are not prolonged at the sides as in that bird. The present is at best but very questionably distinct, being most probably a specimen of the *A. heliodori* with the throat feathers not fully developed, examples of which are not infrequently met with, both in this and other genera having species with elongated gorgets.

### 3. *Acestrura heliodori*.

*Ornismya heliodori*, BOURC., Rev. Zool. (1840), p. 275.—ID., Ann. Sci. Phys., Lyon, tom. v (1842), p. 308, pl. xv, ♂; pl. xvi, ♀.

*Mellisuga heliodori*, GRAY, Gen. Birds, vol. i, p. 113, sp. 66.

*Calothorax heliodori*, BON., Consp. Gen. Av. (1850), vol. i, p. 85.—REICH., Aufz. der Colib., p. 13 (1853).—GOULD, Mon. Troch., vol. iii, pl. 147.

*Calothorax heliodorus*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Lucifer heliodori*, REICH., Troch. Enum., p. 10 (1855).

*Chaetocercus heliodori*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 60.

*Acestrura heliodori*, GOULD, Intr. Troch., octavo ed., p. 92 (1861).

*Acestrura heliodori*, MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 120 (1877).

*Hab.* Venezuela and Columbia.

*Male.* Upper surface, abdomen, and under tail coverts dark grass-green. Throat metallic violet-red, feathers elongated on the sides. Breast grayish-white. A patch of white on the flanks near the thighs. Vent white. Tail brownish-black. Bill black. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{1}{8}$  in. Tail, 1 in. Culmen,  $\frac{1}{2}$  in.

*Female.* Above bronzy-green. Loes and ear coverts dark brown. Under surface deep buff. Tail deep buff, with a subterminal black bar. Bill black. Total length,  $2\frac{1}{4}$  in. Wing,  $1\frac{1}{4}$  in. Tail,  $\frac{3}{4}$  in. Culmen,  $\frac{1}{2}$  in.

### 4. \**Acestrura micrura*.

*Calothorax micrura*, GOULD, P. Z. S. (1853), p. 109.—ID., Mon. Troch., vol. iii, pl. 148.

*Acestrura micrura*, GOULD, Intr. Troch., octavo ed., p. 92 (1861).

*Myrmia micrura*, MULS., Cat. Ois. Mouch. (1875), p. 32.—ID., Hist. Nat. Ois. Mouch., tom. iv, p. 113 (1877).

*Hab.* Bolivia.

*Male.* Upper surface bronze-green. Chin, sides of the throat, and under surface buff. Throat metallic-amethyst. Under tail coverts white. Tail black. Bill black. Total length,  $2\frac{3}{8}$  in. Wing,  $1\frac{5}{16}$  in. Tail,  $\frac{3}{8}$  in. Culmen,  $1\frac{9}{16}$  in.

*Female.* Above bronze-green. Beneath buff. Tail black. Lateral rectrices tipped with white.

## Genus LXII.—CHÆTOCERCUS.

*Chaetocercus*, GRAY, Gen. Birds (1853), p. 22.

*Osalia*, MULS. and VERR., Class. Troch. (1865), p. 92.

*Polyxemus*, MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 123 (1877).

#### TYPE.

*O. jourdani*, Bourc.

*O. jourdani*, Bourc.

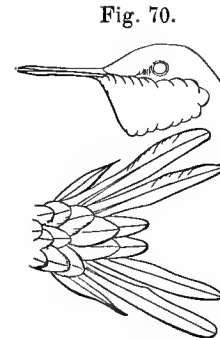
*C. bombus*, Gould.



*Ch.* Bill long as the head, straight, slender; nostrils hidden in frontal plumes. Median rectrices extremely short; two next the outermost ones lengthened, equal, and uniform; outermost one, about half the length of the one next, filiform, graduating to a point, stiff. Sexes dissimilar in plumage.

*Range.* Island of Trinidad, Venezuela, Ecuador.

Three species are known, remarkable for their peculiarly shaped tails, a description of which is given above.



*Chætocercus jourdani*, ♂. Trinidad.  
Whitely.

*Key to the species.*

- A. Throat metallic-lilac.
- B. Throat metallic-crimson.
  - a. Breast white.
  - b. Breast dark buff.

- 1. *O. jourdani*, Bourc.
- 2. *T. rosæ*, Bourc.
- 3. *C. bombus*, Gould.

### 1. *Chætocercus jourdani*.

*Ornismya jourdani*, BOURC., Rev. Zool. (1839), p. 295.—ID., Ann. Soc. Sci., Phys., etc., Lyon (1840), p. 227, pls. 5, 6.

*Mellisuga jourdani*, GRAY, Gen. Birds, vol. i, p. 113, sp. 65.

*Calothorax jourdani*, BON., Consp. Gen. Av. (1850), vol. i, p. 85.—REICH., Aufz. der Colib., p. 13.—BON., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 150.

*Lucifer jourdani*, REICH., Troch. Enum., p. 10 (1855).

*Chætocercus jourdani*, GRAY, Gen. and Subgen. Birds (1855), p. 22, no. 349.—GOULD, Intr. Troch., octavo ed., p. 92.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 125 (1877).

*Osalia jourdani*, MULS. and VERR., Class. Troch. (1865), p. 92.

*Hab.* Island of Trinidad.

*Male.* Upper parts and median rectrices, flanks and abdomen bronzy-green. Throat metallic-violet, beneath which is a band of white. Lateral rectrices purplish-brown, the lengthened ones with a buff central stripe at their base. Bill black. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{3}{8}$  in. Tail, 1 in. Culmen,  $\frac{3}{8}$  in.

*Female.* Upper parts and flanks golden-green. Median rectrices green, lateral ones buff, with a subterminal black bar. Under parts buffy-white. Description from the types in my collection.

### 2. *Chætocercus rosæ*.

*Trochilus rosæ*, BOURC. and MULS., Ann. Soc. Sci., Lyons, tom. ix (1846), p. 316.

*Mellisuga rosæ*, GRAY, Gen. Birds, vol. i, p. 113, sp. 64.

*Calothorax rosæ*, REICH., Aufz. der Colib., p. 13 (1853).—BON., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 149.

*Lucifer rosæ*, REICH., Troch. Enum., p. 10 (1855).

*Chætocercus rosæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 60 (1860).—GOULD, Intr. Troch., octavo ed., p. 92.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 127 (1877).

*Hab.* Venezuela.

*Male.* In the general plumage of the body and tail, this species is exactly like the *C. jourdani*, but the throat is differently colored, being in the present bird rich metallic-crimson instead of lilac. Total length, 3 in. Wing,  $1\frac{1}{4}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{3}{16}$  in.

*Female*. Precisely like that of *C. jourdani*. Total length,  $2\frac{1}{2}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $\frac{11}{16}$  in. Culmen,  $\frac{7}{16}$  in. The above descriptions are taken from the types in my collection.

### 3. *Chaetocercus bombus*.

*Chaetocercus bombus*, GOULD, P. Z. S. (1870), p. 804.

*Polyxenus bombus*, MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 123 (1877).

*Hab.* Citado in Ecuador.

*Male*. Upper parts and abdomen dark bronze-green. Throat metallic-crimson, beneath which is a broad buff band, that extends on to the sides of the neck. Tail purplish-black, inner web of third rectrices margined with buff at the base. Bill black. Total length,  $2\frac{1}{2}$  in. Wing, 1 in. Tail,  $\frac{3}{4}$  in. Culmen,  $\frac{9}{16}$  in.

*Female*. Above green, beneath deep buff. Tail deep buff with a subterminal black bar. Bill black. Total length,  $2\frac{3}{8}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $\frac{11}{16}$  in. Culmen,  $\frac{1}{2}$  in. (Typical examples.)

### Genus LXIII.—THAUMASTURA.

*Phaetornis*, TSCHUD. (nec SWAINS., 1827), Consp., p. 37 (1844).

*Thaumastura*, BON., Consp. Gen. Av. (1850), vol. i, p. 85 (nec Compt. Rend., p. 383, 1850).

*Cora*, "REICH.", BON., Ann. Sc. Nat. (1854), p. 138.

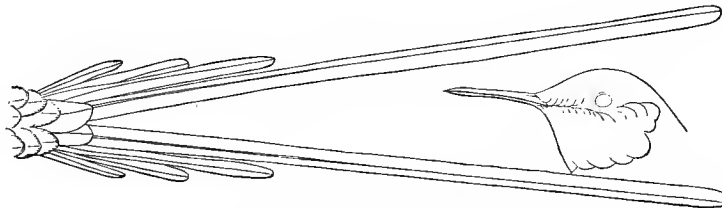
#### TYPE.

*O. cora*, Less.

*O. cora*, Less.

*O. cora*, Less.?

Fig. 71.



*Thaumastura cora*. ♂. Islay, Peru. Whitely.

*Ch.* Bill short, straight, wide at base. Wings long. Tarsi partially clothed. Middle pair of rectrices almost hidden in coverts, next on either side greatly elongated and longest, remainder much shorter and decreasing in length to the outermost one. All are very narrow, but of uniform width for their entire length.

*Range.* Peru.

One species only is known, small in size, with a strangely shaped tail as described above; a brilliant throat, and green and white plumage. The male, as is the case in all these genera, is the only sex adorned with metallic colors, the female being plainly dressed, and with a short tail of moderately broad feathers.

This genus was established by Bonaparte in the Comptes Rendus for 1850, giving as his types the *O. vesper*, Less., and the *O. fanny*, Less.; the *O. cora*, Less., not being mentioned. In the *Conspectus Avium* of the same year, however, he places the latter species, together with those given in the Comptes Rendus, in his genus

THAUMASTURA. As both *O. vesper* and *O. fanny* became subsequently the types of other genera, the *O. cora* is left to represent THAUMASTURA, BON., although it was not originally intended as the type.

### 1. *Thaumastura cora*.

*Ornismya cora*, LESS. and GARN., Voy. de la Coq., pl. 13, fig. 4.—LESS., Ois. Mouch., p. 52, pl. 6 (1829).—ID., Trochil., pp. 109, 111, pls. 39, 40 (1831).—D'ORB. and LAFRES., Syn. Av., ii, p. 31, sp. 25 (1838).

*Trochilus (Phætornis) cora*, TSCHUD., Consp., p. 37.—ID., Faun. Per., p. 245 (1844).

*Calothorax cora*, GRAY, Gen. Birds, vol. i, p. 110, sp. 6.

*Thaumastura cora*, BON., Consp. Gen. Av. (1850), vol. i, p. 85.—ID., Rev. and Mag. Zool. (1854), p. 257.—REICH., Aufz. der Colib., p. 13 (1853).—GOULD, Mon. Troch., vol. iii, pl. 153.—ID., Intr. Troch., octavo ed., p. 93 (1861).—CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 58.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 8 (1877).

*Lucifer coræ*, REICH., Troch. Enum., p. 10 (1855).

*Hab.* Peru.

*Male.* Upper surface golden-green. Throat metallic-crimson with blue reflections. Flanks washed with green. Rest of under parts white. Tail black on outer web, white on inner nearly to the tip. Bill black. Total length,  $5\frac{7}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $3\frac{7}{8}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Head gray-green. Upper parts bronzy-green. Under parts buffy-white. Middle tail feathers green on inner web, white on outer and tipped with black; lateral ones white, with a broad subterminal black band. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{3}{16}$  in. Culmen,  $\frac{1}{2}$  in.

As now constituted, the next genus DORICHA, comprises species of very different forms so far as their tails are concerned. The one I have placed first, the *D. enicura*, has similarly shaped rectrices to those of THAUMASTURA CORA; the *D. elizæ* has moderately long, broad tail feathers, while the remaining species have narrow rectrices, all of which are about equal in length, while those of the first two mentioned are of different lengths. Although many genera of this Family have been made on far less important difference than these, yet I believe it is the proper course to keep them all in one genus, for in every other respect they are closely related. They are all small birds, and the males have luminous throats.

### Genus LXIV.—DORICHA.

*Doricha*, REICH., Aufz. der Colib. (1853), p. 12.  
*Elisa*, "REICH.," BON., Ann. Sc. Nat. (1854), p. 138.  
*Myrtis*, CAB. and HEIN. (nec REICH., 1853), Mus. Hein. Th., iii, p. 59 (1860).  
*Dolicha*, HEINE, Journ. für Ornith. (1863), p. 208.  
*Amathusia*, MULS. and VERR., Class. Troch. (1865), p. 85.  
*Egolia*, MULS. and VERR., Class. Troch. (1865), p. 86.  
*Amalasia*, MULS., Cat. Ois. Mouch. (1875), p. 29.  
*Amalusia*, MULS., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 15.

#### TYPE.

*T. enicurus*, Vieill.  
*T. elizæ*, Less.?  
*T. enicura*, Vieill.  
*T. elizæ*, Less.?  
*T. enicura*, Vieill.  
*T. evelynæ*, Bourc.  
*T. enicura*, Vieill.  
*T. enicura*, Vieill.

*Ch.* Bill longer than the head, slender, curved for its whole length. Wings moderate. Tail long, median feathers nearly hidden in their coverts, two outer ones generally nearly equal and longest. Feet small. Sexes dissimilar.

*Range.* Bahamas, Mexico, Guatemala, Costa Rica, and Veragua.

Five species are known.

*Key to the species.*

- |   |                       |
|---|-----------------------|
| A. Throat metallic-purple. Two outer rectrices lengthened, purplish-black.  | 1. <i>D. enicura.</i> |
| B. Throat metallic violaceous-crimson. Three outer rectrices lengthened purplish-black, margined with buff on inner webs. | 2. <i>D. elizæ.</i>   |
| C. Throat metallic-crimson. Inner webs of rectrices margined with buff.   | 3. <i>D. bryantæ.</i> |
| D. Throat metallic purplish-violet. Inner webs of rectrices bright buff.  | 4. <i>D. evelynæ.</i> |
| E. Throat and forehead metallic purplish-violet. Tail slightly forked, external feathers curving outwards.                | 5. <i>D. lyruræ.</i>  |

### 1. *Doricha enicura.*

*Trochilus enicurus*, VIEILL., Nouv. Dict. Hist. Nat. (1817), tom. 23, p. 429.—ID., Ency. Méth., tom. ii, p. 560.

—TEMM., Plin. Col., no. 66, fig. 3.

*Ornismya heteropygia*, LESS., Ois. Mouch., p. 72, pl. 15 (1829).

*Trochilus swainsoni*, LESS., Trochil., p. 167, pl. 66, ♀ (1831).

*Calothorax enicura*, GRAY, Gen. Birds, vol. i, p. 110.—BON., Consp. Gen. Av. (1850), vol. i, p. 85.

*Doricha henicura*, REICH., Aufz. der Colib., p. 12 (1853).

*Lucifer enicurus*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Calliphlox henicura*, REICH., Trochil. Enum., p. 10 (1855).

*Thaumastura enicura*, GOULD, Mon. Troch., vol. iii, pl. 157.

*Myrtis enicura*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 59.

*Doricha enicura*, GOULD, Intr. Troch., octavo ed., p. 95 (1861).

*Amalasia enicura*, MULS., Cat. Ois. Mouch. (1875), p. 29.

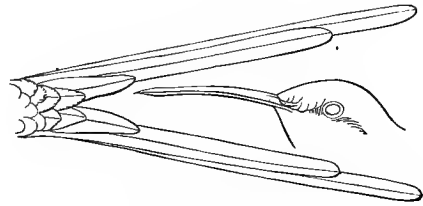
*Amalasia enicura*, MULS., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 16.

*Hab.* Guatemala.

*Male.* Upper parts and flanks dark grass-green. Chin black. Throat metallic dark purple. Breast deep buff. Centre of abdomen dark gray. Lateral rectrices purplish-black, inner webs of two outer feathers narrowly margined with buff. Median rectrices shining grass-green. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper surface and four central tail feathers bronzy-green. Lores and ear coverts blackish-brown. Under surface deep buff. Tail feather next the middle ones rufous at base, then green with a black tip, two outer ones rufous at base, then black with white tips. Bill black. Total length, 3 in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  in.

Fig. 72.



*Doricha enicura.* ♂. Guatemala. Verdey.

## 2. *Doricha elizæ*.

*Trochilus eliza*, LESS. et DELATTE, Rev. Zool. (1839), p. 20.

*Myrtis eliza*, REICH., Aufz. der Colib., p. 13 (1853).

*Lucifer eliza*, BON., Rev. and Mag. Zool. (1854), p. 257.—REICH., Troch. Enum., p. 10 (1855).

*Calothorax eliza*, GRAY, Gen. Birds, vol. i, p. 110.

*Thaumastura elizæ*, GOULD, Mon. Troch., vol. iii, pl. 155.

*Doricha elizæ*, GOULD, Intr. Troch., octavo ed., p. 94 (1861).

*Amalasia elizæ*, MULS., Cat. Ois. Mouch. (1875), p. 29.

*Amalusia elizæ*, MULS., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 20.

*Hab.* Mexico, vicinity of Jalapa and Cordova.

*Male.* Upper parts and flanks bronzy yellowish-green. Throat metallic violaceous-crimson. Breast, centre of abdomen, and under tail coverts white. Upper tail coverts shining green. Middle tail feathers green on inner webs, buff on outer. Lateral feathers which are lengthened purplish-black, two next the outermost, margined with buff on the inner webs. Bill black. Total length,  $3\frac{3}{4}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Head brown, upper surface golden-green. Wings purplish-brown. Under parts white tinged with buff. Median rectrices green; next green edged with buff and tipped with black, remainder buff at base then black and tipped with white. Bill black.

## 3. *Doricha bryantæ*.

*Doricha bryantæ*, LAWR., Ann. N. Y. Lyc. Nat. Hist. (1867), vol. viii, p. 483.—MULS., Hist. Nat. Ois. Mouch., tom. iv (1877), p. 42.

*Hab.* Costa Rica.

*Male.* Upper surface dark grass-green. Throat metallic-crimson. Breast grayish-white, flanks and lower portion of breast dull green; abdomen rufous. Under tail feathers green margined with rufous. Tail purplish-black, the rectrices margined on their inner webs with rufous. Bill black. Iris dark brown. Total length, 4 in. Wing,  $1\frac{11}{16}$  in. Tail,  $1\frac{1}{2}$  in. Bill,  $\frac{7}{8}$  in.

*Female.* Above dull dark green. Sides of neck and upper parts of flanks dark green. Throat and breast pale buff. Abdomen and crissum rufous. Middle tail feathers grass-green, next rufous at base, with the terminal half purplish-black; remaining rectrices rufous with a broad purplish-black band across the central portion. Bill black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{5}{8}$  in. Tail 1 in. Culmen,  $\frac{7}{8}$  in.

## 4. *Doricha evelynæ*.

*Trochilus evelynæ*, BOURC., P. Z. S. (1847), p. 44.

*Calothorax evelynæ*, GRAY, Gen. Birds, vol. i, p. 110.—REICH., Aufz. der Colib., p. 13 (1853).—GOULD, Mon. Troch., vol. iii, pl. 156.

*Lucifer evelinæ*, REICH., Troch. Enum., p. 10.

*Calothorax evillina*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Trochilus bahamensis*, BRYANT, Proc. Nat. Hist. Soc. Bost. (1859), vol. vii, p. 106.

*Doricha evelynæ*, GOULD, Intr. Troch., octavo ed., p. 95 (1861).—ELLIOT, Ibis (1872), p. 353.—MULS., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 38.

*Hab.* Islands of Nassau and New Providence of the Bahamas.

*Male.* Above golden-green. Throat metallic purplish-violet. Breast white. Abdomen green mingled with rufous. Under tail coverts buffy-white. Median rectrices purple, the inner web of all but that of the external feather cinnamon. Bill black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Above greenish-gray. Throat buffy-white. Abdomen and under tail coverts rufous. Middle tail feathers bronzy-green, lateral feathers rufous with a subterminal black band, beneath which there is a green gloss on the outer webs. Bill black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail, 1 in. Culmen,  $\frac{5}{8}$  in.

### 5. *Doricha lyrura*.

*Doricha lyrura*, GOULD, Ann. Mag. Nat. Hist., 4th ser. (1869), vol. iv, pp. 111, 112.—ELLIOT, Ibis (1872), p. 354.—MULS., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 41.

*Hab.* Islands of Inagua, and Long Island of the Bahamas.

*Male.* Forehead and throat metallic purplish-violet. Upper surface dull grass-green. A band of white across the breast, rest of under parts rufous, except vent which is white. Tail lyre-shaped, feathers turning outward at the tips, purplish-black, all the feathers except middle and outermost ones having their inner web rufous. Bill black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Upper parts pale brownish, glossed with metallic-green. Throat and breast white; rest of under parts pale rufous. Tail rounded. Median pair of rectrices shining grass-green; remainder buff with a broad black central band. The feather next the central pair on either side has a shining grass-green gloss on the outer web beneath the black. Wings purple. Bill and feet black. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

### Genus LXV.—MYRTIS.

*Myrtis*, REICH., Aufz. der Colib., p. 13 (1853).

*Zephyritis*, MULS. and VERR., Class. Troch. (1865), p. 87.

*Eudosia*, MULS., Cat. Ois. Mouch. (1875), p. 32 (*nec* p. 20).

*Eulidia*, MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 114 (1877).

#### TYPE.

*O. fanny*, Less.

*O. fanny*, Less.

*T. yarrelli*, Bourc.

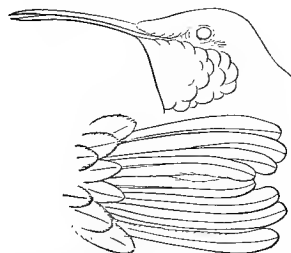
*T. yarrelli*, Bourc.

*Ch.* Bill longer than the head, curved for its entire length. Wings rather long, reaching half the length of the tail. Median rectrices extremely short, almost hidden in the coverts; the four lateral ones long.

*Range.* Ecuador, Peru, and Bolivia.

Two species are known, of small size, with peculiarly shaped tails in the males, and brilliant throat marks.

Fig. 73.



*Myrtis fannia*. ♂. Tinta, Peru. Whitely.

#### Key to the species.

- |   |                         |
|---|-------------------------|
| A. Throat metallic-green bordered by violet; four lateral rectrices uniform in width.       | 1. <i>M. fannia</i> .   |
| B. Throat metallic-lilac with blue reflections. Three lateral rectrices narrow and pointed. | 2. <i>M. yarrelli</i> . |

### 1. *Myrtis fanny*.

- Ornismya fanny*, LESS., Ann. Sci. Nat. (1838), tom. ix, p. 170.—ID., Rev. Zool. (1838), p. 314.  
*Trochilus labrador*, BOURC., Ann. Soc. Sci., Lyon (1839), p. 389, pl. viii.—DELATTE, Rev. Zool. (1846), p. 311.  
*Calothorax fanny*, GRAY, Gen. Birds, vol. i, p. 110, sp. 14.—GOULD, Mon. Troch., vol. iii, pl. 151.  
*Thaumastura fanny*, BON., Compt. Rend., p. 383 (1850).—ID., Consp. Gen. Av. (1850), vol. i, p. 85.  
*Myrtis fanny*, REICH., Aufz. der Colibri., p. 13 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 59 (1860).—  
 GOULD, Intr. Troch., octavo ed., p. 93 (1861).—MULS., Hist. Nat. Ois. Mouch. (1877), tom. iv, p. 33.  
*Lucifer labrador*, BON., Rev. and Mag. Zool. (1854), p. 257.—REICH., Troch. Enum., p. 10 (1855).

*Hab.* Ecuador and Peru.

*Male.* Upper parts light bronze-green; brownish on top of the head. Throat metallic bluish-green, bounded beneath by a narrow line of luminous violet. A white band across the breast; flanks bronzy, washed with buff on lower half, rest of under parts white. Tail brownish-black with a bronze gloss. Wings brown. Bill black. Total length,  $3\frac{3}{8}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in. Type of *T. labrador*, Bourc.

*Female.* Above like the male. Throat white, rest of under parts deep buff. Median rectrices green; next green tipped with black. Lateral ones, buff at base, rest black tipped with white. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail, 1 in. Culmen,  $\frac{3}{4}$  in. Type of *T. labrador*, Bourc., in my collection.

### 2. *Myrtis yarrelli*.

- Trochilus yarrelli*, BOURC., P. Z. S. (1846), p. 45.  
*Calothorax yarrelli*, REICH., Aufz. der Colib., p. 13 (1853).—GOULD, Mon. Troch., vol. iii, pl. 152.  
*Calothorax yarrelli*, BON., Rev. and Mag. Zool. (1854), p. 257.  
*Lucifer yarrelli*, REICH., Troch. Enum., p. 10 (1855).  
*Myrtis yarrelli*, GOULD, Intr. Troch., octavo ed., p. 93 (1861).  
*Eudisia yarrelli*, MULS., Cat. Ois. Mouch. (1875), p. 32.  
*Eulidia yarrelli*, MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 115 (1877).

*Hab.* Bolivia.

*Male.* Upper parts and four central tail feathers light yellowish-green. Throat metallic-lilac with blue reflections. Under parts white, washed with green on the flanks. Lateral tail feathers, which are stiff and narrow, and graduate to a point, dark brown. Bill black. Total length,  $2\frac{7}{8}$  in. Wing,  $1\frac{3}{16}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Above like the male, beneath buffy-white. Middle tail feathers green, next green with black tips, remainder buff at the base, then black and tipped with white. Bill black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail, 1 in. Culmen,  $\frac{7}{16}$  in.

Descriptions taken from Bourcier's specimens, now in my collection, which were the types of Mr. Gould's plate in his Monograph.

## Genus LXVI.—TILMATURA.

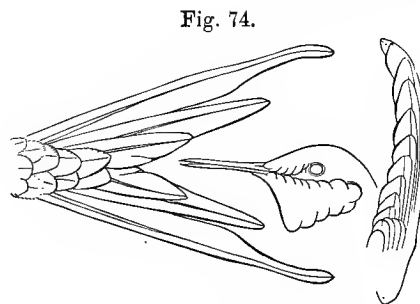
*Tilmatura*, REICH., Aufz. der Colib., p. 8 (1853).  
*Tryphæna*, GOULD, Intr. Troch., octavo ed., p. 96 (1861).

TYPE.  
*O. duponti*, Less.  
*O. duponti*, Less.

*Ch.* Bill as long as the head, straight. Wings rather short. Tail deeply forked, outermost feather tapering rapidly at the tip, and curved inwards. Feet small. Sexes dissimilar.

*Range.* Restricted to Guatemala.

But one species is known, remarkable for the very unusual style of coloration exhibited on the tail feathers of the male. In this respect it is totally unlike all other members of the Trochilidæ.



*Tilmatura duponti*, ♂. Guatemala. Gould.

1. *Tilmatura duponti*.

- Ornismya duponti*, LESS., Ois. Monch. Supp., p. 100, pl. 1 (1829).  
*Ornismya celestis*, LESS., Trait. Ornith. (1831), p. 276.  
*Ornismya zemès*, LESS., Rev. Zool. (1838), p. 315.  
*Mellisuga duponti*, GRAY, Gen. Birds, vol. i, p. 113, sp. 71.  
*Tryphæna duponti*, BON., Consp. Gen. Av., p. 84 (1850).—GOULD, Mon. Troch., vol. iii, pl. 158.—ID., Intr. Troch., octavo ed., p. 97.  
*Tilmatura lepida*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5, pl. 711, figs. 4610–14.  
*Thaumastura duponti*, BON., Rev. and Mag. Zool. (1854), p. 257.  
*Trochilus duponti*, JARD., Nat. Lib. Humming-birds, vol. i, p. 131, pl. 26.  
*Tilmatura duponti*, CAB. and HEIN., Mus. Hein. Th., iii, p. 59 (note) (1860).—MULS., Cat. Ois. Mouch. (1875), p. 28.—ID., Hist. Nat. Ois. Mouch., tom. iv, p. 11 (1877).

*Hab.* Guatemala.

*Male.* Upper parts dark green, with a white spot on each side of the rump. Throat deep blue. Across the breast a band of white; rest of under surface and crissum green. Median rectrices short, shining green, next one dark brown, the next dark brown with a white spot on inner web, and white tip. Remainder dark brown at base, then a band of rufous, then one of white succeeded by another of dark brown, and tip white. Bill black. Total length, 4 in. Wing,  $1\frac{1}{2}$  in. Tail, 2 in. Culmen,  $\frac{5}{8}$  in.

*Female.* Upper surface bronzy-green with two buffy-white patches on each side of the rump. Under surface deep buff, with an indistinct band of white across the breast, and vent white. Middle tail feathers green, rest green at base, remaining part black tipped with white. Bill black. Total length,  $2\frac{3}{4}$  in. Tail,  $\frac{7}{8}$  in. Wing,  $1\frac{3}{8}$  in. Culmen  $\frac{5}{8}$  in.



## Genus LXVII.—SMARAGDOCHRYSIS.

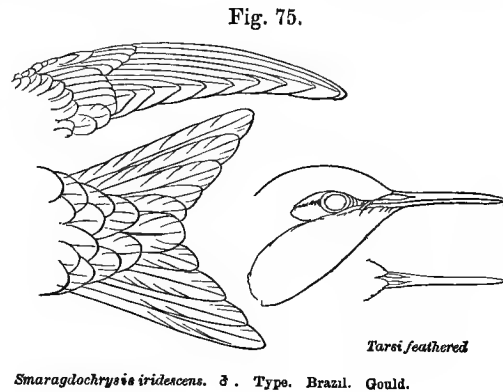
*Smaragdochrysis*, GOULD, Intr. Troch., octavo ed., p. 180 (1861).

TYPE.  
*C. iridescens*, Gould.

*Ch.* “Bill longer than the head, straight and slender; wings small, primaries narrow and rigid; tail of moderate size and deeply forked; tarsi clothed; feet small; hind toe and nail nearly as long as the middle toe and nail.” (Gould, loc. cit.)

*Range.* Brazil.

One species only is known, and together with that of the succeeding genus, with which it is closely allied, leads on naturally to CALLIPHLOX.

1. *Smaragdochrysis iridescens*.

*Calliphlox?* *iridescens*, GOULD, P. Z. S. (1860), p. 310.

*Smaragdochrysis iridescens*, GOULD, Mon. Troch., vol. v, pl. 359.—ID., Intr. Troch., octavo ed., p. 181.

*Hab.* Brazil.

“The whole of the body including the upper and under tail coverts iridescent pale green and light coppery-red, most brilliant on the throat; the deeply forked tail steely dark brown, each feather tipped with a more bronzy or purplish hue, which is seen only in certain lights; upper mandible and the tip of the lower one black, the remainder of the latter apparently reddish flesh-color. Total length,  $3\frac{1}{4}$  in. Bill  $\frac{3}{4}$  in. Wing,  $1\frac{9}{16}$  in. Tail  $1\frac{1}{4}$  in.” (Gould, l. c.)

## Genus LXVIII.—PTOCHOPTERA.

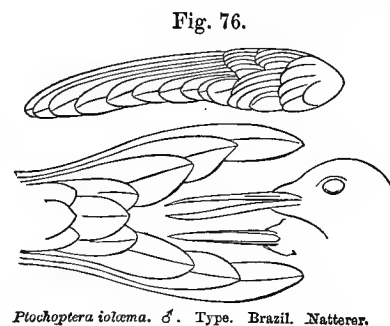
*Ptochoptera*, ELLIOT, Ibis (1874), p. 261.

TYPE.  
*T. iolæma*, Pelz.

*Ch.* Bill moderately long, straight, sharply pointed. Wings extremely short, a little over one-third the entire length of the bird. Tail long, deeply forked, feathers narrow, outer ones curving slightly inwards. Tail coverts very long, reaching to the fork of the tail.

*Range.* Brazil.

The single known species, like that of SMARAGDOCHRYSIS, is a small bird, of rather plain plumage, but with a brilliant throat. The females of both genera are entirely unknown.



### 1. \**Ptochoptera iolæma*.

*Riccordia iolæma*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum. p. 4, pl. 705, figs. 4588–89.

*Thalurania iolæma*, VON PELZ., Ornith. Bras., p. 57.—SALV. and ELLIOT, Ibis (1873), p. 361.

*Ptochoptera iolæma*, ELLIOT, Ibis (1874), p. 261.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 89.

*Hab.* Brazil.

*Male.* Top of head and nape dull dark green, entire upper parts grass-green, only slightly metallic. The tail coverts are a lighter green than the back, and reach to the fork of the tail. Throat pale metallic grass-green. Rest of under parts pale smoky-brown, with some of the flank feathers tipped with grass-green. Under tail coverts long, same color as the abdomen, with a slight metallic-greenish lustre on the centre of the feathers. Tail long, deeply forked, dark purplish-brown, feathers very narrow. Wings purplish-brown. Bill and feet black. Total length,  $4\frac{3}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail, 2 in. Bill along gape,  $\frac{3}{4}$  in. From type of species in the Vienna Zoological Museum.

### Genus LXIX.—CALLIPHLOX.

*Calliphlox*, BOIE, Isis (1831), p. 544.

*Philodice*, MULS. and VERR., Class. Troch. (1865), p. 86.

*Ch.* Bill shorter than the head, straight, slightly curved at extreme tip. Wings moderate. Tail rather long, deeply forked, feathers narrow. Sexes unlike.

*Range.* Venezuela, island of Trinidad, Brazil, and Ecuador.

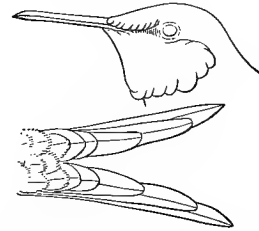
Two species are known; similar in form to those of the preceding genera, with rather dull metallic throats, not luminous in any light.

TYPE.

*T. amethystinus*, Gmel.

*T. mitchelli*, Bourc.

Fig. 77.



*Calliphlox amethystina*. ♂. Brazil. Whitely.

#### *Key to the species.*

A. Tail long and deeply forked.

a. Throat metallic-amethyst.

b. Throat metallic dark violet.

1. *C. amethystina*.

2. *C. mitchelli*.

### 1. *Calliphlox amethystina*.

*Trochilus amethystinus*, GMEL., Syst. Nat. (1788), vol. i, p. 496.—LATH., Ind. Orn., vol. i, p. 319 (1790).—SHAW, Gen. Zool., vol. iii, p. 328.—PR. MAX., Beitr. Natur. Bras., p. 90.

*Mellisuga amethystina*, STEPH., Gen. Zool., vol. xiv, p. 243.—GRAY, Gen. Birds, vol. i, p. 113, sp. 72.

*Trochilus brevicauda*, SPIX., Av. Bras., vol. i, p. 79, t. 80, fig. 2 (1825).

*Ornismya amethystina*, LESS., Ois. Mouch., p. 150, pl. 47 (1829).—ID., Suppl., pls. 20, 21, 22.

*Ornismya amethystoides*, LESS., Troch., p. 79, pl. 25, 26, 27 (1831).

*Mellisuga amethystoides*, GRAY, Gen. Birds, vol. i, p. 113, sp. 72.

*Trochilus campestris*, PR. MAX., Beit. Naturg. Bras., p. 73.

*Tryphæna amethystina*, BON., Consp. Gen. Av. (1850), vol. i, p. 84.—ID., Rev. and Mag. Zool. (1854), p. 257.

*Tryphæna amethystoides*, BON., Consp. Gen. Av. (1850), vol. i, p. 84.

*Calliphlox amethystina*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum. (1855), p. 10.—GOULD, Mon. Troch., vol. iii, pl. 159.—ID., Intr. Troch., octavo ed., p. 97.—CAB. and HEIN., Mus. Hein. Th., iii, p. 58 (1860).—ELLIOT, Ibis (1876), p. 398.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 45 (1877).

*Calliphlox amethystoides*, REICH., Aufz. der Colib. (1853), p. 12.—ID., Troch. Enum., p. 10 (1855).—BON., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Intr. Troch., octavo ed., p. 98.

*Hab.* Island of Trinidad, Venezuela, Brazil.

*Male.* Upper parts dark bronzy-green. Throat metallic-amethyst, beneath which is a band of white, flanks green, abdomen gray changing to buff on the lower part of the flanks and under tail coverts. Central tail feathers green, lateral ones purplish-brown. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Upper parts golden-green, brownish on the head. Under parts pale gray, throat spotted with brown. Wings purplish-brown. Median rectrices bright metallic-green, lateral ones have basal half light purplish-gray, washed with green, remaining part black tipped with white. Bill black, feet brown. Total length, 3 in. Wing  $1\frac{3}{4}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{1}{2}$  in.

## 2. *Calliphlox mitchelli*.

*Trochilus mitchelli*, BOURC., P. Z. S. (1847), p. 47.

*Mellisuga mitchelli*, GRAY, Gen. Birds, vol. i, p. 113, sp. 74.

*Calothorax mitchelli*, REICH., Aufz. der Colib., p. 13 (1853).

*Lucifer mitchelli*, REICH., Troch. Enum., p. 10 (1855).

*Tryphoena mitchelli*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Calliphlox mitchelli*, GOULD, Mon. Troch., vol. iii, pl. 160.—ID., Intr. Troch., octavo ed., p. 98 (1861).—ELLIOT, Ibis (1876), p. 399.—MULS., Hist. Nat. Ois. Mouch., tom. iv, p. 49 (1877).

*Hab.* Ecuador.

*Male.* Upper surface, abdomen, flanks, and under tail coverts dark grass-green. Throat dark metallic-violet. Breast grayish-white. A patch of buff on each side of the rump. Tail dark purple. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Upper parts dark green. Under parts buff, changing to rufous on the abdomen and under tail coverts. Lores and sides of neck blackish-brown. Middle tail feathers bronze-green, lateral ones rufous with a subterminal black bar. Bill black. Total length,  $2\frac{5}{8}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{1}{2}$  in.

## Genus LXX.—LOPHORNIS.

*Lophornis*, LESS., Tab. Esp. Ois. Mouch., p. xxxvii (1829).

*Bellatrix*, BOIE, Isis, p. 545 (1831).

*Lophorinus*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Polemistria*, CAB. and HEIN., Mus. Hein. Th., iii, p. 63 (note) (1860).

*Telamon*, MULS. and VERR., Class. Troch. (1865), p. 75.

*Paphosia*, MULS. and VERR., Class. Troch. (1865), p. 75.

*Dialia*, MULS., Catal. Ois. Mouch. (1875), p. 27.

*Idas*, MULS., Catal. Ois. Mouch., p. 27 (1875).

*Aurinia*, MULS., Catal. Ois. Mouch., p. 27 (1875).

### TYPE.

*T. ornatus*, Bodd.

*T. ornatus*, Bodd.

*O. delatirii*, Less.

*T. verreauxi*, Bourc.

*O. delatirii*, Less.

*O. helencæ*, Delatt.

*L. adorabilis*, Salv.

*T. magnificus*, Vieill.

*T. verreauxi*, Bourc.

*Ch.* Head usually crested. Feathers of the sides of the throat more or less lengthened into ruffs, and projecting outwards. Tail rounded. Bill straight, short, weak. Sexes unlike in plumage.

*Range.* Central America, island of Trinidad, Guiana, Venezuela, Brazil, Columbia, and Ecuador.

This genus, as instituted by Lesson (l. c.), was a composite one. It contained as the first of its species, his *Ornismya natiferi* (= *T. superbus*, Vieill.), followed by *O. petasophora* (= *T. serrirostris*, Vieill.), *O. delalandi*, *O. cristata*, *O. ornata*, Linn., *O. strumaria* (= *T. magnificus*, Vieill.), and *O. vieillotii* (= *T. chalybeus*, Vieill.). Of these, the first is the type of Mr. Gould's genus

AUGASTES, the second is the type of PETASOPHORA, Gray, the third is the type of CEPHALLEPIS (CEPHALOLEPIS), Lodd., and the fourth is the type of BELLONA, Muls., leaving the two remaining species in Lesson's genus LOPHORNIS, of which his *Ornismya ornata* (*Trochilus ornatus*, Bodd.) may be considered as the type. The birds comprised in this genus seem best placed here, as from them through GOULDIA and DISCURA we arrive naturally at STEGANURA, LODDEGESIA, and the long-tail species commonly known as the blue-, and fire-tail Hummers.—Although the tails of the species of LOPHORNIS and GOULDIA are very different, yet there are points of resemblance between them in plumage, among which could be cited the conspicuous bar that crosses the rump. The *Coquettes*, as they are called, are small birds possessing a highly ornamented plumage, having elongated feathers springing from the sides of the neck with metallic tips. Some species are also adorned with crests, and all have metallic throats, with but two exceptions. Of course this is understood to imply only as regards the males. The females are differently attired.

Ten species are recognized as belonging to this genus; two very closely allied, viz., *L. delatirii* and *L. regulus*, and it may be well doubted if they really are distinct.

*Key to the species.*

A. Throat metallic-green.

- |   |                             |
|---|-----------------------------|
| a. No metallic colors on upper parts of the head.                       |                             |
| a'. Crest spotted throughout its length.                                | 1. <i>L. stictolophus</i> . |
| b'. Crest unspotted.  |                             |
| a'' Crest tipped minutely with black.                                   | 2. <i>L. delatirii</i> .    |
| b'' Crest conspicuously tipped with greenish-black.                     | 3. <i>L. regulus</i> .      |
| b. Front covered with metallic-green feathers.                          |                             |
| a'. Feathers of neck elongated, buff tipped with green.                 | 4. <i>L. ornatus</i> .      |
| b' Feathers of neck elongated, white.                                   |                             |
| a'' Elongated feathers with round apical metallic-green spots.          | 5. <i>L. gouldi</i> .       |
| b'' Elongated neck feathers with apical metallic-green bars.            | 6. <i>L. magnificus</i> .   |
| c'. Feathers of neck elongated, buff streaked with black, or all black. | 7. <i>L. helenæ</i> .       |
| c. Front covered with metallic-red feathers; crown white.               | 8. <i>L. adorabilis</i> .   |

Fig. 78.



*Lophornis ornatus*. ♂. Trinidad. Whitely.

B. Throat not metallic.

a. Elongated neck feathers green spotted with white.

a'. Under parts deep oil-green. Tail bronzy-brown. 9. *L. chalybea*.

b'. Under parts dark brown with bronzy-brown reflections. Tail purplish-bronze. 10. *L. verreauxi*.

### 1. *Lophornis stictolophus*.

*Lophornis reginæ*, GOULD (nec SCHREIB.), P. Z. S. (1847), p. 97.—ID., Mon. Troch., vol. iii, pl. 122.—ID., Intr. Troch., octavo ed., p. 84 (1861).—BON., Consp. Gen. Av., vol. i, p. 84 (1850).—ID., Rev. and Mag. Zool. (1854), p. 257.

*Bellatrix reginæ*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 9 (1855).

*Lophornis stictolophus*, SALV. and ELLIOT, Ibis (1873), p. 280.

*Telamon stictolophus*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 201 (1876).

*Hab.* Venezuela, Columbia, and Ecuador.

*Male.* Distinguished from all others of the genus by its crest, which is broad, rust-red in color, each feather tipped with a green spot; the spots commencing in the centre of the crown. Back shining green. Rump and upper tail coverts bronzy-brown; a white band across the rump. Throat metallic-green, beneath which is a spot of white. Under parts light shining green. Under tail coverts buff. Tail brownish-chestnut, external feathers margined and tipped with bronzy-green. Bill flesh-color, brown at tip. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Head not crested. Front and crown deep buff, occiput dark green. Rump bronzy-brown, crossed by a band of buff. Upper part of throat white spotted with blackish-brown, lower portion black with bronze reflections. Tail buff, with a broad subterminal blackish-brown band with bronzy-green reflections. Remaining plumage as in the male. Types in my collection.

### 2. *Lophornis delatirii*.

*Ornismya (Lophornis) delatirii*, LESS., Rev. Zool. (1839), p. 19.

*Lophornis delatirii*, GOULD, Mon. Troch., vol. iii, pl. 121.—ID., Intr. Troch., octavo ed., p. 84 (1861).—REICH., Aufz. der Colib., p. 12.—ID., Troch. Enum., p. —, (1855).—BON., Rev. and Mag. Zool. (1854), p. 257.—ID., Consp. Gen. Av., p. 83 (1850).

*Mellisuga delatirii*, GRAY, Gen. Birds, vol. i, p. 113.

*Telamon delatirii*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 199 (1876).

*Hab.* Veragua, Panama, Columbia, Ecuador, Peru, and Bolivia.?

*Male.* Differs from the *L. stictolophus* simply in the form of its crest, which is rufous, lengthened, central feathers the longest, and tipped with minute green spots. Rest of plumage like *L. stictolophus*. Total length,  $2\frac{1}{2}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{5}{16}$  in.

*Female* like that of *L. stictolophus*.

*Young male* has the forehead and throat rufous, rest like the female.

### 3. *Lophornis regulus*.

*Trochilus (Lophornis) regulus*, GOULD, P. Z. S. (1847), p. 89.—ID., Mon. Troch., vol. iii, pl. 120.—BON., Consp. Gen. Av., p. 84 (1850).

*Mellisuga regulus*, GRAY, Gen. Birds, vol. i, p. 113.

*Lophornis lophotes*, GOULD, Intr. Mon. Troch., octavo ed., p. 83 (1861).

*Hab.* Bolivia.

*Male.* Only differs from *L. delatirii* by having the crest conspicuously tipped with dark green spots, and a slightly longer bill. Total length,  $2\frac{1}{2}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Exactly like that of the *L. delatirii*.

The *L. lophotes*, Gould, is the same as *regulus* with still larger spangles on the tips of the crest feathers. It is most probable that all these three constitute but one species, which should be called *L. delatirii*.

#### 4. *Lophornis ornatus*.

*Trochilus ornatus*, Bodd., Plan. Enlum. d'Aubent, pl. 640, fig. 3 (1783).—Gmel., Syst. Nat. (1788), vol. i, p. 497.—Lath., Ind. Orn., vol. i (1790), p. 318.—Shaw., Gen. Zool. vol. viii., p. 345.—Virell., Ency. Méth., p. 565, sp. 64.

*Ornismya ornata*, Less., Ois. Mouch., p. 139, pl. 41 (1829).—Id., Troch., p. 77, pl. 24, juv. (1831).

*Mellisuga ornata*, Gray, Gen. Birds, vol. i, p. 13, sp. 84.—Léot., Ois. Trinid., p. 148.

*Lophornis auratus*, Bon., Consp. Gen. Av., vol. i, p. 83 (1850).

*Lophornis ornata*, Reich., Aufz. der Colib., p. 12 (1853).—Cab. and Hein., Mus. Hein. Th., iii, p. 62 (1860).

*Lophornis ornatus*, Gould, Mon. Troch., vol. iii, pl. 117.—Id., Intr. Troch., octavo ed., p. 82 (1861).—Bon., Rev. and Mag. Zool. (1854), p. 257.—Id., Consp. Gen. Av., p. 83, vol. i.—Reich., Aufz. der Colib., p. 12.—Id., Troch. Enum., p. 9.—Less., Trait. Ornith., p. 285 (1831).—Muls., Hist. Nat. Ois. Mouch., vol. iii, p. 215.

*Hab.* Trinidad, Venezuela, and Guiana.

*Male.* Head and crest deep chestnut, unspotted. Forehead and throat metallic-green. On either side of neck, a series of lengthened graduated feathers, each one tipped with metallic-green. Under surface bronzy-green. Rest of plumage like *L. stictolophus*. Total length,  $2\frac{9}{16}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Top of head, upper and under surface bronzy-green. Across the rump a band of buffy-white. Throat and upper part of breast buff. Rest of plumage like the female of *L. stictolophus*.

#### 5. *Lophornis gouldi*.

*Ornismya gouldi*, Less., Trochil., p. 103, pl. 36 (1831-33).

*Lophornis reginae*, Schreib., Collect. Faun. Bras. (1833), pl. 1.

*Bellatrix gouldi*, Reich., Aufz. der Colib., p. 12 (1853).—Id., Troch. Enum., p. 9 (1855).

*Lophornis gouldi*, Gould, Mon. Troch., vol. iii, pl. 118.—Id., Intr. Troch., octavo ed., p. 83 (1861).—Bon., Consp. Gen. Av., vol. i, p. 83 (1850).—Id., Rev. and Mag. Zool. (1854), p. 257.—Salv. and Elliot, Ibis (1873), p. 279.—Muls., Hist. Nat. Ois. Mouch., vol. iii, p. 218 (1876).

*Hab.* Brazil, Amazonian valley—vicinity of Para.

*Male.* Head and crest chestnut-red. Forehead and throat metallic-green. Upper and under surface, and wing coverts bronzy-green. Rump chestnut-brown, crossed by a band of white. On either side of neck are lengthened graduated white feathers, each one with a round metallic-green spot at tip. Tail chestnut-red, feathers margined and tipped with bronzy-green. Bill flesh-color, tip brown. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Head and upper surface golden-green. Lores and throat buff. Median rectrices bronzy-green, lateral ones buff, with bronzy-green subterminal bar. Rest of plumage like the male, no elongated feathers on sides of the neck.

**6. Lophornis magnificus.**

- Trochilus magnificus*, VIEILL., Nouv. Dict. Hist. Nat. (1817), t. vii, p. 367, et t. xxiii, p. 428, pl. G, 36, fig. 3.  
 —ID., Ois. Dor., tom. iii, pl. 8.—TEMM., Plan. Col., 229, fig. 2.—PR. MAX., Beit. Nat. Bras., p. 79.  
*Colibri helios*, SPIX., Av. Bras., tom. i, p. 81, tab. 82, fig. 2 (1824).  
*Trochilus decorus*, LICHT., Doubl., p. 14, no. 120.  
*Ornismya magnifica*, LESS., Man. Ornith., tom. ii, p. 80.  
*Ornismya strumaria*, LESS., Ois. Mouch., p. 143, pl. 42, ♂ (1829); pl. 43, fig. 1, ♀; fig. 2, ♂, juv.  
*Lophornis strumaria*, LESS., Trait. Ornith., p. 285 (1831).  
*Mellisuga magnifica*, GRAY, Gen. Birds, vol. i, p. 113, sp. 88.  
*Bellatrix magnifica*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 9 (1855).  
*Lophornis magnificus*, GOULD, Mon. Troch., vol. iii, pl. 119.—ID., Intr. Troch., octavo ed., p. 83 (1861).—BON.,  
 Consp. Gen. Av., vol. i, p. 83 (1850).—ID., Rev. and Mag. Zool. (1854), p. 257.  
*Lophornis magnifica*, CAB. and HEIN., Mus. Hein. Th., iii, p. 62 (1860).  
*Telamon magnificus*, GRAY, Handl.-B., p. 147, vol. i.  
*Idas magnificus*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 211 (1876).

*Hab.* Brazil.

*Male.* Precisely like the *L. gouldi*, except that the elongated neck feathers have the tip crossed by a bar of metallic-green, instead of a round spot. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{8}$  in.

*Female* like that of *L. gouldi*.

*Prince Heller as Loquette*  
 ♀

**7. Lophornis helenæ.**

- Ornismya helenæ*, DELATTE., Echo du Monde Savant. (1843), p. 1068.—ID., Rev. Zool. (1843), p. 133.  
*Mellisuga helenæ*, GRAY, Gen. Birds, vol. i, p. 133.  
*Lophornis helenæ*, REICH., Aufz. der Colib., p. 12.—ID., Troch. Enum., p. 9 (1855).—BON., Consp. Gen. Av. (1850), vol. i, p. 83.—ID., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 123.—ID., Intr. Troch., octavo ed., p. 84.  
*Paphosia helenæ*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 205 (1876).

*Hab.* Mexico, Guatemala, and Costa Rica.

*Male.* Top of head and crest dark shining green. From either side of the occiput spring three long, slender, greenish-black feathers. Back and wing coverts bronzy-green. Rump bronzy-brown, crossed by a narrow line of white. Throat metallic light green, surrounded by black, the feathers on the sides of the neck elongated and streaked with buff. Under surface white, each feather with a golden spot at the tip. Under tail coverts dark rufous. Median rectrices green, lateral ones deep rufous margined with dark brown. Bill flesh-color. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Upper surface and abdomen bronzy-green. Throat white spotted with green. Tail deep buff, with a subterminal band of black. Middle rectrices dark green tipped with black.

**8. Lophornis adorabilis.**

- Lophornis adorabilis*, SALV., P. Z. S. (1870), p. 207.  
*Dialia adorabilis*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 208 (1876).

*Hab.* Chiriqui.

*Male.* Forehead metallic ruby-red. Crown pure white, narrowing to a point on the occiput. From each side of the occiput spring a few narrow, lengthened dark

green feathers. Sides of the head bordering the white, dark brown. Back and wing coverts bronzy-green. Rump dark purple crossed by a narrow white band. Throat metallic dark green. Upper part of breast white. Flanks bronzy-green. Abdomen and under tail coverts dark rufous. Tail deep rufous, with the tips of the median feathers, and edges of the others, greenish-brown. Bill flesh-color, tip brown. Wings purple. Total length,  $2\frac{7}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{2}{6}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Top and sides of head dark brown. Upper parts bronzy-green. Throat and breast white spotted with dark brown. Tail deep buff with a subterminal black bar. Flanks bronzy-green. Abdomen and under tail coverts deep rufous. Rump as in the male. Maxilla black, mandible flesh-color at base, tip black.

### 9. *Lophornis verreauxi.*

*Trochilus verreauxi*, BOURC., Rev. Zool. (1853), p. 193.

*Lophornis verreauxi*, REICH., Aufz. der Colib., p. 12.—ID., Troch. Enum., p. 9 (1855).—GOULD, Mon. Troch., vol. iii, pl. 125.

*Bellatrix verreauxi*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Polemistria verreauxi*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 63 (note).—GOULD, Intr. Troch., octavo ed., p. 85.—MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 221.

*Hab.* Upper Amazon and Columbia, Peru.

*Male.* Forehead and patch beneath the eye metallic grass-green. Crest deep chestnut, each feather tipped and margined with dark green. Back and flanks dark bronzy-green. Across the rump a line of white. Throat and sides of neck dull pale green, the feathers of the neck tipped with white. Centre of breast and abdomen dark green—almost black. Upper tail coverts bronzy-purple. Tail purplish-bronze. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Top of head dark brown, without crest. Back bronzy-green. A line of white on sides of throat. Flanks washed with green. Throat and abdomen black spotted with buff. Line across the rump buff. Upper tail coverts dark crimson. Tail bronze-green at base, changing to blackish-brown, all the lateral feathers tipped with pearly-white. Under tail coverts blackish-brown. Description taken from a female procured by Chesterton in Columbia.

### 10. *Lophornis chalybea.*

*Trochilus chalybeus*, VIEILL., Ency. Méth., vol. ii, p. 574.—TEMM., Pl. Col., no. 66, fig. 2.

*Trochilus festivus*, LICHT., Doubl., p. 14.

*Colibri mystax*, SPIX., Av. Bras., tom. i, p. 82, tab. 82, fig. 3 (1824).

*Ornismya vieillotii*, LESS., Hist. Nat. Ois. Mouch., p. 186, pl. 64 (1829).—ID., Trochil., p. 37, pl. 8; p. 41, pl. 9; p. 44, pl. 10; p. 46, pl. 11 (1831).

*Ornismya audenitii*, LESS., Ois. Mouch. Supp., p. 102, pl. 2 (1831).

*Mellisuga chalybea*, GRAY, Gen. Birds, vol. i, p. 113 (1844-49).

*Mellisuga audenitii*, GRAY, Gen. Birds, vol. i, p. 113.

*Lophornis audenitii*, BON., Consp. Gen. Av., vol. i (1850), p. 84.

*Lophornis chalybeus*, BON., Consp. Gen. Av., vol. i (1850), p. 84.—REICH., Troch. Enum., p. 9 (1855).—GOULD, Mon. Troch., vol. iii, pl. 124.—BERLEPSCH., Journ. für Ornith. (1873), p. 275.

*Lophornis chalybea*, REICH., Aufz. der Colib., p. 12 (1853).



*Bellatrix chalybeus*, BON., Rev. and Mag. Zool. (1854), p. 297.

*Lophornis festivus*, BURM., Th. Bras., vol. ii, p. 354, sp. 2 (1856).

*Polemistria chalybea*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 63.—GOULD, Intr. Troch., octavo ed., p. 85 (1861).

*Polemistria vieillotii*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 231 (1876).

*Hab.* Brazil.

*Male.* Forehead, line beneath the eye, and ear coverts metallic grass-green. Back, wing coverts, and back of head bronzy-green. Rump dark purple, crossed by a narrow white band. Throat and lengthened feathers on the sides dark glossy green, not metallic, the latter tipped with white. Breast grayish-white; abdomen and flanks dark brown with bronze reflections. A line of white across the vent. Upper tail coverts pale gray tipped and margined with bronzy-green. Tail bronzy-brown tipped with white. Wings dark purplish-brown. Bill black. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{3}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{5}{16}$  in.

*Female.* Top of head brown, upper surface of body greenish-bronze; beneath grayish-white. Throat streaked with brown. Tail bronzy-green at base, changing into dark bronzy-brown, and tipped with buff. Rump, bill, and wings like the male.

We now reach a group of birds allied in many ways to those of the genus LOPHORNIS, yet differing greatly in their singular tails, which are composed of lengthened attenuated feathers, the three outermost ones on either side being the longest, although very unequal, and the four median ones so short as to be hardly visible. The species first given is perhaps possessed of the most spine-like rectrices, closely followed, however, by the next; but when the *G. laticia* is reached we find it to be almost the counterpart of *Discura longicauda*, the only species of the following genus, but without the *spatules* at the end of the external rectrices. All the species of GOULDIA are small but of a graceful shape. I have kept the *G. popelairi* in the same genus as the rest, not considering that the possession of a crest is of sufficient importance to give the species a distinct generic rank.

#### Genus LXXI.—GOULDIA.

*Gouldia*, BON., Compt. Rend., p. 381 (1850).

*Popelaria*, REICH., Aufz. der Colib., p. 12 (1853).

*Gouldomyia*, BON., Rev. and Mag. Zool. (1854), p. 257.

*Prymnacantha*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 64.

*Tricholopha*, HEINE, Journ. für Ornith. (1863), p. 209.

*Mytinia*, MULS., Catal. Ois. Mouch. (1875), p. 28.

*Mythinia*, MULS., Hist. Nat. Ois. Mouch., vol. iii (1876), pp. 235, 245.

#### TYPE.

*T. langsdorffi*, Vieill.

*T. popelairi*, DuBus.

*T. langsdorffi*, Vieill.

*T. popelairi*, DuBus.

*T. popelairi?*, DuBus.

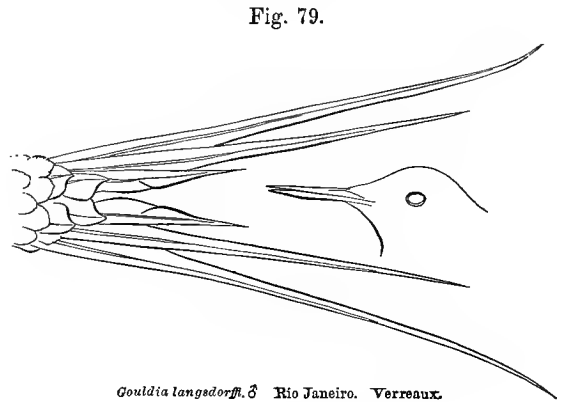
*T. laticia*, Bourc.

*T. laticia*, Bourc.

*Ch.* Bill about as long as the head. Rectrices lengthened, stiff, graduating to a fine point. Outermost one bare of outer web for nearly three-fourths its length. Tarsi covered by a tuft of feathers.

*Range.* Veragua and Costa Rica in Central America, Brazil, the upper Amazon, Columbia, Ecuador, Peru, and Bolivia.

Four species are here included in this genus.



*Gouldia langsdorffi*, ♂ Rio Janeiro. Verreaux.

*Key to the species.*

- |   |                            |
|---|----------------------------|
| A. Head crested, breast black, not metallic.                    | 1. <i>G. popelairii</i> .  |
| B. Head not crested, breast metallic.                           |                            |
| a. Breast luminous green bordered with red.                     | 2. <i>G. langsdorffi</i> . |
| b. Breast shining green, abdomen dull green.                    | 3. <i>G. conversi</i> .    |
| c. Breast metallic-green, a patch of white on its lower border. | 4. <i>G. lætitix</i> .     |

### 1. *Gouldia popelairii*.

*Trochilus popelairii*, DU BUS., Esquiss. Ornith., pl. 6 (1845).

*Mellisuga popelairii*, GRAY, Gen. Birds, vol. i, p. 113.

*Gouldia popelairi*, BON., Consp. Gen. Av. (1850), vol. i, p. 86.—GOULD, Mon. Troch., vol. iii, pl. 127.—BON., Rev. and Mag. Zool. (1854), p. 257.

*Popelairia tricholopha*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 9 (1855).—MULS., Hist. Nat. Ois. Mouch. (1876), vol. iii, p. 235.

*Prymnacantha popelairi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 64 (1860).—GOULD, Intr. Troch., octavo ed., p. 87.

*Tricolopha popelairi*, HEINE, Journ. für Ornith. (1863), p. 209.

*Hab.* Columbia, Ecuador, and Peru.

*Male.* Top of head and throat metallic grass-green. Lengthened hair-like feathers, extending beyond the short crest, black. Back and upper tail coverts grass-green. A white band across the rump, between this band and the tail coverts the rump is greenish-black. Breast and abdomen black; flanks light brownish-gray. Under tail coverts white. Tail steel-blue, shafts white in the middle feathers, brownish in the lateral ones. Thighs red. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $2\frac{5}{8}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Upper parts, flanks, and tail coverts bronzy-green, white band across the rump. Chin and a line on side of the neck grayish-white. Centre of throat and abdomen bluish-black. Tail short, steel-blue with gray base and white tips. Thighs red.

### 2. *Gouldia langsdorffi*.

*Trochilus langsdorffi*, BONNAT. and VIELL., Ency. Méth., vol. ii, p. 574 (1794).—TEMM., Plan. Col., no. 66, fig. 1.

*Orthorhynchus langsdorffi*, LESS., Man. Ornith., tom. ii, p. 77 (1828).

*Ornismya langsdorffi*, LESS., Ois. Mouch., p. 102, pl. 26 (1829).—ID., Supp., p. 129, pl. 16.—ID., Trochil., p. 101, pl. 35 (1831).

- Colibri hirundinaceus*, SPIX., Av. Bras., vol. i (1824), p. 80, pl. 81, fig. 2.  
*Mellisuga langsdorffi*, GRAY, Gen. Birds, vol. i, p. 113.  
*Gouldia langsdorffi*, BON., Consp. Gen. Av. (1850), vol. i, p. 86.—ID., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 128.—DES MURS, Voy. Castel. (Oiseaux.), p. 41.—REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 9 (1855).  
*Prymnacantha langsdorffi*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 64.—MULS., Hist. Nat. Ois. Mouch., vol. iii (1876), p. 238.  
*Gouldia melanosternum*, GOULD, Ann. and Mag. Nat. Hist. (1868), 4th ser., vol. i, p. 323.

*Hab.* Brazil, upper Amazon, Peru.

*Male.* Crown, throat, and breast glittering metallic grass-green, bounded beneath by a line of fiery-red. Upper surface bronzy-green, with a white band across the rump. Lower portion of breast black, rest of under parts grayish-white. Median rectrices steel-blue with white shafts, lateral ones steel-blue at base, then brownish-white with brown shafts. Wings purple-brown. Bill black. Total length,  $4\frac{7}{8}$  in. Wing,  $1\frac{3}{8}$  in. Tail,  $3\frac{3}{8}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Upper surface bronzy-green with a white band across the rump. Chin black; a white line from the angle of bill. Throat spotted with green. Tail short. Median rectrices steel-blue tipped with white; lateral ones grayish-white, with a subterminal steel-blue bar.

### 3. *Gouldia conversi*.

- Trochilus conversi*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1846), p. 313.—ID., Rev. Zool. (1846), p. 314, pl. 3.  
*Mellisuga conversi*, GRAY, Gen. Birds, vol. i, p. 113 (1844-49).  
*Gouldia conversi*, BON., Consp. Gen. Av. (1850), vol. i, p. 86.—ID., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 129.—REICH., Aufz. der Colib. p. 12 (1853).—ID., Troch. Enum., p. 9 (1855).—GOULD, Intr. Troch., octavo ed., p. 86 (1861).  
*Prymnacantha conversi*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 65.—MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 242.

*Hab.* Columbia.

*Male.* Head and throat shining dark grass-green. A white band across the rump below which is a broad one of deep chestnut. Entire rest of body dark bronze-green. Wings purplish-brown. Rectrices steel-blue, with a central line and tips pale brown. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $1\frac{3}{4}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* General plumage dark green, with a white band across the rump. Throat black, with a white line on either side from the angle of the mouth. Tail feathers dark gray at base, with a greenish gloss on the central pair, succeeded by steel-blue and tipped with white. Tail short and rounded. Total length,  $2\frac{7}{8}$  in. Wing,  $1\frac{9}{16}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{8}$  in.

### 4. *Gouldia lætitiaë*.

- Trochilus lætitiaë*, BOURC., Ann. Soc. Agr., Lyon (1852), p. 143.  
*Gouldia lætitiaë*, BON., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 130.—REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 9 (1855).—GOULD, Intr. Troch., octavo ed., p. 86 (1861).  
*Prymnacantha lætitiaë*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 64.  
*Myiophobus lætitiaë*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 245 (1876).

*Hab.* Bolivia?.

*Male.* Head and throat glittering pale grass-green. Upper surface coppery-brown; band across the rump white. A white patch beneath the green of the throat. Upper part of abdomen and flanks bronzy-green. Lower portion of belly gray. Upper tail coverts red, changing to golden-green. Tail black, shafts rufous. Under tail coverts golden-green bordered with black. Bill: Maxilla black, mandible flesh-color at base, rest black. Total length,  $3\frac{5}{8}$  in. Wing,  $1\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Unknown.

Only two examples of this species have been obtained; one in my collection, and one in that of Mr. Gould.

### Genus LXXII.—DISCURA.

*Platurus*, LESS., Ois. Mouch. (1829), p. xxii (nec Latr. Rept.).  
*Ocreatus*, GOULD, P. Z. S. (1846), p. 86 (partim).  
*Discosura*, BON., Comp. Rend., p. 383 (1850), vol. i, p. 84.  
*Discura*, REICH., Aufz. der Colib., p. 8 (1853).

#### TYPE.

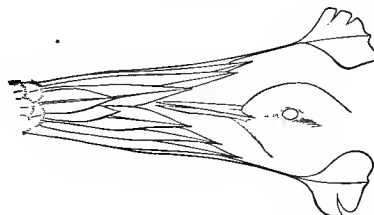
*T. longicaudus*, Gmel.  
*T. longicaudus*, Gmel.  
*T. longicaudus*, Gmel.  
*T. longicaudus*, Gmel.

*Ch.* Bill short, straight, cylindrical, converging rapidly near the tip to a slender point. Tail deeply forked, the rectrices pointed, the outermost ones bare of webs near their tips, and terminating in a spatula. Sexes unlike in plumage.

*Range.* Guiana, Brazil.

But one species of this genus is known, very closely resembling the *Gouldia lætitiae* in plumage, but possessing spatules on the external rectrices, and thus leading directly to STEGANURA.

Fig. 80.



*Discura longicauda*. ♂. Cayenne. Sallé.

### 1. *Discura longicauda*.

*Trochilus longicaudus*, GMEL., Syst. Nat., vol. i, p. 498 (1788).  
*Trochilus platurus*, LATH., Ind. Ornith., vol. i, p. 317 (1790).—SHAW, Gen. Zool., vol. viii, p. 316.—VIEILL., Nouv. Dict. Hist. Nat. (1817), tom. vii, p. 370.—ID., Ency. Méth., tom. ii, p. 569.—PR. MAX., Beit. Naturg., t. iv, p. 96.—TSCHUD., Faun. Peruan., p. 245 (1840-46).  
*Mellisuga platura*, STEPH., Gen. Zool., vol. xiv, p. 242.  
*Trochilus bilophus*, TEMM., Pl. Col., no. 18, fig. 3.  
*Ornismya platura*, LESS., Ois. Mouch., p. 136, pl. 40 (1829).—ID., Supp., p. 159, pl. 31 (1831).  
*Trochilus (Ocreatus) ligonicaudus*, GOULD, P. Z. S. (1846), p. 86.  
*Mellisuga ligonicauda*, GRAY, Gen. Birds, vol. i, p. 113, sp. 57.  
*Discosura longicauda*, BON., Consp. Gen. Av., vol. i (1850), p. 84.  
*Discosura ligonicauda*, BON., Consp. Gen. Av., vol. i (1850), p. 84.  
*Discura platura*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5, pl. 706, figs. 4591-95 (1855).  
*Discura longicauda*, REICH., Aufz. der Colib., p. 8.—ID., Troch. Enum., p. 5, pl. 706, figs. 4591-95.—BON., Rev. and Mag. Zool. (1854), p. 257.—GOULD, Mon. Troch., vol. iii, pl. 126.—ID., Intr. Troch., octavo ed., p. 85.—CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 65.

*Hab.* Guiana, Brazil.

*Male.* Face, throat, neck, and upper part of breast shining grass-green. A small black spot on the chin. Back and upper tail coverts bronzy-green. A band of

buffy-white crosses the lower part of back. Flanks golden-green. A few green feathers on the centre of the breast edged with white. Middle of abdomen golden-brown; lower part and under tail coverts buff. Tail purplish-brown, each feather having a central stripe of buff. Shaft of outermost ones elongated beyond the rest and terminating in a purplish-black spatula. Wings purplish-brown. Bill black. Total length,  $3\frac{7}{8}$  in. Wing,  $1\frac{3}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{3}{8}$  in.

*Female.* Head greenish-brown. Upper surface and flanks bronzy-green. A broad buff band across the lower part of back. Centre of throat black, bordered on either side with white. Centre of abdomen blackish-brown. Upper tail coverts black. Tail dark gray, largely tipped with purplish-black, the black on the outermost feathers edged with white. Bill black. At the base of bill is a small spot of buff. Total length,  $2\frac{7}{8}$  in. Wing,  $1\frac{1}{6}$  in. Tail 1 in. Culmen,  $\frac{3}{8}$  in.

Genus LXXIII.—STEGANURA.

*Ocreatus*, GOULD, P. Z. S. (1846), p. 86 (partim).  
*Steganurus*, REICH., Syst. Av. Nat., pl. 40 (1849).  
*Steganura*, REICH., Aufz. der Colib., p. 8 (1853).  
*Spathura*, GOULD, Intr. Troch., octavo ed., p. 99.  
*Uralia*, MULS. and VERR., Class. Troch. (1865), p. 81.

TYPE.  
*T. addæ*, Bourc.  
*O. underwoodi*, Less.  
*O. underwoodi*, Less.  
*O. underwoodi*, Less.  
*S. cissiura*, Gould.

*Ch.* Bill straight, about as long as the head; wings moderately long. Tail deeply forked, the outer rectrix on each side, with one exception, having the shaft bare of webs for a portion of its length and terminating in a spatula. Tarsi hidden in a tuft of downy feathers; hind toe and nail shorter than the middle toe and nail. Sexes unlike in plumage.

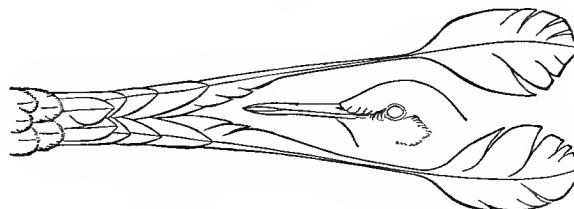


Fig. 81.

*Steganura underwoodi*. ♂ New Granada, Whitely.

*Range.* Venezuela, Columbia, Ecuador, Peru, and Bolivia.  
 Six species are known belonging to this genus. They are strongly characterized birds, with luminous throats and breasts, tarsi completely hidden in downy puffs, and elongated external rectrices, bare of webs near the tips and terminating in a spatula. They are of various sizes, but generally rather small.

Key to the species.

- A. Tarsal tufts white.
  - a. Chin bronzy-green in ♂, breast and abdomen in ♀ white spangled with green.
    - 1. *S. underwoodi*.
    - 2. *S. melananthera*.
  - b. Chin black in ♂, breast and abdomen in ♀ pure white.
- B. Tarsal tufts rufous.
  - a. Outer rectrices very long, spatules oval.
    - 3. *S. solstitialis*.
    - 4. *S. periana*.
  - b. Outer rectrices moderately long, spatules wide as long.
    - 5. *S. addæ*.
  - c. Outer rectrices shorter than those of *b*; spatules wider than long.
    - 6. *S. cissiura*.
  - d. Outer rectrices webbed throughout their entire length. Spatules small.

**1. *Steganura underwoodi*.**

*Ornismya underwoodi*, LESS., Troch., p. 105, pl. 37 (1831).

*Ornismya kieneri*, LESS., Troch., p. 165, pl. 65, ♀ (1831).

*Mellisuga underwoodi*, GRAY, Gen. Birds, vol. i, p. 113, sp. 56.

*Steganura underwoodi*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5 (1855).—MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 254.

*Steganura spatuligera*, REICH., Aufz. der Colib., pp. 8, 24 (1853).—ID., Troch. Enum. p. 5 pl. 707, figs. 4596-9 (1855).

*Steganura remigera*, REICH., Aufz. der Colib., pp. 8, 24 (1853).—ID., Trochil. Enum., p. 5, pl. 708, figs. 4601-2.

*Steganurus remigera*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 67.

*Steganurus underwoodi*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 66.

*Spathura underwoodi*, GOULD, Mon. Troch., vol. iii, pl. 162.—BON., Consp. Gen. Av., p. 80 (1850).—ID., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Intr. Troch., octavo ed., p. 100 (1861).

*Hab.* Columbia and Venezuela.

*Male.* Upper surface, abdomen, flanks, and under tail coverts bronzy-green. Throat and breast luminous grass-green. Tail, outer rectrices, and inner webs of rest brown; outer webs and middle pair grass-green; spatules large, black. External rectrices vary considerably in length among individuals. Tarsal tufts white, bill black. Total length,  $5\frac{1}{2}$  in. Wing,  $1\frac{3}{4}$  in. Tail,  $3\frac{3}{8}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Upper surface and median rectrices grass-green. Beneath white spangled with green. Under tail coverts buff, lateral rectrices light brown, outer ones tipped with white, rest washed with green on outer webs. Wings purple. Bill black. Tarsal tufts white. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{1}{2}$  in.

**2. *Steganura melananthera*.**

*Trochilus (Spathura) melananthera*, JARD., Contr. Ornith. (1851), p. 111, pl. 20.

*Discura melananthera*, BON., Consp. Gen. Av. (1850), vol. i, p. 70.—ID., Rev. and Mag. Zool. (1854), p. 256.

*Steganura melananthera*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5, pl. 710, figs. 4608-9 (1855).

*Spathura melananthera*, GOULD, Mon. Troch., vol. iii, pl. 163.—ID., Intr. Troch., octavo ed., p. 100 (1861).

*Steganurus melanantherus*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 66 (note 3).

*Hab.* Ecuador.

*Male.* Differs from the *S. underwoodi* by having the chin jet-black, and the spatules somewhat smaller. Otherwise the two are almost precisely alike. Total length,  $4\frac{3}{8}$  in. Wing,  $1\frac{1}{2}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Differs from the female of *S. underwoodi* by having the under surface pure white, without any spangles of green on the breast. Total length,  $2\frac{7}{8}$  in. Wing,  $1\frac{1}{2}$  in. Tail, 1 in. Culmen,  $\frac{9}{16}$  in.

**3. *Steganura solstitialis*.**

*Spathura (Steganurus) solstitialis*, GOULD, Ann. Mag. Nat. Hist. (1871), 4th ser., vol. viii, p. 62.

*Steganura solstitialis*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 260 (1876).

*Hab.* Ecuador.

*Male.* Upper surface, abdomen, flanks, and under tail coverts dark grass-green. Throat and breast luminous grass-green. Wings purplish-brown. Tarsal tufts very deep buff. Tail dark brown; outer webs of all but the outermost rectrices washed

with green. Spatules black. Specimen before me (a typical one) has no gray on the edges. Bill black. Total length,  $5\frac{1}{4}$  in. Wing,  $1\frac{7}{8}$  in. Tail, 3 in. Culmen,  $\frac{5}{8}$  in.

*Female.* Upper parts bronzy-green. Entire under parts white spotted with green. Under tail coverts buff. Middle rectrices bronzy-green, outermost one on either side brown tipped with white, remainder brown on inner web, bronzy-green on outer. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{3}{4}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

#### 4. *Steganura peruana.*

*Spathura peruana*, GOULD, Mon. Troch., vol. iii, pl. 164.—ID., Intr. Troch., octavo ed., p. 100 (1861).—BON., Consp. Gen. Av. (1850), vol. i, p. 80.—ID., Rev. and Mag. Zool. (1854), p. 256.

*Steganura peruana*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5, pl. 709, figs. 4606-7 (1855). MÜLL., Hist. Nat. Ois. Mouch., vol. iii, p. 261 (1876).

*Steganurus peruanus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 66 (note 5) (1860).—WHITELEY, P. Z. S. (1873), p. 784.

*Hab.* Peru.

*Male.* Throat and breast metallic grass-green; rest of plumage of body bronzy-green. Wings and tail brown; the outer webs of all the lateral rectrices except the outermost bronzy-green. Bill black. Tarsal tufts buff. Total length, 5 in. Wing,  $1\frac{3}{4}$  in. Tail,  $3\frac{1}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Upper surface and median rectrices bronzy-green. Under surface white spangled with green. Tarsal tufts and under tail coverts buff. Outermost rectrices brown tipped with white, rest brown on inner web, green on outer. Bill black. Wings brown. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen  $\frac{5}{8}$  in.

*Obs.* Although Mr. Gould cites the P. Z. S., for 1849, as the place where this species was described, and he has been followed in this citation by others, yet I cannot find that the species was published in the volume for that year, but was evidently first described in the Monograph of the Trochilidæ.

#### 5. *Steganura addæ.*

*Trochilus addæ*, BOURC., Rev. Zool. (1846), p. 312, Sept.

*Trochilus (Ocreatus) rufocaligatus*, GOULD, P. Z. S. (1846), p. 86, Oct.

*Mellisuga rufocaligata*, GRAY, Gen. Birds, vol. i, p. 113, sp. 59.

*Spathura addæ*, BON., Consp. Gen. Av. (1850), vol. i, p. 80.—ID., Rev. and Mag. Zool. (1854), p. 256.

*Steganura addæ*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Trochil. Enum., p. 5, pl. 709, figs. 4603-5.—MÜLL., Hist. Nat. Ois. Mouch., vol. iii, p. 263 (1876).

*Spathura rufocaligata*, GOULD, Mon. Troch., vol. iii, pl. 165.—ID., Intr. Troch., octavo ed., p. 100 (1861).

*Steganurus addæ*, CAB. and HEIN., Mus. Hein. (1861) Th., iii, p. 66 (note 6).

*Hab.* Bolivia.

*Male.* Throat and breast brilliant green; rest of body and middle rectrices bronze-green. Under tail covers bronze-green, margined with buff. Tarsal tufts rufous. Tail brown, spatules black. Bill black. Total length,  $4\frac{3}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{9}{16}$  in. From Bourcier's type in my collection.

*Female.* Upper parts and median rectrices bronze-green. Under surface white spotted with green. Tarsal tufts and under tail coverts rufous. Outermost rectrices brown tipped with white, rest brown on inner web, green on outer. Bill black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

6. \**Steganura cissiura*.

*Spathura cissiura*, GOULD, P. Z. S. (1853), p. 109.—*Id.*, Mon. Troch., vol. iii, pl. 166.—*Id.*, Intr. Troch., octavo ed., p. 100 (1861).

*Steganurus cissiurus*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 66 (note 4).

*Uralia cissiura*, MULS., Hist. Nat. Ois. Mouch., vol. iii, p. 265 (1876).

*Hab.* Peru.

*Male.* "General plumage bronzy-green; wings purplish-brown; four outer tail feathers purplish steel-black; under surface green, paler on the throat; thighs thickly plumed and of a reddish-buff. Total length,  $4\frac{1}{4}$  in. Bill,  $\frac{5}{8}$  in. Wing,  $1\frac{5}{8}$  in. Tail,  $2\frac{3}{8}$  in." (Gould, l. c.)

*Female.* Unknown.

This species is easily recognized from having the outermost rectrix webbed for its entire length. Two specimens only are known, brought by Warszewicz from Peru.

## Genus LXXIV.—LODDIGESIA.

*Loddigesia*, GOULD, Mon. Troch., vol. iii.—*Id.*, Intr. Troch., octavo ed., p. 99 (1861).

*Loddigiornis*, BON., Compt. Rend., p. 381 (1850).

*Mulsantia*, REICH., Aufz. der Colib., p. 12 (1853).

*Thaumatoëssa*, HEIN., Journ. für Ornith. (1863), p. 209.

## TYPE.

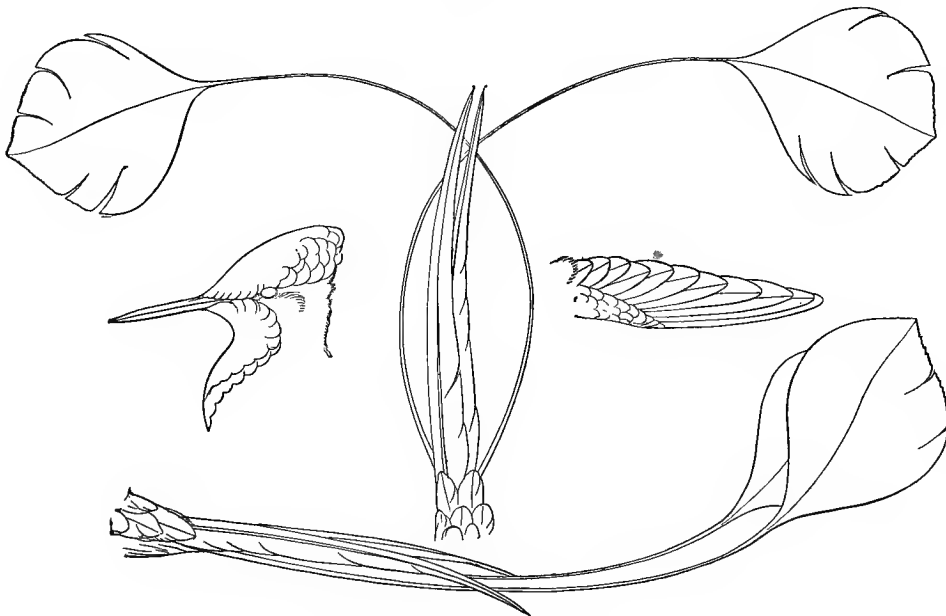
*T. mirabilis*, Bourc.

*T. mirabilis*, Bourc.

*T. mirabilis*, Bourc.

*T. mirabilis*, Bourc.

Fig. 82.



*Loddigesia mirabilis*, ♂. (From Gould.)

*Ch.* "Bill straight, longer than the head; wings diminutive; primaries rounded at the tip; outer tail feathers on each side very much prolonged, and terminating in a large spatule."

*Range.* Peru.



Only one species is known, the extraordinary *L. mirabilis*. This species is remarkable for the enormous spatules at the end of the external rectrices. We know very little about it, the type still remains unique, and even the precise locality the species inhabits has never been ascertained.

### 1. \**Loddigesia mirabilis*.

*Trochilus mirabilis*, BOURC., P. Z. S. (1847), p. 42.—ID., Rev. Zool. (1847), p. 253.

*Loddigesia mirabilis*, GOULD, Mon. Troch., vol. iii, pl. 161.—ID., Intr. Troch., octavo ed., p. 99 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 252 (1876).

*Mulsantia mirabilis*, BON., Consp. Gen. Av., p. 80 (1850), vol. i.—REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 9, pl. 830, fig. 4888 (1855).

*Loddigiornis mirabilis*, BON., Rev. and Mag. Zool. (1854), p. 256.

*Thaumatoëssa mirabilis*, HEIN., Journ. für Ornith. (1863), p. 210.

*Hab.* Chachapoyas, Peru. One specimen procured, now in Mr. Loddige's collection.

*Male.* "Crown of the head brilliant blue, neck, scapularies, back, wing, and tail coverts golden-green; on the throat a gorget of very brilliant green, tinged with blue in the centre, and bounded on each side by a narrow band of coppery-red; sides of the breast and flanks dull white; the greatly prolonged shaft of the outer feather on each side and the large spatule at its tip violaceous-black; centre tail feathers shining glaucous-green, passing into brown at their tips; bill and feet black" (Gould, l. c.). Length of bill, 20 mm.; wings, 40 mm. Outer rectrices, about 160 mm. Spatules, 20 mm. Middle rectrices, 60 mm. (Bourc., l. c.).

*Female.* Unknown.

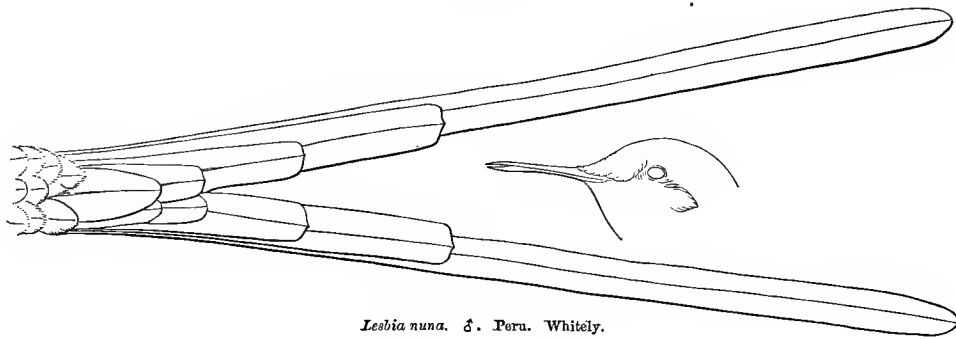
The Genus LESBIA, which succeeds, is composed of various species, possessing lengthened rectrices of nearly even width for their entire length, and having generally a luminous tip. All the species have metallic-green throats, and differ from each other, in size, and the length and coloration of their tails. The females are very differently clothed, having white breasts spangled with green, and comparatively short tails.

### Genus LXXV.—LESBIA.<sup>1</sup>

	TYPE.
<i>Lesbia</i> , LESS., Ind. Gen. et. Syn. des Ois. du Genre Trochilus (1832), p. xvii.	<i>O. nuna</i> , Less.
<i>Cynanthus</i> , BON. (nec SWAINS., 1827), Consp. Gen. Av., p. 81 (1850).	<i>T. amaryllis</i> , Bourc.
<i>Agaclyta</i> , CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 70.	<i>T. gouldi</i> , Lodd.
<i>Psalidoprymna</i> , CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 52 (note).	<i>T. amaryllis</i> , Bourc.

<sup>1</sup> Lesson instituted this genus, including in it species not closely related, such as *L. sappho*, *L. nuna*, and *L. kingii*. The first of these is the SAPPHO SPARGANURA, Auct., and the last (the *T. forficatus*, Linn.) is the type of Swainson's genus CYNANTHUS, thus leaving the *O. nuna*, Less., as the type of his genus LESBIA.

Fig. 83.



*Ch.* Bill short, straight. Tail very deeply forked, rectrices narrow, outermost ones greatly exceeding the others in length. Feet rather large. Sexes different.

*Range.* Columbia, Ecuador, and Peru.

I recognize four species only belonging to this genus.

*Key to the species.*

- |   |                          |
|---|--------------------------|
| A. Outermost rectrices on either side black glossed and tipped with green, the rest brownish-black at base, remaining portion metallic-green. | 1. <i>L. gouldi</i> .    |
| B. Rectrices black at base, apical half of all but the two outermost metallic-green, the outermost pair all black with luminous green tips.   | 2. <i>L. nuna</i> .      |
| C. Rectrices brownish-black, largely tipped with grass-green, except the outermost which has a bronze tip.                                    | 3. <i>L. eucharis</i> .  |
| D. Rectrices black, their tips greenish-bronze.   | 4. <i>L. amaryllis</i> . |

### 1. *Lesbia gouldi*.

*Trochilus gouldi*, Lodd., P. Z. S. (1832), p. 7.

*Ornismya sylphia*, Less., Rev. Zool. (1840), p. 73.

*Trochilus (Lesbia) gracilis*, Gould, P. Z. S. (1846), p. 86.

*Mellisuga gouldi*, Gray, Gen. Birds, vol. i, p. 113, sp. 51 (1844-49).

*Mellisuga gracilis*, Gray, Gen. Birds, vol. i, p. 113, sp. 53.

*Cynanthus gracilis*, Bon., Consp. Gen. Av. (1850), vol. i, p. 81.

*Cynanthus gouldi*, Bon., Consp. Gen. Av. (1850), vol. i, p. 81.—Id., Rev. and Mag. Zool. (1854), p. 252.

*Lesbia gouldi*, Reich., Anz. der Colib., p. 8 (1853).—Id., Troch. Enum., p. 5, pl. 712, figs. 4615-17.—Gould, Mon. Troch., vol. iii, pl. 167.—Id., Intr. Troch., octavo ed., p. 101 (1861).—Muls., Hist. Nat. Ois. Mouch., tom. iii, p. 293 (1876).

*Agaclyta gouldi*, Cab. and Hein., Mns. Hein. (1860) Th., iii, pp. 70, 71 (note).

*Lesbia gracilis*, Reich., Anz. der Colib., p. 8 (1853).—Id., Troch. Enum., pl. 713, figs. 4618-19 (1855).—Gould, Mon. Troch., vol. iii, pl. 168.—Id., Intr. Troch., octavo ed., p. 101 (1861).—Muls., Ois. Mouch., tom. iii, p. 295.

*Lesbia chlorura*, Gould, P. Z. S. (1871), p. 504.

*Hab.* Columbia and Ecuador. Peru.?

*Male.* Upper parts, breast, upper part of abdomen, and flanks golden-green; abdomen sometimes mottled with buff; throat metallic grass-green. Lower part of abdomen buff, under tail coverts green margined with buff. Rectrices brownish-black at base, remaining part metallic-green. Outermost one black, with a shining green tip, the outer web buff for three-fourths its basal length. Wings purplish-

brown. Bill black. Total length,  $5\frac{5}{8}$  in. Wing,  $2\frac{1}{16}$  in. Tail,  $3\frac{7}{8}$  in. Culmen,  $\frac{5}{16}$  in.

*Female.* Upper surface golden-green. Outer rectrices, much shorter than those of the male, brown, the basal two-thirds of the outer web, shaft, and tip buff. Under surface white speckled with bronzy-green. Bill black. Total length,  $4\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $2\frac{5}{8}$  in. Culmen,  $\frac{5}{16}$  in.

*Obs.* I have placed the *L. gracilis*, Gould, as a synonym of the present species, for with ample materials before me to judge, I cannot find any difference sufficient in my opinion to separate them. The rectrices vary in width, and this character is evidently not to be relied upon, any more than is the extent of their green or buff coloring.—I also consider the *L. chlorura*, Gould, to be the same as this species, an examination of the type having failed to convince me of its claims to a distinct specific rank.

## 2. *Lesbia nuna.*

*Ornismya nuna*, LESS., Supp. Ois. Mouch., p. 169, pl. 35? juv. ♂.

*Ornismya gouldi*, D'ORB. and LAFRES., Syn. Av., ii, p. 27, sp. 5 (1838).

*Ornismya nuna-koali*, DELATR. and LESS., Rev. Zool. (1839), p. 19.

*Lesbia nuna*, GOULD, Mon. Troch., vol. iii, pl. 169.—ID., Intr. Troch., octavo ed., p. 101 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 291 (1876).—ELLIOT, Ibis (1877), p. 135.

*Cyananthus bifurcatus*, BON., Consp. Gen. Av. (1850), p. 81.—ID., Rev. and Mag. Zool. (1854), p. 252.

*Lesbia bifurcata*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5, pl. 716, figs. 4624-25? (1855).

*Psalidoprymna bifurcata*, CAB. and HEIN., Mus. Hein. Th., iii, p. 53 (1860) (partim).

*Hab.* Peru.

*Male.* Upper surface, breast, and under parts dark bronzy-green. Throat covered by a rounded gorget of metallic grass-green. Wings purplish-brown. Rectrices black at base, all but the outermost ones with their apical half metallic grass-green; the outermost one black for its entire length with luminous green tips, and the basal half of outer web buffy-white. Under tail coverts green margined with buff. Thighs white. Bill black. Total length,  $7\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $5\frac{1}{4}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Upper parts bronzy-green. Under surface white spangled with green, and a few metallic-golden spots on the throat. Under tail coverts buffy-white. Tail colored like that of the male but much shorter, the outer web of outermost feather being buffy-white nearly to the tip. Bill black. Total length,  $4\frac{1}{2}$  in. Wing, 2 in. Tail,  $2\frac{3}{8}$  in. Culmen,  $\frac{9}{16}$  in.

## 3. *Lesbia eucharis.*

*Trochilus eucharis*, BOURC., Rev. Zool. (1848), p. 274.

*Lesbia eucharis*, REICH., Aufz. der Colib., p. 8.—ID., Troch. Enum., p. 5.—GOULD, Mon. Troch., vol. iii, pl. 171.

—ID., Intr. Troch., octavo ed., p. 102 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 289 (1876).

*Cyananthus eucharis*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Hab.* Columbia.

*Male.* Entire upper surface, breast, abdomen, and flanks bronzy-green. Throat metallic grass-green. Vent and under tail coverts buff, the latter with green centres. Wings purplish-brown. Rectrices brownish-black, largely tipped with grass-

green, except the outermost one which has a bronze tip. Bill black. Total length,  $7\frac{5}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $5\frac{5}{8}$  in. Culmen,  $\frac{7}{16}$  in. From Bourcier's type in my collection.

*Female.* Above golden-green; beneath buff spangled with green. Tail like the male but shorter, and with the outer web of outermost feather grayish-white for three-fourths its length.

Though similar to the *L. nuna*, besides the differences already mentioned, the present is a larger bird, and is I believe a very distinct species.

#### 4. *Lesbia amaryllis*.

*Trochilus victoriae*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1846), tom. ix, p. 312.—ID., Rev. Zool. (1846), p. 315, pl. 4 (discolored specimen).

*Mellisuga victoriae*, GRAY, Gen. Birds, vol. i, p. 113, sp. 54.—REICH., Troch. Enum., pl. 715, figs. 4622-23 (1855).

*Trochilus amaryllis*, BOURC., Rev. Zool. (1848), p. 273.—GRAY, Gen. Birds, vol. iii; Supp., App. 30 a, p. 103.

*Lesbia victoriae*, REICH., Troch. Enum., p. 5, pl. 714, figs. 4620-21.—ID., Aufz. der Colib., p. 8 (1853).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 286 (1876).

*Cynanthus amaryllis*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Cynanthus victoriae*, BON., Consp. Gen. Av. (1850), vol. i, p. 81.

*Lesbia amaryllis*, REICH., Aufz. der Colib., p. 8 (1853).—GOULD, Mon. Troch., vol. iii, pl. 170.—ID., Intr. Troch., octavo ed., p. 101 (1861).

*Psalidoprymna victoriae*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 52.

*Psalidoprymna amaryllis*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 53 (note).

*Hab.* Columbia and Ecuador.

*Male.* Upper surface, breast, and flanks golden-green. Elongated patch on the throat metallic yellowish-green. Lower part of abdomen and under tail coverts deep buff. Tail purplish-black, each feather tipped with greenish-bronze. Bill black. Wings purplish-brown. Total length,  $8\frac{1}{2}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $6\frac{1}{4}$  in. Culmen,  $\frac{1}{2}$  in.

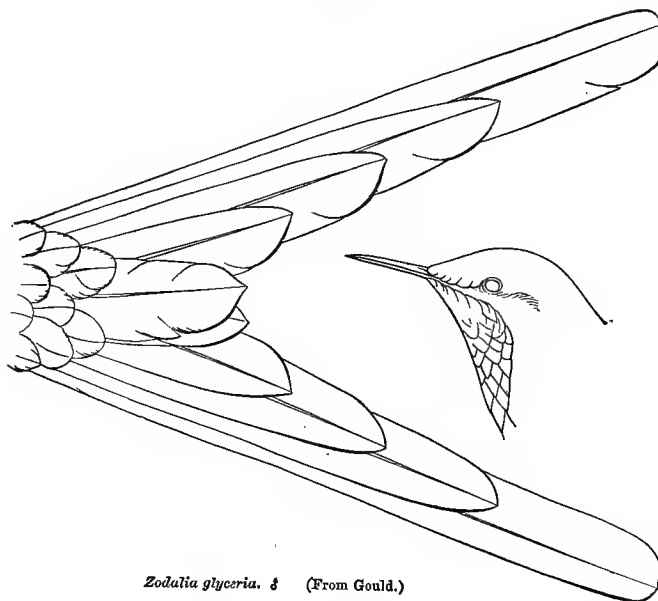
*Female.* Upper surface golden-green. On the centre of the throat a small lengthened patch of metallic golden-green. Rest of under surface white spotted with green. Under tail coverts light buff. Wings purplish-brown. Tail purplish-black, each feather tipped with bronzy-green; outer web of outermost feather buff to within an inch of the tip. Bill black. Total length,  $5\frac{3}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $3\frac{1}{8}$  in. Culmen,  $\frac{9}{16}$  in.

M. Mulsant (l. c.) has called this species *L. victoriae*. As this name was bestowed on a discolored specimen it cannot be continued, although published prior to *amaryllis*, as the description gives an entirely erroneous idea of the species, and would certainly mislead.

## Genus LXXVI.—ZODALIA.

*Zodalia*, MULSANT, Hist. Nat. Ois. Mouch., tom. iii, p. 281 (1876).TYPE.  
*Lesbia ortonii*, LAWRE.

Fig. 84.

*Zodalia glyceria*, ♂ (From Gould.)

*Ch.* Bill straight, shorter than the head. Tail long, deeply forked, feathers broad and even throughout their length.

*Range.* Columbia and Ecuador.

Two species only are known.

*Key to the species.*

- A. Throat metallic pale green.
- a. Upper parts purple. Median rectrices green, external ones brownish-black. 1. *Z. ortonii*.
  - b. Upper parts shining green. Rectrices reddish-purple. 2. *Z. glyceria*.

I have adopted the term ZODALIA for these birds, as proposed by M. Mulsant, for in many ways they appear to differ from the species of all other allied genera. They are rather large in size, with short feeble bills, rectrices broad for their length, and a general style of coloration that, were it not for their metallic throats, would be suggestive of the female sex. The types of the two known species are unique.

**1. \*Zodalia ortonii.**

*Lesbia ortonii*, LAWRE., Ann. N. Y. Lyc. Nat. Hist. (1869), vol. ix, p. 269.

*Zodalia ortonii*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 282.

*Hab.* Quito, Ecuador.

*Male.* "Entire upper plumage and wing coverts of a rich glossy purple; the concealed bases of the feathers are green; upper tail coverts similar in color to the back, but marked centrally between the purple and green with crimson; the tail

feathers are brownish-black, except the two central which are green; the ends of the eight middle tail feathers are largely marked with a deep vinous bronzy-crimson, most in extent on the short central feathers; the long outer feather on each side ends with obscure bronzy-green; the outer edge of the lateral feather is buff for three-quarters its length from the base—this color occupying only about one-third the width of the web; the under surface of the tail is steel-blue, bronzy at the ends of the feathers; the shafts of the two long lateral feathers are whitish at base for about half their length; wings brownish-purple; the throat gorget is of a brilliant metallic pale green; the sides of the neck, breast, upper part of abdomen, and sides are a shining green; lower part of abdomen ashy-buff. Bill and feet black. Length,  $5\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail, lateral feathers,  $3\frac{7}{8}$  in., short central ones  $1\frac{1}{8}$  in. Bill,  $\frac{1}{2}$  in.” (Lawr., l. c.)

*Female.* Unknown.

## 2. \**Zodalia glyceria*.

*Lesbia glyceria*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Cometes mossai*, GOULD, Athen. (1853).—ID., Rep. Brit. Ass. (1853). p. 68.

*Cometes! glyceria*, GOULD, Mon. Troch., vol. iii, pl. 176.—ID., Intr. Troch., octavo ed., p. 104 (1861).

*Sparganura mossai*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 52 (note).

*Sparganura glyceria*, SCLAT. and SALV., Nomencl., p. 86 (1873).

*Hab.* Columbia.

*Male.* “Head, back of neck, wing coverts, back, and tail coverts deep shining-green; wings purplish-brown; chin and throat metallic light olive-green; sides of neck and under surface buff with a spot of deep shining green on the tip of each feather; tail dark reddish-purple, passing into deep bluish-green at the tip except on the outer feathers, where the hue is so faint as to be scarcely perceptible; the outer feathers also have the basal three-fourths of the shaft and the outer webs buffy-white, the base of the shaft paler than the web; basal three-fourths of the shaft of the next feather also buffy-white; under tail coverts buff, with a brown mark in the centre near the tip.” (Gould, Mon. Troch.)—Total length, 6 in. Wing,  $2\frac{1}{2}$  in. Tail,  $3\frac{1}{4}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Unknown.

## Genus LXXVII.<sup>1</sup>—CYNANTHUS.

TYPE.

*Cynanthus*, SWAINSON, Classif. Birds, vol. ii, p. 330 (1837) (nec 1827).

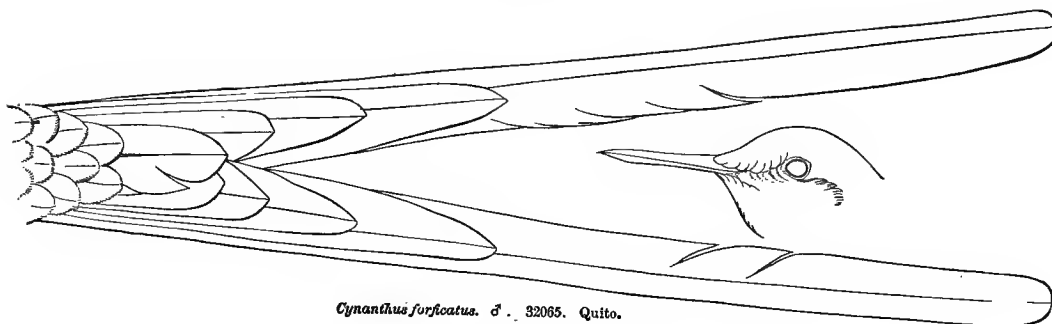
*T. forficatus*, Linn.

*Lesbia*, CAB. and HEIN. (nec LESS., 1832), Mus. Hein. Th., iii, p. 71 (1860).

*T. mocoa*, Delatt. and Bourc.

<sup>1</sup> This genus was first established by Swainson in 1827, Zool. Journ., p. 357, and contained species belonging to various genera, all of which he called types. In 1837 (l. c.), he ejected the species from CYNANTHUS, which he had previously placed in it, and inserted *T. forficatus*, Linn., only, which now stands as *the* type of the genus.

Fig. 85.



*Ch.* Bill shorter than the head, straight, graduating rapidly at the tip to a sharp point. Wings long, first primary slightly falcate. Tail extremely long and deeply forked. Tarsi bare. Sexes different.

*Range.* Venezuela, Columbia, Ecuador, Peru, and Bolivia.

Two species only are known, but they are among the most beautiful of the Family, and are remarkable for their lengthened and brilliantly colored tails.

*Key to the species.*

- A. General plumage shining green. Top of head metallic grass-green.
- a. Tail entirely shining blue, or shining green with outermost feather blue. 1. *C. forficatus.*
  - b. Tail metallic grass-green. 2. *C. mocoa.*

### 1. *Cynanthus forficatus.*

*Trochilus forficatus*, LINN., Syst. Nat. (1766), p. 190, sp. 5.

*Trochilus cyanurus*, STEPH., Shaw Gen. Zool., vol. xiv, p. 239.

*Ornismya (Lesbia) kingii*, LESS., Trochil., p. 107, pl. 38 (1829); Ind., p. xvii.—BOISS., Rev. Zool. (1840), p. 7.

*Cynanthus forficatus*, SWAIN., Class. Birds, vol. ii, p. 330 (1836)

*Mellisuga forficata*, GRAY, Gen. Birds, vol. i, p. 113, sp. 49 (1844-49).

*Mellisuga cyanura*, GRAY, Gen. Birds, vol. i (1849), p. 113, sp. 50.

*Cynanthus forficatus*, BON., Consp. Gen. Av. (1850), vol. i, p. 8.

*Lesbia forficata*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5, pl. 718, figs. 4628-29.—BON., Rev. and Mag. Zool. (1854), p. 252.—CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 71.

*Lesbia gorgo*, REICH., Aufz. der Colib., pp. 8, 24 (1853).—ID., Troch. Enum., p. 5 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 71 (1860).

*Cynanthus cyanurus*, GOULD, Mon. Troch., vol. iii, pl. 172.—ID., Intr. Troch., octavo ed., p. 102 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 268 (1876).—ELLIOT, Ibis (1876), p. 10.

*Mellisuga salvadori*, BENVENUT, Ann. Zool. Mus. Flor. (1865), p. 204.

*Cynanthus celestis*, GOULD, Mon. Troch. Intr., octavo ed., p. 102 (1861).

*Lesbia margarethæ*, HEIN., Journ. für Ornith. (1863), p. 213, ex Venezuela.

*Cynanthus* —?, VON PELZ, Verh. Zool. bot. Gesellsch., Wien (1876), xxv., p. 768.

*Hab.* Venezuela, Columbia, and Ecuador.

*Male.* Crown metallic grass-green, bordered on the sides with a greenish-black line. Throat metallic-purple. Plumage of the body bronzy-green, darkest on the back, and sometimes with a brownish hue on the under parts. Wing coverts green like the back. Primaries and secondaries brown. Rectrices—in some specimens the feathers of the tail are black, with the portions that project beyond the tip of the rest shining purple—in others the central rectrices are metallic-green; the three next are black with metallic-green tips, inclining to blue on the inner web, and on

the edge of the outer web. Outermost rectrices black on their basal half, remaining part deep metallic-blue. Under tail coverts shining green. A few white feathers near the vent, and a minute white spot behind the eye. Bill and feet black. Total length,  $7\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $5\frac{5}{8}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Crown dark shining green, not so brilliant as in the male. Upper parts bright bronze-green. Throat grayish-white, each feather tipped with green. Under surface rufous, washed with green on the flanks. Central rectrices shining green. Lateral ones black glossed with dark blue, the outermost one tipped with white. A white spot behind the eye. Bill and feet black. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{1}{2}$  in.

There are two styles among individuals of this species, observable in the coloration of their rectrices; some have these a uniform purplish-blue on their apical half, while others have all but the outermost feather margined and tipped with metallic-green. These styles do not seem to be peculiar to any particular locality, as both are found in Columbia and elsewhere. Mr. Gould has separated the Ecuador bird from the others, as *C. caelestis* (l. c.), on account of its size (!) and a coppery-brown hue of the under parts. I cannot perceive that this is in any wise a peculiar character of Ecuadorian specimens, and consider Mr. Gould's species to have been established upon too slight grounds to be maintained. The Venezuelan birds are of a lighter green generally than those from the western part of South America, and, as stated by Mr. Gould, are nearly destitute of the black line, bordering the brilliant green of the crown; but, in my opinion, these characters are not worthy of being considered as indicating a separate species. The different styles can only be regarded as phases of plumage belonging to one widely distributed, variable species.

## 2. *Cyanthus mocoa*.

*Trochilus mocoa*, DELATT. and BOURC., Rev. Zool. (1846), p. 311.

*Trochilus (Lesbia) smaragdinus*, GOULD, P. Z. S. (1846), p. 85.

*Mellisuga smaragdinus*, GRAY, Gen. Birds, vol. i, p. 113, sp. 52 (1844-49).

*Cyanthus smaragdicaudus*, GOULD, Mon. Troch., vol. iii, pl. 173.

*Cyanthus mocoa*, BON., Consp. Gen. Av. (1850), vol. i, p. 81.—GOULD, Intr. Troch., octavo ed., p. 103 (1861).

—TACZANOW., P. Z. S. (1874), p. 544.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 271 (1876).

*Lesbia mocoa*, REICH., Aufz. der Colib., p. 8 (1853).—LD., Troch. Enum. p. 5, pl. 717, figs. 4626-27.—BON., Rev. and Mag. Zool. (1854), p. 252.—CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 71.

*Hab.* Ecuador, Peru, and Bolivia.

*Male.* Crown brilliant metallic-green. Plumage of the body bronze-green, inclining to a brownish hue on the lower surface. A metallic-blue spot on the centre of the throat. Wings purplish-brown. Basal half of rectrices black, remaining portion brilliant metallic-green. Behind the eye a minute white spot. Under tail coverts grass-green. Bill and feet black. Total length,  $7\frac{1}{8}$  in. Wing,  $2\frac{3}{4}$  in. Tail, 5 in. Culmen,  $\frac{9}{16}$  in.

*Female.* Crown shining green, not so luminous as the males. Upper surface golden-bronze. Throat grayish-white, each feather tipped with white. Under surface rufous, washed with green on the flanks. Central rectrices metallic-green; lateral ones black tipped with white. Wings purplish-brown. Bill black. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{1}{2}$  in.



The next genus, which naturally succeeds CYNANTHUS, is composed of probably the most wonderfully plumaged birds, certainly so as regards the brilliancy of their hues, that are to be found among the known species of the Trochilidæ. The tails of the males blaze with the radiance of flashes of flame, while their ruby backs, luminous green throats, and under surface present altogether a tout ensemble that is perfectly unique, and unapproached by anything yet known in the whole range of Ornithology. They are of rather large size, and the sexes are very unlike, although if the male was unknown, the female would probably be considered very beautiful. Three species are retained in the genus, but it is doubtful if one of them, the *S. caroli*, has really its proper place with the others; but at present we know so little about it, and the specimens that have been obtained are so few, that it will be necessary to wait for farther information to enable the doubt to be satisfactorily removed.

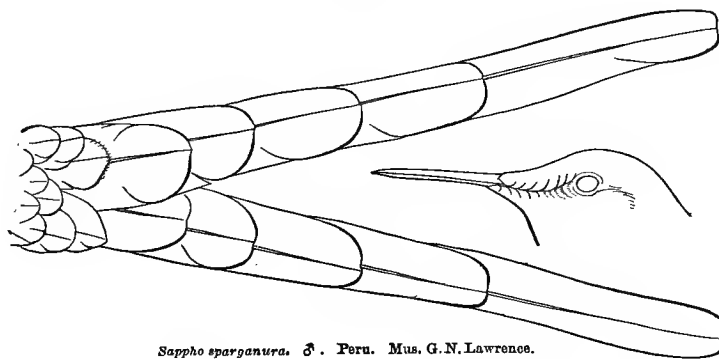
## Genus LXXVIII.—SAPPHO.

*Cynanthus*, TSCHUD., Consp., p. 36 (1844) (nec SWAINS., 1837).  
*Cometes*, GOULD, P. Z. S. (1847), p. 31 (nec HODG., 1841).  
*Sappho*, REICH., Syst. Av. Natur., pl. 40 (1849).  
*Lesbia*, BON. (nec LESS., 1832), Rev. and Mag. Zool. (1854), p. 252.  
*Sparganura*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 52.  
*Polygonymus*, HEINE, Journ. für Ornith. (1863), p. 206.  
*Leobia*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 297 (1876).

## TYPE.

*T. sparganurus*, Shaw.  
*T. sparganurus*, Shaw.  
*T. sparganurus*, Shaw.  
*T. sparganurus*, Shaw.  
*T. sparganurus*, Shaw.  
*T. caroli*, Bourc.  
*T. caroli*, Bourc.

Fig. 86.

*Sappho sparganura*. ♂. Peru. Mus. G. N. Lawrence.

*Ch.* Bill arched, longer than the head. Tail long and deeply forked. Tarsi naked, hind toe and nail nearly as long as middle toe. Sexes different.

*Range.* Columbia, Peru, Bolivia, and Argentine Republic.

I place three species in this genus as follows:—

*Key to the species.*

- |  |                           |
|--|---------------------------|
| A. Throat metallic-green, tail luminous.                               |                           |
| a. Rectrices fiery orange-red, tips black.                             | 1. <i>S. sparganura</i> . |
| b. Rectrices dark luminous crimson.                                    | 2. <i>S. phaon</i> .      |
| B. Throat scarlet; central rectrices bronze-green, lateral ones black. | 3. <i>S. caroli</i> .     |

### 1. *Sappho sparganura*.

- Trochilus sparganurus*, SHAW, Gen. Zool., vol. viii, p. 291, pl. 39.  
*Trochilus chrysurus*, CUV. RÉGN., Anim. (1829), t. i, p. 486 (note).  
*Ornismya sappho*, LESS., Ois. Mouch., p. 105, t. 27-28 (1829).—ID., Troch., p. 131, pl. 49 (1831).  
*Ornismya chrysurus*, D'ORB. and LAFRES., Syn. Av., ii, p. 26, sp. 3 (1838).  
*Orthorhynchus chrysurus*, D'ORB. and LAFRES., Syst. Av. (1838), p. 36.  
*Trochilus (Cynanthus) chrysurus*, TSCHUD., Consp., p. 36 (1844).  
*Mellisuga sparganura*, GRAY, Gen. Birds, vol. i, p. 113, sp. 46 (1844).  
*Cometes sappho*, GOULD, P. Z. S. (1847), p. 31.  
*Cometes sparganurus*, BON., Consp. Gen. Av., vol. i (1850), p. 81.—ID., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Mon. Troch., vol. iii, pl. 174.—ID., Intr. Troch., octavo ed., p. 103 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 274.—ELLIOT, Ibis (1877), p. 134.  
*Sappho sparganura*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 5, pl. 724, figs. 4651-52 (1855).  
*Lesbia sparganura*, BON., Rev. Zool. (1854), p. 252.  
*Sparganura sappho*, CAB. and HEIN., Mus. Heid. (1860) Th., iii, p. 52.

*Hab.* Bolivia, Argentine Republic.

*Male.* Head, upper part of back, wing coverts, and under surface shining bronze-green. Back and upper tail coverts shining crimson. Rectrices dark brown at base, remaining part metallic fiery-orange tipped with velvety-black. Basal half of outer web of external rectrices pale brown. Wings purplish-brown. Under tail coverts light brown with purplish-red centres. Bill and feet black. Total length,  $6\frac{3}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $4\frac{1}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Crown and back greenish-brown. Throat and sides of the face buffy-white spotted with green; rest of under parts whitish, with large spots of green on the flanks. Rump and upper tail coverts shining crimson. Central rectrices crimson; lateral ones, brownish glossed with crimson; the external feather white on its outer web. Bill and feet black. Total length, 5 in. Wing,  $2\frac{1}{2}$  in. Tail,  $2\frac{1}{2}$  in. Culmen,  $\frac{5}{8}$  in.

### 2. *Sappho phaon*.

- Ornismya chrysurus* var., D'ORB. and LAFRES., Syn. Av., ii, p. 27, sp. 4 (1838).  
*Cometes phaon*, GOULD, P. Z. S. (1847), p. 31.—ID., Mon. Troch., vol. iii, pl. 175.—ID., Intr. Troch., octavo ed., p. 104 (1861).—BON., Consp. Gen. Av. (1850), vol. i, p. 81.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 279.—ELLIOT, Ibis (1877), p. 135.  
*Mellisuga phaon*, GRAY, Gen. Birds, vol. i, p. 113, sp. 47.  
*Sappho phaon*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 5, pl. 725, figs. 4633-34.  
*Lesbia phaon*, BON., Rev. Zool. (1854), p. 252.  
*Sparganura phaon*, CAB. and HEIN., Mus. Heid. (1860) Th., iii, p. 52 (note).

*ab.* Bolivia, Peru.

*Male.* Head, neck, and under surface brownish-green, darkest on the head. Back, and upper tail coverts dark crimson. Throat metallic grass-green. Vent white. Under tail coverts buff with a central line of dark brown in some specimens. Tail; basal half blackish-brown, rest metallic crimson, with velvety-black tips. Wings purple-brown. Bill and feet black. Total length,  $6\frac{3}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail  $4\frac{1}{4}$  in. Culmen, 1 in.

*Female.* Like that of *S. sparganura*, but the tail is dark crimson as in the male. Total length,  $5\frac{2}{8}$  in. Wing,  $2\frac{3}{8}$  in. Tail, 3 in. Culmen,  $\frac{7}{8}$  in.

3. \**Sappho caroli*.

*Trochilus caroli*, BOURC., P. Z. S. (1847), p. 48.—ID., Rev. Zool. (1847), p. 260.

*Hylocharis caroli*, GRAY and MITCH., Gen. Birds, vol. i, p. 115, sp. 44.—BON., Consp. Gen. Av. (1850), vol. i, p. 74.

*Calliphlox caroli*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).

*Avocettinus carolus*, BON., Rev. and Mag. Zool. (1854), p. 256.

*Cometes? caroli*, GOULD, Mon. Troch., vol. iii, pl. 177.—ID., Intr. Troch., octavo ed., p. 104 (1861).

*Polyonymus caroli*, HEIN., Journ. für Ornith. (1863), p. 206.

*Leobia caroli*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 298 (1876).

*Hab.* Peru.

*Male?* "Crown, wing-coverts, and upper surface dull greenish-bronze, becoming of a greener cast on the lower part of the back and upper tail coverts; wings purplish-brown; four middle tail feathers bronzy-green, the remainder black with violet reflections, the outer one with a stripe of dull or buffy-white along the apical portion of the outer web; behind the eye a small spot of white, and a small streak of buff from the angle of the mouth; throat red; under surface pale bronzy-green, each feather slightly fringed with gray; on each flank near the back a tuft of white; vent and under tail coverts buffy-white, with a streak of brown down the centre of each feather. Bill black." (Gould, Mon. Troch.) Length,  $5\frac{1}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail, 2 in. Culmen,  $\frac{3}{4}$  in.—Although I hardly consider that this species belongs to the genus *Sappho*, I leave it there for the present, additional information being required, for its proper position to be accurately determined.

Between SAPPHO and OXYPOGON, the next genus, a gap occurs. The first named terminates its section, as there is no genus in the Family that has any especial claims to be placed immediately after the "Fire-tails." OXYPOGON leads on to RHAMPOMICRON through OREONYMPHA, and these three genera constitute a small section by themselves, without any particular affinities to the other members of the Trochilidæ. The species of the next genus are birds of moderate size, without any brilliant coloration, but possessing high crests and lengthened feathers on the throat, usually designated as "beards."—They are dwellers of the elevated regions among the Andean range.

## Genus LXXIX.—OXYPOGON.

*Oxyvogon*, GOULD, P. Z. S. (1848), p. 14.

TYPE.

*O. guerini*, Boiss.

Fig. 87.

*Ch.* Head crested. Bill shorter than the head, feeble, straight. Face above and below the bill ornamented with lengthened plumes. Tail ample, forked. Feet large. Tarsi naked, hind toe and nail longer than middle toe and nail.

*Range.* Venezuela and Columbia.

Two species are known of this genus.



*Oxyvogon lindeni* ♂ Meriða. Verreaux.

*Key to the species.*

- A. Head black; lengthened feathers above and below the bill pure white. Head bounded on sides and front with a white band. Tail coppery-bronze. 1. *O. lindeni*.
- B. Head brownish-black. Feathers in centre of crown buffy-white. Lengthened feathers on the throat buffy-white, with a line of brilliant green in the centre. Lateral rectrices coppery-bronze, with a stripe of white in the centre. 2. *O. guerini*.

**1. *Oxygogon lindeni*.**

*Ornismya lindeni*, PARZ., Rev. Zool. (1845), p. 253.

*Mellisuga lindeni*, GRAY, Gen. Birds, vol. i, p. 113, sp. 31.

*Oxygogon lindeni*, GOULD, P. Z. S. (1848), p. 14.—ID., Mon. Troch., vol. iii, pl. 183.—ID., Intr. Troch., octavo ed., p. 108 (1861).—BON., Consp. Gen. Av., vol. i, p. 79.—ID., Rev. and Mag. Zool. (1854), p. 253.—REICH., Aufz. der Colib., p. 12 (1853).—ID., Enum., p. 10 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 67 (note) (1860).—SCLAT. and SALV., P. Z. S. (1870), pp. 782, 787.—MULS., Hist. Nat. Ois. Mouch. tom. iii, p. 182 (1876).

*Hab.* Venezuela.

*Male.* Head and crest black with a narrow line of white feathers down the centre. A lengthened tuft of white feathers hangs from the centre of the throat. Black of the head is bounded by a band of white. Plumage of the body bronzy-green, with an olive hue on the under surface. Central rectrices bronzy-green; lateral ones coppery-bronze, with the shafts white for three-fourths their length. Wings purplish-brown. Bill and feet black. Total length,  $5\frac{1}{4}$  in. Wing, 3 in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{5}{16}$  in.

*Female.* Head and upper surface coppery-brown. Throat mottled with white and coppery-brown. Flanks coppery-brown with a green lustre. Tail as in the male. In size she is a little smaller.

**2. *Oxygogon guerini*.**

*Ornismya guerini*, BOISS., Rev. Zool. (1840), p. 7.—LORD., P. Z. S. (1843), p. 122.

*Trochilus parvirostris*, FRAS., P. Z. S. (1840), p. 18, juv.

*Mellisuga guerini*, GRAY, Gen. Birds, vol. i, p. 112, sp. 30 (1844-49).

*Oxygogon guerini*, GOULD, P. Z. S. (1848), p. 14.—ID., Mon. Troch., vol. iii, pl. 182.—ID., Intr. Troch., octavo ed., p. 108 (1861).—BON., Consp. Gen. Av., vol. i, p. 79 (1850).—ID., Rev. and Mag. Zool. (1854), p. 253.—REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 67, sp. 148 (1860).

*Hab.* Columbia.

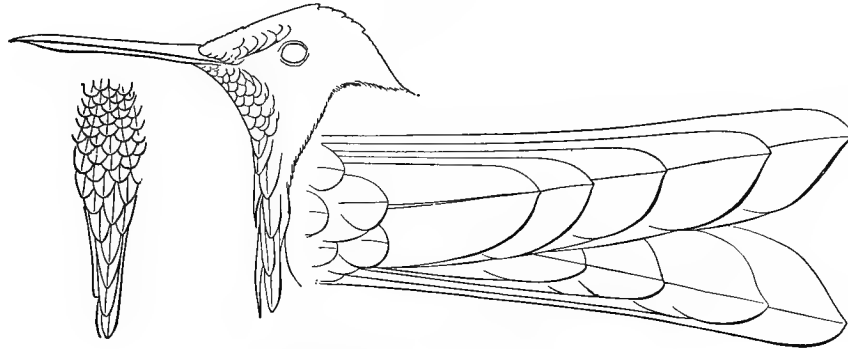
*Male.* Head and crest brownish-black, with a central line of buffy-white feathers. From the centre of the throat hangs a tuft of buffy-white feathers, in the middle of which is a line of brilliant metallic-green. A band of buffy-white bounds the black of the head. Upper surface, wing coverts, and central rectrices bronzy-green; lateral feathers coppery-bronze with a strip of white down their centres. Shafts of all the rectrices white for nearly their entire length. Wings purplish-brown. Under surface pale brown, bronzy on the flanks. Bill and feet black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{3}{8}$  in.

I have not seen an authenticated female, but doubt if she would differ much from the male.

## Genus LXXX.—OREONYMPHA.

*Oreonympha*, GOULD, P. Z. S. (1869), p. 295.TYPE.  
*O. nobilis*, Gould.

Fig. 88.

*Oreonympha nobilis*. ♂. Huatocto, Peru. Whitely.

*Ch.* "Bill longer than the head, stout, and with a somewhat downward curvature; wings large and sickle-shaped; tail ample and forked; tarsi clothed nearly to the toes, which are of moderate size; the hinder toe and nail rather shorter than the middle toe and nail." (Gould, l. c.).

*Range.* Peru.

But one species is known, the magnificent—

**1. *Oreonympha nobilis*.**

*Oreonympha nobilis*, GOULD, P. Z. S. (1869), p. 295.—WHITELY, P. Z. S. (1874), p. 676.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 175, pl. (1876).

*Hab.* Huatocto, Paucartambo, and vicinity of Tinta, Peru.

*Male.* Forehead and centre of crown black; remaining portion of top of head dark blue. Cheeks and sides of throat black. Throat metallic-green, succeeded by a tuft of lengthened metallic reddish-purple feathers. Upper surface bronzy-brown. Sides of neck and under surface grayish-white, mottled faintly with brown on the abdomen and flanks. Under tail coverts bronzy-brown. Central rectrices bronze; lateral feathers white at base, rest bronze; the external one all white excepting a streak of bronze at the tip of the inner web. Bill and feet black. Total length, 7 in. Wing,  $3\frac{1}{2}$  in. Tail,  $3\frac{1}{2}$  in. Culmen, 1 in. Specimen described is a very fine male from Huatocto, Peru, collected by Mr. Whitely.

*Female or young male.* Centre of crown deep chestnut, rest greenish-blue. Sides of face and throat black. Centre of throat metallic-green, no pendant tuft. Under part brownish-white. Rest of plumage like that of the male. Bill and feet black. Total length,  $5\frac{5}{8}$  in. Wing, 3 in. Tail,  $2\frac{3}{4}$  in. Culmen,  $\frac{1}{2}$  in. This specimen came from Paucartambo, Peru.

## Genus LXXXI.—RHAMPHOMICRON.

*Ramphomicron*, BON., Compt. Rend., p. 382 (1850).  
*Chalcostigma*, REICH., Aufz. der Colib. (1853), p. 12.  
*Lampropogon*, BON., Rev. and Mag. Zool. (1854), p. 252.  
*Eupogonus*, MULS. and VERR., Class. Troch. (1865), p. 73.

## TYPE.

*O. microrhyncha*, Boiss.  
*O. heteropogon*, Boiss.  
*O. heteropogon*, Boiss.  
*T. herrani*, Delatt. and Bourc.

*Ch.* Bill shorter than the head, straight, rather stout. Feathers of lower part of throat lengthened, and hanging in a tuft. Wings long, ample. Tail broad, forked, in one species only slightly so when closed.

*Range.* Columbia, Ecuador, Peru, and Bolivia.

I recognize six species belonging to this genus. They are birds of rather large size, without crests, but having pendant "beards" of metallic feathers of various colors. They constitute a well-marked group of this Family and terminate the section to which they belong.

*Key to the species.*

- |   |                             |
|---|-----------------------------|
| A. Throat green, terminating in lengthened purplish-red feathers.                                       |                             |
| a. General plumage dull olive-brown.  | 1. <i>R. olivaceus</i> .    |
| b. General plumage greenish-bronze. Tail bronzy-brown.  | 2. <i>R. heteropogon</i> .  |
| c. Upper surface bronzy-green; rump bronzy-rufous. Tail purplish-black, lateral ones tipped with white. | 3. <i>R. herrani</i> .      |
| d. Upper surface bluish-violet; beneath sooty-brown. Tail bluish-green.                                 | 4. <i>R. stanleyi</i> .     |
| B. Throat and beard-like appendage metallic-green.  |                             |
| a. Top of head rufous-chestnut. Tail bronze.  | 5. <i>R. ruficeps</i> .     |
| b. Head and upper parts shining purple. Tail velvety-black.   | 6. <i>R. microrhyncha</i> . |

**1. *Rhamphomicron olivaceus*.**

*Rhamphomicron olivaceus*, LAWRE., Ann. N. Y. Lyc. Nat. Hist. (1867), p. 44.—TACZANOW., P. Z. S. (1874), p. 544.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 170 (1876).

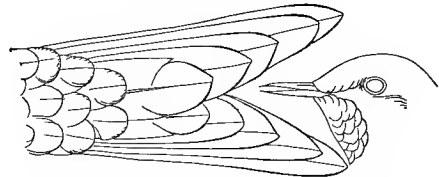
*Hab.* Junin and Maraynioc, Peru (Jelski), Bolivia.

Upper surface and tail dull olive-green. Wings light purplish-brown. Chin and upper part of throat metallic-green, ending in a bunch of elongated feathers, metallic-crimson terminating in violet-purple. Under surface brownish-olive. Vent grayish-white. Under tail coverts olive-green, the feathers margined with pale rufous. Bill and feet black. Total length,  $5\frac{1}{4}$  in. Wing,  $3\frac{3}{4}$  in. Tail,  $2\frac{7}{8}$  in. Culmen,  $\frac{7}{16}$  in. There does not seem to be any difference in the plumage of the sexes.

**2. *Rhamphomicron heteropogon*.**

*Ornismya heteropogon*, BOISS., Rev. Zool. (1839), p. 355.—ID., Mag. Zool. (1840), pl. 12 (Ois.).  
*Trochilus coruscus*, FRAS., P. Z. S. (1840), p. 15.  
*Mellisuga heteropogon*, GRAY, Gen. Birds, vol. i, p. 112, sp. 28.

Fig. 89.

*Rhamphomicron microrhynchum*. ♂. 24650. "Andes."

*Rhamphomicron heteropogon*, BON., Consp. Gen. Av., vol. i (1850), p. 79.—GOULD, Mon. Troch., vol. iii, pl. 184.—ID., Intr. Troch., octavo ed., p. 109 (1861).—REICH., Troch. Enum., p. 10 (1855).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 167 (1876).

*Chalcostigma heteropogon*, REICH., Aufz. der Colib., p. 12 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 67 (1860).

*Lampropogon heteropogon*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Hab.* Columbia.

*Adult.* Forehead and crown shining dark green. Upper surface greenish-bronze, becoming reddish-bronze on lower part of rump and upper tail coverts. Throat metallic-green, from which hangs a bunch of lilac feathers. Under surface bronzy-green, becoming rufous-brown on the abdomen. Under tail coverts buff with bronze centres. Wings purplish-brown. Tail shining bronze-brown. Bill and feet black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{1}{2}$  in. Culmen,  $\frac{1}{2}$  in.

*Female?* or *young* have no beard-like appendage. Throat spotted with green.

### 3. *Rhamphomicron herrani*.

*Trochilus herrani*, DELATT. and BOURC., Rev. Zool. (1846), p. 309.

*Calothorax herrani*, BON., Consp. Gen. Av. (1852), vol. i, p. 85.

*Rhamphomicron herrani*, GOULD, Mon. Troch., vol. iii, pl. 187.—ID., Intr. Troch., octavo ed., p. 109 (1861).—

REICH., Troch. Enum., p. 10 (1855).—MULS., Hist. Nat. Troch., tom. iii, p. 172 (1876).

*Chalcostigma herrani*, REICH., Aufz. der Colib., p. 12 (1853).

*Lampropogon herrani*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Hab.* Ecuador and Columbia.

*Male.* Forehead and centre of the crown rusty-red margined with black. Rest of head, the upper and under surfaces bronzy-green, becoming brownish on the abdomen. Grayish-white band across the vent. Wings purplish-brown. Rump and upper tail coverts bronzy-rufous. Tail has the middle feathers purplish-blue; lateral ones purplish-black with the two outer ones tipped with white. Chin metallic-green, beneath which are elongated metallic-red feathers bounded on either side with black. Under tail coverts buffy-white. Bill and feet black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{1}{2}$  in.

*Female* like the male without the throat mark; this part being dark brown with rufous tinge.

### 4. *Rhamphomicron stanleyi*.

*Trochilus stanleyi*, BOURC. and MULS., Ann. Soc. d'Agr., Lyon (1850), p. 199, 3d ser.

*Rhamphomicron stanleyi*, GOULD, Mon. Trochil., vol. iii, pl. 185.—ID., Intr. Troch., octavo ed., p. 109 (1861).

—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 164 (1876).—TACZAN., P. Z. S. (1874), p. 544.

*Rhamphomicron vulcani*, GOULD, Jard. Contr. Ornith. (1852), p. 135.—ID., Mon. Troch., vol. iii, pl. 186.—ID.,

Intr. Troch., octavo ed., p. 109 (1861).—REICH., Troch. Enum., p. 10 (1855).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 166 (1876).

*Chalcostigma stanleyi*, REICH., Aufz. der Colib., p. 12 (1853).—ID., Troch. Enum., p. 10 (1855).

*Lampropogon stanleyi*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Chalcostigma vulcani*, REICH., Aufz. der Colib., p. 12 (1853).

*Lampropogon vulcani*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Hab.* Ecuador, Peru.

*Adult.* Top of head dark greenish-bronze. Back dark violet-blue. Sides of face and throat black. Centre of throat metallic-green, terminating with some elongated

amethyst feathers. Under surface sooty-brown. Upper tail coverts and tail dark bluish-green. Under tail coverts grayish-white with the central part bluish. Wings brown. Bill and feet black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{9}{16}$  in. Culmen,  $\frac{7}{16}$  in.

*Female* or *young* has no brilliant gorget; but the throat is grayish-white, each feather tipped with greenish-brown. I can perceive nothing in the specimens called *vulcani* by Mr. Gould, to separate them from the present species, and I do not consider them distinct.

### 5. *Rhamphomicron ruficeps*.

*Trochilus* (—?) *ruficeps*, GOULD, P. Z. S. (1846), p. 89.

*Mellisuga ruficeps*, GRAY, Gen. Birds, vol. i (1844), p. 112, sp. 29.

*Rhamphomicron ruficeps*, BON., Consp. Gen. Av., vol. i, p. 79 (1850).—GOULD, Mon. Troch., vol. iii, pl. 188.—

Id., Intr. Troch., octavo ed., p. 109 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 171 (1876).

*Chalcostigma ruficeps*, REICH., Aufz. der Colib., p. 12 (1853).—Id., Troch. Enum., p. 10 (1855).

*Lampropogon ruficeps*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Hab.* Pern (Whitely), Bolivia (Bridges) (Buckley).

*Male.* Front and crown dark chestnut-red. Upper surface bronzy-green. Throat metallic-green. Under surface dark buff spotted with green. Under tail coverts pale buff. Tail greenish-bronze. Bill and feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{1}{2}$  in. (Specimen procured in Peru by H. Whitely, 9000 feet elevation.)

*Female.* Upper surface bronzy-green. Under surface buff; rufous in the centre of the throat, and flanks spotted with green. Wings purplish-brown. Tail greenish-bronze. Bill and feet black. Total length,  $3\frac{5}{16}$  in. Wing, 2 in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{16}$  in. (Specimen procured by Buckley in Bolivia.)

### 6. *Rhamphomicron microrhynchus*.

*Ornismya microrhyncha*, BOISS., Rev. Zool. (1839), p. 354.—Id., Mag. Zool. (1840), Ois., pl. 16.

*Trochilus brachyrhynchus*, FRAS., P. Z. S. (1840), p. 16.

*Mellisuga microrhyncha*, GRAY, Gen. Birds, vol. i, p. 112, sp. 32 (1844-49).

*Rhamphomicron microrhyncha*, BON., Consp. Gen. Av., vol. i, p. 79 (1850).—GOULD, Mon. Troch., vol. iii, pl. 189.—Id., Intr. Troch., octavo ed., p. 109 (1861).—REICH., Aufz. der Colib., p. 12 (1853).—Id., Troch. Enum., p. 10 (1855).—WHITELY, P. Z. S. (1873), p. 190.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 162 (1876).

*Rhamphomicron microrhynchus*, BON., Rev. and Mag. Zool. (1854), p. 253.—CAB. and HEIN., Mus. Hein. Th., iii, p. 70 (1860).

*Hab.* Columbia, Ecuador.

*Male.* Head and upper surface shining purple. Wings purplish-brown. Throat luminous grass-green. Under surface bronzy-green. Band of buff crosses the vent. Tail black with a purplish-gloss. Under tail coverts bronzy-green edged with buff. Bill and feet black. Total length,  $3\frac{3}{4}$  in. Wing, 2 in. Tail, 2 in. Culmen,  $\frac{1}{4}$  in.

*Female.* Upper surface bronzy-green. Throat buffy-white spotted with dull green. Rest of under surface white spotted with green. Tail purplish-black, two outermost feathers tipped with white. Bill and feet black. Total length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{1}{4}$  in.

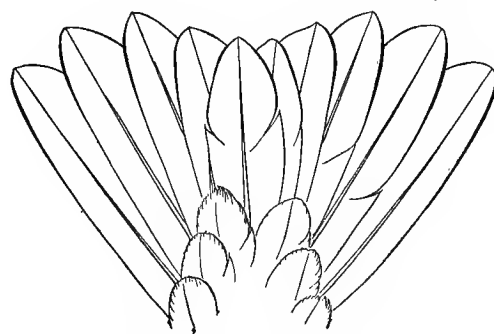


## Genus LXXXII.—AVOCETTINUS.

*Avocettinus*, BON., Rev. and Mag. Zool. (1854), p. 256 (nec 1850).  
*Opisthoproca*, CAB. and HEIN., Mus. Hein. Th., iii, p. 76 (note) (1860).

TYPE.  
*T. eurypyterus*, Lodd.  
*T. eurypyterus*, Lodd.

Fig. 90.

*Avocettinus eurypyterus*. ♂. (From Gould.)*Avocettinus eurypyterus*. Bogota.  
Mus. G. N. Lawrence.

*Ch.* Bill shorter than the head; gonys ascending rapidly at their apical termination. Culmen straight until just at the tip, when it turns slightly upwards. Bill broad at its base, narrowing rapidly to a point at the tip. Wings moderate. Tail very slightly forked when closed. Feet strong, hind toe and nail as long as, if not slightly longer than, middle toe and nail.

*Range.* Columbia.

But one species of this singular genus is known, a plainly colored bird, chiefly remarkable for having the bill turned upwards at the tip.

This genus appears to have been first established by Bon. with the *Avocettula recurvirostris* as type, Consp. Av., p. 75, and the type afterwards changed by him to the *T. eurypyterus* (l. c.).

**I. *Avocettinus eurypyterus*.**

*Trochilus eurypyterus*, Lodd., P. Z. S. (1832), p. 7.

*Trochilus georginae*, Bourc., P. Z. S. (1847), p. 48.

*Polytmus eurypyterus*, Gray, Gen. Birds, vol. i, p. 109.

*Polytmus georginae*, Gray, Gen. Birds, vol. i, p. 109 (1844-49).

*Avocettula eurypyterus*, Reich., Aufz. der Colib., p. 6 (1853).—Id., Troch. Enum. (1855), p. 3, pl. 679, figs. 4485-86.

*Avocettula georginae*, Reich., Aufz. der Colib., p. 6 (1853).

*Delatiria georgina*, Bon., Rev. and Mag. Zool. (1854), p. 256.

*Avocettinus eurypyterus*, Bon., Rev. and Mag. Zool. (1854), p. 256.—Gould, Mon. Troch., vol. iii, pl. 264.—Id.,

Intr. Troch., octavo ed., p. 114 (1861).—Muls., Hist. Nat. Ois. Mouch., tom. ii, p. 264 (1876).

*Opisthoproca eurypyterus*, Cab. and Hein., Mus. Hein. (1860) Th., iii, p. 76 (note).

*Hab.* Columbia.

*Adult.* Head bronze; rest of upper surface bronze-green, darkest on the rump and upper tail coverts. Wings purplish-brown. Sides of neck and flanks bronzy-green. Throat and breast grayish-white, each feather tipped with green. Lower

part of abdomen and under tail coverts rufous. Median rectrices bronze-green, lateral ones purplish-black with a green gloss, the outermost ones tipped with buffy-white. Bill black, feet brown. Total length, 4 in. Wing,  $2\frac{7}{8}$  in. Tail, 2 in. Culmen,  $\frac{1}{2}$  in.

Apparently there is no difference between the sexes in the color of their plumage.

### Genus LXXXIII.—AVOCETTULA.

*Avocettula*, REICH., Syst. Av. Nat., pl. 39 (1849).

*Avocettinus*, BON., Consp. Gen. Av., vol. i, p. 75 (1850, nec 1854).

*Streblorhamphus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 76 (1860).

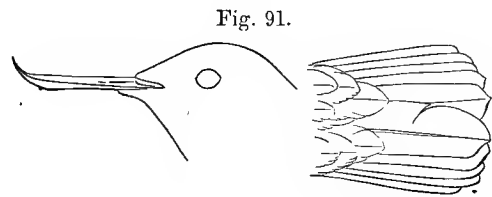
TYPE.

} *T. recurvirostris*, Swains.

*H.* Bill longer than the head, turned up at the point. Nostrils exposed. Wings long and pointed. Tail slightly rounded. Tarsi partly clothed.

*Range.* Guiana.

With a bill similar in structure to that of the species in the preceding genus, the single member of the present one possesses also fiery metallic tail feathers, very similar to those of the species contained in the genus immediately succeeding. It seemed, therefore, that here was the proper place for it to occupy. The single species is rather small, of a not ungraceful form, and brilliant plumage.



*Avocettula recurvirostra*. ♂. Guiana. Parzudaki.

#### 1. *Avocettula recurvirostris*.

*Trochilus recurvirostris*, SWAINS., Zool. Ill., vol. ii, pl. 105.—JARD., Nat. Libr. Humming-Birds, vol. i, p. 80, pl. 3.

*Mellisuga recurvirostris*, STEPH., Cont. Shaw. Gen. Zool., vol. xiv, p. 248.

*Ornismya recurvirostris*, LESS., Ois. Mouch. (1829), p. xxxvi, and Supp., p. 166, pl. 34.

*Ornismya avocetta*, LESS., Supp. Ois. Mouch., p. 145, pl. 24 (1831).—ID., Trochil., p. 74, pl. 23 (1831).—JARD.,

Nat. Libr. Humming-birds, vol. i, p. 78, pl. 2.

*Campylopterus recurvirostris*, SWAINS., Class. B., vol. ii, p. 330 (1836).

*Hylocharis avocetta*, GRAY, Gen. Birds, vol. i, p. 114, sp. 12.

*Hylocharis recurvirostris*, GRAY, Gen. Birds, vol. i, p. 114, sp. 11.

*Avocettinus recurvirostris*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).

*Avocettinus lessoni*, BON., Consp. Gen. Av., vol. i, p. 75, juv. (1850).

*Avocettula recurvirostris*, REICH., Aufz. der Colib., p. 6 (1853).—ID., Trochil. Enum. (1855), p. 3, pl. 679, figs.

4487-89.—BON., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Mon., Troch., vol. iii, pl. 201.—ID., Intr.

Troch., octavo ed., p. 114 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 262 (1876).

*Streblorhamphus recurvirostris*, CAB. and HEIN., Mus. Hein. Th., iii, p. 76 (1860).

*Hab.* Guiana.

*Male.* Upper surface, abdomen, and under tail coverts bronze-green. Throat and breast luminous emerald-green. On the centre of the abdomen is a narrow black stripe. Wings blackish-purple. Median rectrices bronze-green; lateral ones above coppery-brown, margined on the outer webs with green, beneath metallic fiery copper-red. Bill black, feet brownish. Total length,  $3\frac{5}{8}$  in. Wing,  $3\frac{5}{16}$  in. Tail,  $1\frac{3}{16}$  in. Culmen,  $\frac{5}{8}$  in.

*Female?* or *young*. Upper surface and flanks bronze-green. Throat and abdomen white, with a black stripe running the entire length of both. Under tail coverts green. Tail above, dark purple glossed with green and the lateral feathers tipped with white; beneath, the lateral feathers are fiery-bronze for three-fourths their length, succeeded by a purplish-black bar glossed with green, and the tips white. Size same as that of the male.

*Immature male*. Resembles the above, but has the centre of the throat luminous emerald-green bordered with white.

### Genus LXXXIV.—METALLURA.

*Metallura*, GOULD, P. Z. S. (1847), p. 94.

*Urolampira*, CAB. and HEIN., Mus. Hein. Th., iii, p. 68 (1860).

*Lavania*, MULS., Catal. Ois. Mouch. (1875), p. 24.

*Lavinia*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 106 (1877).

#### TYPE.

*T. opaca*, Licht.

*T. tyrianthina*, Lodd.

*T. eupogon*, Cab.

*T. eupogon*, Cab.

*Ch.* Bill straight, moderately long. Tail ample, rounded when spread. Tarsi bare; feet large; hind toe and nail longer than middle toe and nail. Sexes unlike.

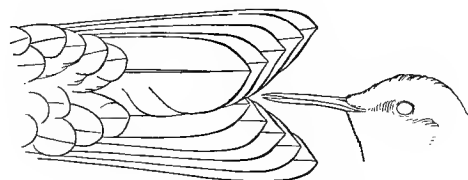
*Range*. Venezuela, Columbia, Ecuador, Peru, and Bolivia.

Nine species are now known, of a comparatively large size, with brilliant throats, and luminous rectrices. These last are of various colors, and in some of the species are extremely brilliant. Contrary to the general law in this Family, the tails of the females are as luminous as those of the males, but the rest of their plumage is different and much more subdued in its coloration.

#### Key to the species.

- |   |                                 |
|---|---------------------------------|
| A. Throat bluish-green; general plumage blackish-purple.                        |                                 |
| a. Tail luminous copper-color.  | 1. <i>M. opaca</i> .            |
| b. Tail luminous vinous-purple.   | 2. <i>M. jelski</i> .           |
| c. Tail luminous purple, crissum white!   | 3. <i>M. chloropogon</i> .      |
| B. Centre of throat metallic-red.   | 4. <i>M. eupogon</i> .          |
| C. Throat metallic-green.   |                                 |
| a. Tail metallic-bronze, changing to blue above, luminous bronze-green beneath. | 5. <i>M. æneicauda</i> .        |
| b. Tail purplish-blue above, shining grass-green beneath.                       | 6. <i>M. primolina</i> .        |
| c. Tail purplish-green above, beneath deep violet.                              | 7. <i>M. williami</i> .         |
| d. Tail purple-bronze.  | 8. <i>M. tyrianthina</i> .      |
| e. Tail deep violet with blue reflections.                                      | 9. <i>M. smaragdinicollis</i> . |

Fig. 92.



*Metallura tyrianthina*. ♂ 25740. Quito.

### 1. *Metallura opaca*.

*Trochilus (Lampornis) opacus*, "LICHT.," Tsch., Consp., p. 38.—Id., Faun. Per., p. 248 (1844).

*Trochilus* (—?) *cupreicauda*, GOULD, P. Z. S. (1846), p. 87.

*Mellisuga cupreicauda*, GRAY, Gen. Birds, vol. i, p. 113, sp. 43.

- Metallura cupreicauda*, GOULD, P. Z. S. (1847), p. 94.—ID., Mon. Troch., vol. iii, pl. 191.—ID., Intr. Troch., octavo ed., p. 111 (1861).—BON., Consp. Gen. Av., vol. i, p. 75 (1850).—РЕЙСН., Troch. Enum., p. 5, pl. 721, figs. 4638-39.—ID., Aufz. der Colib., p. 8 (1853).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 110 (1876).  
*Agleactis cupreicauda*, BON., Rev. and Mag. Zool. (1854), p. 253.  
*Metallura opaca*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 69.

*Hab.* Peru and Bolivia.

*Male.* General plumage lustrous dark purplish-brown. A metallic bluish-green spot on the throat, across the vent a buff line. Tail fiery reddish-bronze. Bill black, feet brown. Total length,  $4\frac{1}{2}$  in. Wing,  $3\frac{3}{4}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{5}{8}$  in. The female is not certainly known.

## 2. *Metallura jelski*.

- Metallura jelski*, CAB., Journ. für Ornith. (1874), p. 99.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 109.  
*Metallura cupreicauda*, TACZAN., P. Z. S. (1874), p. 544.

*Hab.* Peru (Jelski).

*Male.* General plumage purplish-black. A bluish-green metallic spot on the lower part of the throat. Wings purplish-brown. A white band crosses the vent. Under tail coverts purplish-black margined narrowly with rufous. Tail luminous vinous-purple. Bill and feet black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in. From a typical example.

I have specimens of the *M. opaca* from Peru and Bolivia. The present species, which is very distinct, has as yet only been found in Peru at Maragnoc by M. Jelski.

## 3. \**Metallura chloropogon*.

- Urolampira chloropogon*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 68.

*Hab.* —?

*Mas.* Purpureo-fuscescens nitore quodam metallico virescenti, vertice humeris uropygioque valde, imprimis autem macula gulari splendidissime virescente-fulgentibus; alis purpureo-fuscis, rectricibus latissimis pulchre purpureo-resplendentibus; crisso albedo, tectricibus caudæ inferioribus virescenti-nitentibus margine lutescenti.

*Fem.* (an mas. juv.). Subtus brunnescenti-ochracea gula lateribusque maculis, parvis fuscis virescentibusque guttatis, rectricibus splendide pupurascentibus, tribus externis apice pallide albescentibus. Long. tot., 3' 6''; al., 2''; caud., 1' 6''; rostr. culm., 5''.—(Cab., l. c.)

I do not know this bird.

## 4. *Metallura eupogon*.

- Metallura eupogon*, CAB., Journ. für Ornith. (1874), p. 97.  
*Metallura hedvigæ*, TACZAN., P. Z. S. (1874), p. 544, pl. xxi, fig. 2.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 107 (1876).

*Hab.* Peru (Jelski).

*Male.* General plumage bronzy-green. Line down the centre of the throat metallic fiery-red. Tuft of white feathers below the thighs. Wings purple-

brown. Tail bronze above with blue reflections; beneath luminous grass-green. Bill and feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail, 2 in. Culmen,  $\frac{1}{2}$  in. From typical example in my collection.

*Female.* Unknown.

### 5. *Metallura æneicauda.*

*Trochilus* (—?) *æneicauda*, GOULD, P. Z. S. (1846), p. 87.

*Mellisuga æneicauda*, GRAY, Gen. Birds, vol. i, p. 113, sp. 44.

*Metallura æneicauda*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).—GOULD, Mon. Troch., vol. iii, pl. 192.—ID., Intr. Troch., octavo ed., p. 111 (1861).—REICH., Troch. Enum., p. 5, pl. 720, figs. 4634–36.—ID., Aufz. der Colib., p. 8 (1853).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. —WHYBELY, P. Z. S. (1873), p. 191.

*Aglæactis æneicauda*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Urolampira æneicauda*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 68.

*Hab.* Peru and Bolivia.

*Male.* Upper surface bronzy-green. Throat luminous metallic-green. Under surface bronzy-green on the flanks, centre of breast and abdomen mingled green and brown. Under tail coverts pale bronze-green margined with rufous. Wings purple-brown. Tail, metallic-bronze above changing to blue in certain lights, beneath luminous green. White spot behind the eye. Bill and feet black. Length,  $4\frac{3}{8}$  in. Wing,  $2\frac{9}{16}$  in. Tail, 2 in. Culmen,  $\frac{3}{4}$  in.

*Female.* Differs in having the under surface brown, each feather tipped with bronzy-green. Centre of abdomen buff. Tail colored like the male, but the lateral feathers are tipped with buff. Bill and feet black.

### 6. *Metallura primolina.*

*Metallura primolina*, BOURC., Rev. and Mag. Zool. (1853), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 113.

*Metallura primolinus*, GOULD, Mon. Troch., vol. iii, pl. 194.—BON., Rev. and Mag. Zool. (1854), p. 253.

*Metallura primolina*, REICH., Aufz. der Colib., p. 8 (1855).—ID., Troch. Enum., p. 5 (1855).

*Urolampira primolina*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 68 (note 5).

*Metallura primolii*, GOULD, Intr. Troch., octavo ed., p. 112 (1861).

*Hab.* Ecuador. Vicinity of Laguano, on the banks of the Napo.

*Female?* Upper surface bronzy-green. Under surface has the base of the feathers rufous-white, darkest on the throat and abdomen, tips bronzy-green. Wings purplish-brown. Tail luminous bronzy-green changing to purple in certain lights, on the upper surface; and metallic luminous grass-green on the under surface; the three outermost feathers tipped with brownish-gray. Bill and feet black. Total length,  $3\frac{9}{16}$  in. Wing,  $2\frac{5}{16}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{9}{16}$  in. From Bourceir's specimen in my collection.

### 7. *Metallura williami.*

*Trochilus williami*, BOURC. and DELATTRE, Rev. Zool. (1846), p. 308.

*Mellisuga williami*, GRAY, Gen. Birds, vol. i, p. 112, sp. 38.

*Metallura williami*, BON., Consp. Gen. Av. (1850), vol. i, p. 75.—REICH., Troch. Enum., p. 5 (1855).—ID., Aufz. der Colib., p. 8 (1853).—BON., Rev. and Mag. Zool. (1854), p. 253.—GOULD, Mon. Troch., vol. iii, pl. 193.

—ID., Intr. Troch., octavo ed., p. 112 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 114 (1876).

*Urolampira williami*, CAB. and HEIN., Mus. Hein. Th., iii, p. 68 (note 6).

*Hab.* Columbia.

*Male.* Upper surface dark bronzy-green. Throat and upper part of breast luminous grass-green. Under surface bronzy-green, the base of the feathers buff. Wings purplish-brown. Tail dark green above, with bright purple reflections in certain lights; beneath luminous violet, with green reflections. Bill and feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{1}{2}$  in. (From type in my collection.)

*Female.* Like the male, but the under surface is mottled with green and buff

### 8. *Metallura tyrianthina.*

*Trochilus tyrianthinus*, LODD., Proc. Zool. Soc. (1832), p. 6.

*Ornismya allardi*, BURC., Rev. Zool. (1839), p. 294.—ID., Ann. Soc. d'Agr., Lyon (1840), p. 226, pls. 3 and 4.

*Ornismya pauline*, BOISS., Rev. Zool. (1839), p. 354.—ID., Mag. Zool. (1840), pl. 13.

*Mellisuga tyrianthina*, GRAY, Gen. Birds, vol. i, p. 112, sp. 36.

*Trochilus allardi*, JARD., Contr. Ornith. (1850), pp. 81-89, and 151, pl. 55.

*Metallura tyrianthina*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).—REICH., Troch. Enum., p. 5, pl. 719, figs.

4630-31.—ID., Aufz. der Colib., p. 8 (1853).—BON., Rev. and Mag. Zool. (1854), p. 253.—GOULD, Mon.

Troch., vol. iii, pl. 195.—ID., Intr. Troch., octavo ed., p. 112 (1861).—MULS., Hist. Nat. Ois. Mouch., tom.

iii, p. 117 (1876).

*Urolampira tyrianthina*, CAB. and HEIN., Mus. Hein. Th., iii, p. 68 (1860).

*Metallura quitensis*, GOULD, Intr. Troch., octavo ed., p. 112 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p.

115 (1876).

*Hab.* Venezeula, Columbia, Ecuador, and Peru.

*Male.* Upper surface dark bronze-green. A small white spot behind the eye. Throat luminous grass-green. Under surface bronze-green, the base of the feathers buff, which, showing in various parts, gives a mottled appearance to the plumage. Under tail coverts bronzy-green margined with reddish-buff. Wings purplish-brown. Tail brilliant metallic purple-bronze. Bill and feet black. A tuft of white feathers on each side of the vent. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{4}$  in. Tail  $1\frac{7}{8}$  in. Culmen,  $\frac{7}{16}$  in.

*Young male.* Like the male, but with the exception, that the throat and under parts are buff- or grayish-white, the feathers tipped with green. No luminous spot on the throat.

*Female.* Upper parts bronzy-green. Entire under parts rufous, lightest on the abdomen, spotted with green on the throat, and mottled with green on the flanks. Tail bronzy-purple, lighter than the males. In size she is slightly smaller than the male.

The Ecuador bird separated by Mr. Gould as *M. quitensis* (l. c.) does not always possess a greater size to distinguish it, as I have some from Columbia quite equal to it in measurements. I do not consider it a distinct species, and have placed Mr. Gould's term among the synonyms of the *M. tyrianthina*.

### 9. *Metallura smaragdnicollis.*

*Orthorhynchus smaragdnicollis*, D'ORB. and LAFRES., Syn. Av., ii, p. 31, no. 23 (1838).—D'ORB., Voy. Amer.

Mérid., tom. iv, p. 375, Atl. Ois., pl. 59, fig. 2.

*Mellisuga smaragdnicollis*, GRAY, Gen. Birds, vol. i, p. 112, sp. 42.

*Metallura smaragdincollis*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).—REICH, Troch. Enum., p. 5, pl. 719, fig. 4632.—ID., Aufz. der Colib., p. 8 (1853).—BON., Rev. and Mag. Zool. (1854), p. 253.—GOULD, Mon. Troch., vol. iii, pl. 196.—ID., Intr. Troch., octavo ed., p. 112 (1861).—WHITELY, P. Z. S. (1873), p. 191.—TACZAN., P. Z. S. (1874), p. 544.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 120 (1876).—ELLIOT, Ibis (1877), p. 141.

*Urolampira smaragdincollis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 68 (note 4) (1860).

*Hab.* Peru, Bolivia.

*Male.* Upper and under surface bronzy-green. Throat luminous dark grass-green. Wings purplish-brown. Tail above dark violet, with green reflections on the edges and tips of the feathers; beneath reddish-violet. Bill and feet black. Length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{1}{2}$  in.

*Young male* has the throat bronzy-green like the rest of the under parts.

*Female.* Above bronzy-green. Beneath deep buff, glossed with green on the flanks and spotted with bronzy-green on the throat, breast, and abdomen. Tail purple-violet, lateral feathers tipped with grayish-white.

The next genus, CHRYSURONIA, has generally been placed far from its present position, among such genera as AMAZILIA and EUCEPHALA. I do not perceive that it has any especial relationship with these; but its different species, in the shape and brilliant coloration of their tails, seem to possess an affinity to the members of METALLURA, and properly belong to the small section of these birds with rounded luminous rectrices. The species vary greatly from each other in their style of coloration, and while certain ones have the head and breast highly metallic and luminous, others have the throat and under surface possessed of very little brilliancy.—The sexes differ in their plumage, but, like those of the species of METALLURA, the females also have luminous tails.

#### Genus LXXXV.—CHRYSURONIA.

*Chrysuronia*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).

*Chrysurus*, BON., Compt. Rend., p. 382 (1850).

*Chrysurisca*, CAB. and HEIN., Mus. Hein. Th., iii, p. 42 (1860).

#### TYPE.

*O. ænone*, LESS.

*O. ænone*, LESS.

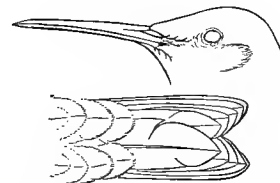
*O. ænone*, LESS.

*Ch.* Bill a little longer than the head, slightly curved, broad at base and rather flat, graduating rapidly to a sharp point. Feathers of the forehead not advancing on to the culmen, nostrils exposed. Wings long, narrow. Tail very slightly rounded when spread. Feet rather large. Tarsi clothed. Plumage of sexes different.

*Range.* Central America, Columbia and Ecuador, Peru, Venezuela, Brazil, and Argentine Republic.

Five species are known.

Fig. 93.



*Chrysuronia ænone*. ♂. Ecuador. Buckley.

*Key to the species.*

- |   |                          |
|---|--------------------------|
| A. Top of head and throat blue; tail bronze-green.                    | 1. <i>C. humboldti</i> . |
| B. Entire head and throat blue, tail fiery golden-bronze.             | 2. <i>C. ænone</i> .     |
| C. Crown of head and chin blue, tail golden-bronze.                   | 3. <i>C. josephinæ</i> . |
| D. Crown green, throat lazuline-blue, tail shining green-bronze.      | 4. <i>C. eliciæ</i> .    |
| E. Head golden inclining to brown, throat buff. Tail metallic-golden. | 5. <i>C. chrysuræ</i> .  |

**1. *Chrysuronia humboldti*.**

*Trochilus humboldti*, BOURC. and MULS., Ann. Sci. Phys., Lyon (1852), p. 142.

*Chrysuronia humboldti*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 5 (1855).—GOULD, Mon. Troch., vol. v, pl. 327.—ID., Intr. Troch., octavo ed., p. 165 (1861).—BON., Rev. and Mag. Zool. (1854), p. 254.

*Chrysurisca humboldti*, CAB. and HEIN., Mus. Hein. Th., iii, p. 42 (note 4) (1860).

*Thaumatias viridicaudus*, LAWR., Ann. Lyc. Nat. Hist. N. Y. (1866), p. 403, ♀.

*Hab.* Ecuador.

*Male.* Top of head and throat dark purple-blue. Upper surface golden-green, bronzy on the rump. Wings purplish-brown. Under surface shining light bronzy-green with a white streak in the centre of the abdomen. Tail dark bronzy-green, with a bluish shade on the central feathers. Under tail coverts white. Bill flesh-colour, or red?, tip black. Feet brown. Total length, 4 in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

*Female.* Upper parts coppery-bronze. Under surface dull white, breast spangled with green. Central tail feathers dark green, lateral ones bronzy-green, graduating into dark brown and tipped with white. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

**2. *Chrysuronia ænone*.**

*Ornismya ænone*, LESS., Ois. Mouch. Supp., p. 157, pl. 30.—DELATT. and LESS., Rev. Zool. (1839), p. 17.

*Polytmus ænone*, GRAY, Gen. Birds, vol. i, p. 109, sp. 80.

*Chrysuronia ænone*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.—

REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 5, t. 722, figs. 4642-43 (1855).—GOULD, Mon. Troch., vol. v, pl. 325.—ID., Intr. Troch., octavo ed., p. 164 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 7 (1875).

*Chrysurisca ænone*, CAB. and HEIN., Mus. Hein. Th., iii, p. 42 (1860).

*Hab.* Venezuela, Columbia, Ecuador.

*Male.* Head and throat deep shining blue. Upper parts grass-green. Under parts luminous yellowish-green. Wings purplish-brown. Upper and under tail coverts, and tail fiery golden-bronze. Maxilla black. Mandible flesh-color, tip black. Total length, 4 in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Upper surface golden-green. Under surface white, spangled with green. Vent white. Rest like the male. Dimensions the same.

There is a slight difference in the length of bill observable between Columbian and Ecuadorian examples, and the heads of the latter are a greenish-blue; but I believe there is only one species.



**3. Chrysuronia josephinae.**

*Ornismya neera*, LESS. and DELATT., Rev. Zool. (1839), p. 18, desc. null.

*Ornismya josephinae*, BOURC. and MULS., Rev. Zool. (1848), p. 272.

*Trochilus josephinae*, GRAY, Gen. Birds, vol. iii; Supp., app. 30a.

*Chrysuronia josephinae*, REICH., Aufz. der Colib., p. 9 (1855).—ID., Troch. Enum., p. 5 (1855).—BON., Rev. and Mag. Zool. (1854), p. 254.—GOULD, Mon. Troch., vol. v, pl. 326.—ID., Intr. Troch., octavo ed., p. 164 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 10 (1875).

*Chrysurisca josephinae*, CAB. and HEIN., Mus. Hein. Th., iii, p. 42 (note 3) (1860).

*Chrysuronia neera*, GOULD, Intr. Troch., octavo ed., p. 165 (1861).

*Chrysuronia caeruleicapilla*, GOULD, Intr. Troch., octavo ed., p. 165 (1861).

*Hab.* Brazil, upper Amazon.

*Male.* Crown of the head and chin deep blue. Upper parts golden-green. Under parts luminous grass-green. Upper tail coverts and tail golden-bronze, the upper coverts more coppery than the tail. Under tail coverts golden-bronze fringed with gray. Wings purplish-brown. Maxilla black, mandible flesh-color, tip black; feet black. Total length, 4 in. Wing,  $1\frac{1}{2}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{1}{8}$  in.

*Female.* Upper parts bronzy-green. Under parts white, washed with green on the flanks. Rest like the male, but the tail not so brilliant. Dimensions the same.

**4. Chrysuronia eliciae.**

*Trochilus eliciae*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1846), t. ix, p. 314.—ID., Rev. Zool. (1846), p. 316.

*Polytmus eliciae*, GRAY, Gen. Birds, vol. i, p. 109, sp. 82.

*Chrysuronia eliciae*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.—REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 5, pl. 722, figs. 4644–45.—GOULD, Mon. Troch., vol. v, pl. 328.—ID., Intr. Troch., octavo ed., p. 165 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 13 (1875).

*Chrysurisca eliciae*, CAB. and HEIN., Mus. Hein. Th., iii, pp. 42, 92 (1860).

*Hab.* Central America. Guatemala to Chiriqui.

*Male.* Upper surface and flanks dark green. Throat lazuline-blue. Abdomen buff washed with green; under tail coverts fawn. Upper tail coverts coppery-bronze. Wings purplish-brown. Tail metallic greenish-bronze, in some specimens golden-bronze. Bill flesh-color, tip black. Feet black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female* very similar to the male, but less brilliant, and with but an indication of the blue on the throat.

**5. Chrysuronia chrysur.**

*Ornismya chrysur*, LESS., Ois. Mouch. Supp., p. 107, pl. 4 (1831).

*Ornismya ruficollis*, D'ORB. and LAFRES., Syn. Av., ii, p. 30, sp. 22 (1838).

*Polytmus chrysurus*, GRAY, Gen. Birds, vol. i, p. 100, sp. 81.

*Chrysuronia chrysur*, BON., Consp. Gen. Av., vol. i, p. 75 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.—REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 5, pl. 721, figs. 4640–41 (1855).—GOULD, Mon. Troch., vol. v, pl. 329.—ID., Intr. Troch., octavo ed., p. 165 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 4 (1875).—ELLIOT, Ibis (1877), p. 140.

*Rhamphodon chrysurus*, REICH., Aufz. der Colib., p. 15 ?.—ID., Troch. Enum., p. 12 ? (1855).

*Chrysurisca chrysur*, CAB. and HEIN., Mus. Hein. Th., iii, p. 42 (note 5) (1860).

*Hab.* Brazil, Paraguay, and Argentine Republic.

*Male.* Upper surface golden-bronze, most brilliant upon the tail; and inclining to brown upon the head. Throat buff. Breast and flanks golden-brown. Middle of abdomen buff. Under tail coverts golden with gray edges. Bill flesh-color, tips black. Feet black. Total length,  $3\frac{5}{8}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

Some specimens have the two outermost rectrices tipped with gray. These may possibly be females; and occasionally the rectrices of the males are reddish-bronze very brilliant, instead of golden-bronze.

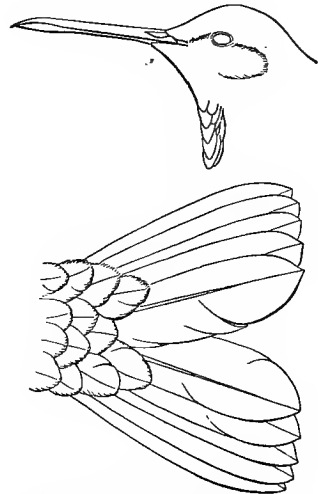
Next to *CHRYSURONIA* I place *AUGASTES*, containing species with highly luminous tails, and a bill similar in shape to the preceding species, yet inclining towards the point to the attenuated form so characteristic of the wedge-like bills of *SCHISTES* and *HELIOTHRIX*. One of the species is a rather large bird, of most beautiful and luminous plumage, and both are distinguished for the metallic color exhibited on their heads and throats.

### Genus LXXXVI.—*AUGASTES*.

*Augastes*, GOULD, Intr. Troch., octavo ed., p. 123 (1861), desc. Mon. Troch., pt. ii (1850). *T. superbus*, Vieill.  
*Lamprurus*, REICH., Aufz. der Colib. (1853), p. 12. *O. lumachella*, Less.

TYPE.

Fig. 94.



*Augastes lumachellus*, ♂. Minas Geraes, Brazil. Verreaux.

*Ch.* Bill straight, longer than the head, attenuated slightly at the tip; frontal feathers not advancing upon the culmen. Wings long; tail moderately long and square; tarsi clothed; feet small, hind toe diminutive.

*Range.* Brazil.

#### *Key to the species.*

- |   |                            |
|---|----------------------------|
| A. Forehead and throat golden-green, the latter ending in reddish-orange.     |                            |
| Tail metallic bronze-red.   | 1. <i>A. lumachellus</i> . |
| B. Forehead and throat emerald-green. Tail shining green with a bluish-gloss. | 2. <i>A. superbus</i> .    |

### 1. *Augastes lumachellus*.

*Ornismya lumachella*, LESS., Rev. Zool. (1838), p. 315, juv.

*Trochilus lumachellus*, BOURC., Rev. Zool. (1846), p. 313.

*Hylocharis lumachellus*, GRAY, Gen. Birds, vol. i, p. 114, sp. 30.

*Augastes lumachellus*, BON., Consp. Gen. Av., p. 84 (1850).—ID., Rev. and Mag. Zool. (1854), p. 253.—GOULD, Mon. Troch., vol. iv, pl. 222.—ID., Intr. Troch., octavo ed., p. 123.—CAB. and HEIN., Mus. Hein. Th., iii, p. 46 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 147.

*Lamprurus lumachellus*, REICH., Aufz. der Colib. (1853), p. 12.

*Rhamphomicron (Lamprurus) lumachellus*, REICH., Troch. Enum., p. 10 (1855).

*Hab.* Brazil, Bahia.

*Male.* Forehead, face, and throat luminous golden-green, bounded beneath by a narrow line of greenish-blue, below which is a tuft of metallic reddish-orange. Top of the head, ear coverts, and a narrow line on side of the throat velvety-black. On either side of the reddish-tuft on breast is a narrow white bar. Rest of plumage of body shining bronze-green. Wings purplish-bronze. Tail metallic bronze-red. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female or young.* Differs in having the top of the head green; throat less luminous, and the tail a coppery-bronze, with the outer web of external rectrices grayish-white near the tip.

## 2. *Augastes superbus*.

*Trochilus superbus*, VIEILL., Ency. Méth., tom. ii, p. 561.

*Trochilus scutatus*, NATT., Temm. Plan. Col., no. 299, fig. 3.

*Ornismya naterleri*, LESS., Ois. Mouch., p. 75, pl. 16 (1829).

*Hylocharis superba*, GRAY, Gen. Birds, vol. i, p. 114, sp. 29.

*Augastes scutatus*, GOULD, Mon. Troch., vol. iv, pl. 221.—ID., Intr. Troch., octavo ed., p. 123 (1861).

*Augastes superbus*, BON., Consp. Gen. Av., vol. i, p. 84 (1850).—REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).—BON., Rev. and Mag. Zool. (1854), p. 253.—CAB. and HEIN., Mus. Hein. Th., iii, p. 45 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 150.

*Hab.* Brazil.

*Male.* Forehead, face, and throat glittering emerald-green, these feathers forming a point on the chest. Band across the crown and ear coverts black. A white spot behind the eye. Upper surface bronzy-green. Wings purplish-brown. Under parts indigo-blue, with a crescentic buffy-white mark on the upper part of chest broadest beneath the green throat mark. Tail metallic-green, with a bluish gloss. Under tail coverts whitewashed with green. Bill and feet black. Length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{1}{8}$  in.

*Female* differs in having the crescent mark white instead of buff, the abdomen green instead of blue, under tail coverts pure white, and the outer rectrices tipped with white.

## Genus LXXXVII.—PHLOGOPHILUS.

*Phlogophilus*, GOULD, P. Z. S. (1860), p. 310.

*Ch.* "Bill straight; wings ample and rather rounded, tarsi long and bare; tail rather large and rounded; hind toe and nail shorter than middle toe and nail." (Gould, loc. cit.)

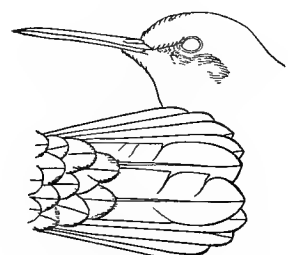
*Range.* Ecuador.

One species is attributed to this genus, which if it is adult would seem to belong to the female sex, but if a male is certainly immature.

TYPE.

*P. hemileucurus*, Gould.

Fig. 95.



*Phlogophilus hemileucurus*. Ecuador.  
Mus. G. N. Lawrence.

### 1. *Phlogophilus hemileucurus*.

*Phlogophilus hemileucurus*, GOULD, P. Z. S. (1860), p. 310.—*Id.*, Mon. Troch., vol. v, pl. 360.—*Id.*, *Intr. Troch.*, octavo ed., p. 181 (1861).

*Elvira hemileucurus*, MULS., *Hist. Nat. Ois. Mouch.*, tom. i, p. 264.

*Hab.* Ecuador.

*Female?* or *young?* Upper surface and flanks grass-green. Throat white, feathers tipped with green. Chest, centre of the abdomen, and under tail coverts white. Median rectrices bronze-green; lateral feathers white, with a band of purplish-black in the centre; this band most extensive on the outer feathers and becoming narrower as it goes towards the median ones, where on those next the central pair it is merely a subterminal bar. Bill black. Feet and tarsi yellow. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

All the specimens known of this bird are apparently in the plumage of the female or young. Mr. Gould has made it the type of a new genus, and thinks it is probably allied to *Adelomyia*. It seems to me, however, its proper place is between *Schistes* and *Augastes*, and it would not at all surprise me if it should eventually prove to be the female of one of the species of the latter genus. It is so closely allied to *Augastes*, that I cannot perceive it possesses any generic characters to separate it (unless it may be the bare tarsus); but for the present I leave it in the genus in which Mr. Gould placed it.

### Genus LXXXVIII.—SCHISTES.

TYPE.

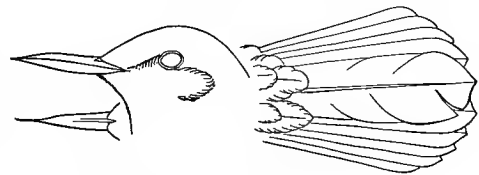
*Schistes*, GOULD, Mon. Troch., pt. vi (1853), and *Intr. Troch.*, octavo ed., p. 122 (1861). *T. geoffroyi*, Bourc.

*Ch.* "Bill longer than the head, straight, wedge-shaped at the tip. Wings moderately long and slightly rounded; tail rounded, the feathers broad; tarsi partially clothed; feet small; hind toe and nail shorter than middle toe and nail." (Gould, loc. cit.)

*Range.* Columbia and Ecuador.

Two species are known, allied to AUGASTES in the shape of their bills; but of small size, and tails not quite so luminous.

Fig. 96.



*Schistes geoffroyi*. ♂. Columbia. Whitely.

#### *Key to the species.*

- |  |                                 |
|--|---------------------------------|
| <p>A. Forehead and crown bronzy-green, a faint line of luminous green on the first; throat luminous green; on either side of the breast a tuft of lilac-blue<br/>Tail bronze-green, with a subterminal chalybeate bar.</p> | <p>1. <i>S. geoffroyi</i>.</p>  |
| <p>B. Forehead, face, and throat glittering pale metallic-green. Tuft of violet-blue feathers on either side of breast. Tail bronze-green with a bluish lustre.</p>  | <p>2. <i>S. personatus</i>.</p> |

### 1. *Schistes personatus*.

- Schistes albogularis*, GOULD, Jard. Contr. Ornith. (1851), p. 140, juv.—ID., Mon. Troch., vol. iv, pl. 220, juv.—CAB. and HEIN., Mus. Hein. Th., iii, p. 27 (note) (1860).  
*Schistes albigularis*, REICH., Aufz. der Colib., p. 13 (1853).—BON., Rev. and Mag. Zool. (1854), p. 251.—GOULD, Intr. Troch., octavo ed., p. 123, juv. (1861).  
*Schistes personatus*, GOULD, P. Z. S. (1860), p. 311.—ID., Mon. Troch., vol. iv, pl. 219.—ID., Intr. Troch., octavo ed., p. 122 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 153 (1876).  
*Schistes geoffroyi*, SCLAT., P. Z. S. (1860), p. 70.

*Hab.* Ecuador.

*Male.* Forehead, face, and throat glittering pale green, behind which is a patch of black. Upper surface bronzy-green. On each side of breast a tuft of violet-blue feathers. Across the upper part of breast is a crescentic-white bar. Abdomen and flanks dark green. Tuft of white behind the thighs. Tail bronze-green with a blue shade. Bill and feet black. Length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{8}$  in.

*Young*, possibly *female*. Differs in having the throat white, and the violet-blue tufts almost obsolete. Mr. Gould in his descriptions gives the tail as crossed near the tip by a chalybeate band. There is no indication of this band in my specimens, the rectrices being a uniform bronzy-green with a slight bluish shade in one example.

If, as I believe is the case, the *S. albogularis* proves to be the young of *personatus*, the latter name will have to sink into a synonym, having been proposed nine years after *albogularis*.

### 2. *Schistes geoffroyi*.

- Trochilus geoffroyi*, BOURC. and MULS., Ann. Soc. d'Agr., Lyon (1843), t. vi, p. 37, pl. 3.—ID., Rev. Zool. (1843), p. 101.  
*Petasophora* ? *geoffroyi*, GOULD, P. Z. S. (1847), p. 9.  
*Polytmus geoffroyi*, GRAY, Gen. Birds, vol. i, p. 108, sp. 31.  
*Colibri geoffroyi*, BON., Consp. Gen. Av., vol. i, p. 69 (1850).  
*Petasophora geoffroyi*, REICH., Troch. Enum., p. 11 (1853).  
*Schistes geoffroyi*, GOULD, Mon. Troch., vol. iv, pl. 218.—ID., Intr. Troch., octavo ed., p. 122 (1861).—REICH., Aufz. der Colib., p. 13 (1853).—BON., Rev. and Mag. Zool. (1854), p. 251.—CAB. and HEIN., Mus. Hein. Th., iii, p. 27 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 155 (1860).

*Hab.* Ecuador.

*Male.* Crown, upper part of back and wing coverts bronze-green. A faint luminous green line on the forehead. Lower part of back and rump rufous. Wings purplish-bronze. A white spot behind the eye. Throat luminous green. Ear coverts dark brown. On each side of breast a tuft of lilac-blue feathers. Under surface dark green. White tuft behind the thighs. Under tail coverts green edged with gray. Rectrices bronze-green; lateral ones with a subterminal chalybeate bar and tipped with white. Bill black, feet brown. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{1}{2}$  in.

*Young*?. Differs in having the throat buffy-white, this color extending also on each side of the upper part of breast. Middle of abdomen also whitish. Mantle green; rest of upper parts bronze. Rest of plumage like the male, though the under parts not above mentioned are a paler green than the male. This plumage

may possibly be that of the female; though I have not seen an authenticated specimen of that sex.

The members of the next genus, *HELIOTHRIX*, are rather large in size, of a most graceful form, distinguished by their singular wedge-shaped bills, pleasing plumage of green and white, and the metallic-blue tufts on the sides of the neck. There is very little difference in the plumage of the sexes, and when it does exist, consists of the absence of metallic coloring upon the throat of the female. The rectrices of this sex are always much longer than those of the males.

### Genus LXXXIX.—*HELIOTHRIX*.

*Heliothrix*, BOIE, Isis (1831), p. 547.

*Heliothrys*, GRAY, List Gen. Birds, p. 14 (1840).

#### TYPE.

*T. auritus*, Gmel.

*T. auritus*, Gmel.

*Ch.* Bill longer than the head, the culmen descending, and the gonys ascending to the tip. Maxilla broad at base, narrowing rapidly towards the middle, the apical half greatly compressed laterally. Tip slender and sharply pointed, nostrils exposed. Wings long, narrow, and pointed. Tail long (longest in the female), much rounded, outermost rectrices two-thirds the length of median ones, upper tail coverts reaching two-thirds the length of the tail. Tarsi clothed to the toes. Sexes similar in color.

*Range.* Central America, Columbia, Ecuador, Peru, Venezuela, Guiana, and Brazil.

Three species are known.

#### *Key to the species.*

A. Head metallic-green.

a. Throat white.

b. Throat metallic-green.

B. Head metallic-purple, throat white.

1. *H. aurila*.

2. *H. auriculatus*.

3. *H. barroti*.

### 1. *Heliothrix auritus*.

*Trochilus auritus*, GMEL., Syst. Nat. (1788), vol. i. p. 493, sp. 47.—LATH., Ind. Ornith. (1790), tom. i, p. 311.—WIED., Beitr., vol. iv, p. 104.—CAB., Schomb. Reis. Guian., vol. iii, p. 707.

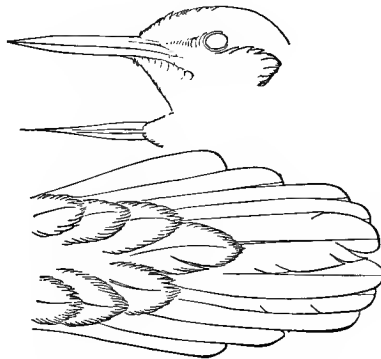
*Trochilus leucocrotophus*, VIEILL., Nouv. Dict. (1817), vol. vii, p. 374.

*Ornismya aurita*, LESS., Ois. Mouch., p. 63, t. 10-11 (1829).

*Ornismya nigrotis*, LESS., Ind. Gen. and Syn. Ois. Gen. Troch., p. 20, sp. 48, ♀ (1831).

*Heliothrix nigrotis*, GRAY, Gen. Birds, vol. i, p. 115, sp. 2.

Fig. 97.



*Heliothrix auritus*. ♂. N. Brazil. Whitely.

*Heliothrix auritus*, BOIE, Isis (1831), p. 547.—GRAY, Gen. Birds, vol. i, p. 115, sp. 1.—BON., Consp. Gen. Av., vol. i, p. 69.—ID., Rev. and Mag. Zool. (1854), p. 251.—REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 28.—GOULD, Mon. Troch., vol. iv, pl. 213.—ID., Intr. Troch., octavo ed., p. 121 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 238.—ELLIOT, Ibis (1876), p. 395.

*Heliothrix longirostris*, GOULD, P. Z. S. (1862), p. 124.

*Hab.* Northern Brazil, Guiana, Venezuela, Columbia, Ecuador, and Peru.

*Male.* Entire upper surface and lengthened upper tail coverts shining golden-green, brightest on the head. Wings purplish-black. Lores and a line below the eye black, ending in violet-blue. Below this line is another of luminous green extending from the gape. Entire under surface pure white. Four middle rectrices bluish-black, remainder pure white. Bill and feet black. Total length,  $4\frac{1}{2}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Wants the green line beneath the black one on the face; and the violet tufts on the cheeks. It also differs in having a much longer tail, and an oblique black bar across the lateral rectrices near their base. In all other respects she resembles the male. Total length,  $5\frac{1}{4}$  in. Wing,  $2\frac{3}{4}$  in. Tail,  $2\frac{3}{4}$  in. Culmen,  $\frac{5}{8}$  in.

## 2. *Heliothrix auriculatus*.

*Trochilus auriculatus*, "LICHT.," Nordm. Erman Reise (1835), p. 5, t. 2, figs. 1 and 2.

*Ornismya pouchetii*, LESS., Rev. Zool. (1840), p. 72.

*Heliothrix auriculatus*, GRAY, Gen. Birds, vol. i, p. 115, sp. 3.—REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).—GOULD, Mon. Troch., vol. iv, pl. 214.—ID., Intr. Troch., octavo ed., p. 121.—BON., Rev. and Mag. Zool. (1854), p. 251.—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 28.—ELLIOT, Ibis (1876), p. 396.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 340 (1875).

*Heliothrix pouchetii*, BON., Consp. Gen. Av., p. 69 (1850).

*Heliothrix aurita*, BURM., Th. Bras., vol. ii, p. 336, juv.

*Heliothrix phainolæma*, GOULD, P. Z. S. (1855), p. 87.—ID., Mon. Troch., vol. iv, pl. 215.—ID., Intr. Troch., octavo ed., p. 121 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 28 (note 4) (1860).

*Heliothrix phainoleuca*, HARTL., Weig. Arch., vol. xxii, 2, p. 23.

*Hab.* Southern Brazil.

*Male.* Differs from the *H. auritus* only in having the chin and sides of the neck luminous grass-green. In all other respects they are alike. Total length,  $4\frac{3}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail, 2 in. Culmen,  $\frac{5}{8}$  in.

*Female.* Precisely like the female of *H. auritus*, and the dimensions the same.

## 3. *Heliothrix barroti*.

*Trochilus barroti*, BOURC., Rev. Zool. (1843), p. 72.—ID., Ann. Soc. Agr., Lyon (1843), t. vi, p. 48.

*Heliothrix barroti*, GRAY, Gen. Birds, vol. i, p. 115, sp. 4.—BON., Consp. Gen. Av., vol. i, p. 69 (1850).—REICH., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).—BON., Rev. and Mag. Zool. (1854), p. 271.—GOULD, Mon. Troch., vol. iv, pl. 217.—ID., Intr. Troch., octavo ed., p. 121, sp. 241.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 242.—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 28 (note 3).—ELLIOT, Ibis (1876), p. 397.

*Heliothrix purpureiceps*, GOULD, P. Z. S. (1855), p. 87.—ID., Mon. Troch., vol. iv, pl. 216.—CAB. and HEIN., Mus. Hein. Th., iii, p. 28 (note 3) (1860).

*Heliothrix violifrons*, GOULD, Intr. Troch., octavo ed., p. 122, sp. 242 (1861).—SALV., P. Z. S. (1870), p. 210.

*Hab.* Central America, Columbia, Ecuador.

*Male.* Top of head purplish-blue. Rest of plumage like *H. auritus*. Total length,  $4\frac{3}{8}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Like the female of *H. auritus*, except the green of the upper surface is darker on the lower part of the back and upper tail coverts. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $2\frac{3}{4}$  in. Culmen,  $\frac{5}{8}$  in.

### Genus XC.—CHRYSOLAMPIS.

*Chrysolampis*, BOIE, Isis (1831), p. 546.

*Ch.* Bill straight, long as the head, nostrils hidden. Feathers of the forehead project on the culmen for nearly one-half the length of the bill. Wings long, tail rounded. Feet small, tarsi bare. Sexes dissimilar.

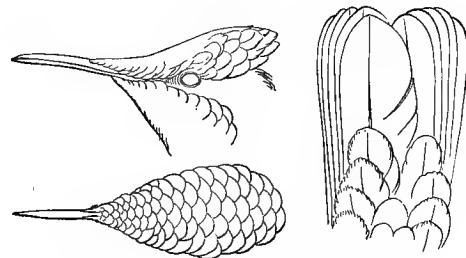
*Range.* Brazil (Amazonian region), Venezuela, Trinidad, and Columbia.

There is only one species, the well-known "Ruby Topaz" of the commercial world. It is distinguished by the frontal plumes projecting far over the culmen, and the beauty of coloring exhibited on the head and throat. The female is a very plain little bird, possessing none of the glittering hues of the male.

TYPE.

*T. moschitus*, Linn.

Fig. 98.



*Chrysolampis moschitus*. ♂. 24660. "South America."

### 1. *Chrysolampis moschitus*.

- Trochilus moschitus*, LINN., Syst. Nat. (1766), vol. i, p. 192.—GMEL., Syst. Nat., tom. i, p. 494 (1788).—LATH., Ind. Ornith., vol. i, p. 316 (1790).—SWAINS., B. Brazil, pl. 30.—CAB., Schomb. Reis. Guian., iii, p. 705.
- Trochilus carbunculus*, GMEL., Syst. Nat., t. i, p. 498, sp. 51 (1788).
- Trochilus pegasus*, GMEL., Syst. Nat., t. i, p. 495 (1788).—LATH., Ind. Ornith., vol. i, p. 315, ♀ (1790).
- Trochilus guianensis*, GMEL., Syst. Nat., t. i, p. 498 (1788).—LATH., Ind. Ornith., vol. i, p. 316, sp. 50 (1790).
- Trochilus elatus*, GMEL., Syst. Nat., t. i, p. 499 (1788).—LATH., Ind. Ornith., vol. i, p. 317, sp. 54 (1790).
- Trochilus hypophæus*, SHAW., Gen. Zool., vol. viii., p. 333, juv.
- Ornismya moschitus*, LESS., Ois. Mouch., p. 166, pls. 52-54 (1829).—ID., Trait. Ornith., p. 280 (1831).
- Mellisuga moschita*, STEPH., Shaw, Gen. Zool., vol. xiv, p. 253.—GRAY, Gen. Birds, vol. i, p. 113, sp. 96.
- Chrysolampis moschitus*, BOIE, Isis (1831), p. 546.—BON., Consp. Gen. Av., vol. i, p. 82 (1850).—ID., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Mon. Troch., vol. iii, pl. 204.—ID., Intr. Troch., octavo ed., p. 115 (1861).—REICH., Aufz. der Colib. (1853), p. 9.—ID., Troch. Enum., pl. 723, figs. 4646-49.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 254 (1875).
- Chrysolampis carbunculus*, REICH., Troch. Enum., p. 5, pl. 723, fig. 4650.—ID., Aufz. der Colib., p. 9 (1853).
- Chrysolampis moschita*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 21.
- Chrysolampis reichenbachii*, CAB. and HEIN., Mus. Hein. Th., iii, p. 21 (1860).

*Hab.* Island of Trinidad, Venezuela, Guiana, Brazil as far south as Bahia, and through the Amazonian valley into Columbia. Plentiful around Bogota.

*Male.* Entire upper part of head and nape metallic ruby-red. Rest of upper surface bronze-brown, nearly black on the upper part of back. Chin, throat, and breast glittering topaz-yellow. Abdomen and flanks dark snuff-brown. Tuft of white feathers behind the thighs. Under tail coverts rufous. Tail chestnut-red



tipped with black. Bill and feet black. Total length,  $3\frac{5}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Upper surface bronzy-green. Under surface grayish-white. Wings purplish-brown. Median rectrices bronzy-green, lateral ones purplish-brown with a green gloss and tipped with white. Bill and feet black.

*Young male.* Like the female, but with a few brilliant ruby feathers on the head, and a line of glittering topaz on the centre of the throat.

*Very young bird.* Upper surface rufous; under parts gray. Tail purple-brown, lateral feathers tipped with white.

Variations in the hues of the head and throat are perceptible among individuals of this species from various localities, but there does not seem to be more than one species. Sometimes very curious forms occur; and one before me from Brazil (?), ex Whitely, has the top of the head luminous orange, and the chin, throat, and breast metallic *emerald-green*. I can, however, only consider this specimen as an abnormal one of the present species; as in every other respect it resembles it exactly.

The next genus, *BELLONA*, although possessing species of a very different style of coloration from the previous one, seems well placed here. Its members have the basal portion of the culmen hidden in the frontal feathers, and the general shape of the birds is very like that of the "Ruby Topaz."—They differ, however, in having well-developed crests, and also from the fact, that the metallic hues are confined to the heads, there being none upon any part of the under surface. The term *Orthorhynchus*, which has been applied to the species of *BELLONA*, is stated, by nearly all ornithologists, to have been established by Cuvier. This does not appear to be the fact. The first naturalist who mentions the genus *Orthorhynchus*, as I have been able to ascertain, is Lacépède in the *Memoir de l'Institute*, 1799–1800, tom. 3, p. 510; and Cuvier himself in the *Règne Animal*, 1817, vol. i, p. 413, cites Lacépède as the author of the term. No species were given in the *Mem. de l'Inst.* as especially belonging to the genus, and the definition is simply, "Bec droit et remplé vers le bout."—Now this will apply to at least one hundred species of the *Trochilidæ*, and it is very clear that Lacépède never intended to restrict his genus to *cristatus* and *exilis*.—The old authors seem to have divided the Humming-birds into two classes, those with straight bills, which they designated "*Orthorhynchus*," and those with curved bills, called "*Ornismya*," or "*Colibri*," and these were not altogether used as genera as understood at the present day. I am unable to find that this term *Orthorhynchus*, although used as a genus by authors, has ever been defined beyond the very unsatisfactory definition quoted. As has been shown, it was first employed in the vaguest possible manner by Lacépède; afterwards restricted by Illiger in his *Prodromus*, 1811, p. 209, to three species (all belonging to different genera), among which *cristatus* and *exilis* were not included, and then of late applied in an entirely different sense from that for which it was established by the author last mentioned. Writers, quoting Cuvier as the creator of the genus *Orthorhynchus*, have usually accredited him also with making the *T. cristatus* its type. The only circumstance I can find to uphold this idea is, that Cuvier in the *Règne Animal*, 1817, p. 414, in a foot-note gives *cristatus* as an example of those

species having *straight bills*, but evidently without any intention of making it the type of Lacépède's genus, because he also includes among the *straight bill birds*, as belonging to *Orthorhynchus*, the *Lophornis ornatus*, *Campylopterus largipennis*, *Florisuga mellivora*, and *Discura longicauda*. Under these circumstances, I do not see how it is possible to retain the term *Orthorhynchus* for any group of humming-birds; it should be rejected entirely as many another term has been, and that of BELLONA proposed by M. Mulsant for *cristatus* and *exilis* is the one that should be adopted.

### Genus XCI.—BELLONA.

*Bellona*, MULS. and VERR., Class. Troch. (1865), p. 75.

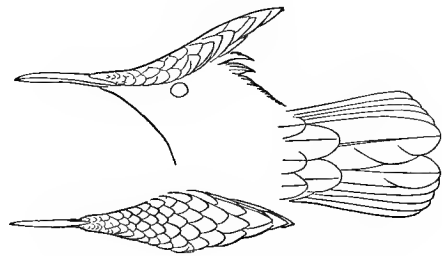
*Ch.* Bill straight, about as long as the head: feathers of the forehead projecting forward, covering one-half the length of the culmen. Nostrils hidden. Head covered with a broad, pointed crest. Wings rather long. Tail rounded. Feet small, tarsi naked. Sexes dissimilar.

*Range.* Islands of the West Indies.

Two species are allotted to this genus.

TYPE.  
*T. cristatus*, Linn.

Fig. 99.



*Bellona cristata*. ♂. Barbadoes. Verreaux.

#### Key to the species.

- |   |                         |
|---|-------------------------|
| A. Crest with the frontal half golden-green, rest blue. | 1. <i>B. cristata</i> . |
| B. Crest golden-green, tips grass-green.                | 2. <i>B. exilis</i> .   |

### 1. *Bellona cristata*.

*Trochilus cristatus*, LINN., Syst. Nat., vol. i, p. 192 (1766).—SCHOMB., Hist. Barb., p. 681.—ID., Gmel. Syst. Nat., vol. i, p. 498 (1788).—LATH., Ind. Orn., tom. i, p. 317 (1790).—SWAINS., B. Braz., pl. 21.

*Trochilus puniceus*, GMEL., Syst. Nat., tom. i, p. 497 (1788).

*Trochilus pileatus*, LATH., Ind. Ornith., vol. i, p. 318 (1790).

*Mellisuga cristata*, GRAY, Gen. Birds, vol. i, p. 113, sp. 98.

*L'oiseau mouche huppé*, LESS., Ois. Mouch. (1829), p. 113, pls. xxxi, xxxii.

*Ornismya cristata*, LESS., Troch., p. 20, pl. 4 (1831).—ID., Gen. and Syn. Troch., p. xxx.—ID., Trait. Ornith., p. 285.

*Orthorhynchus cristatus*, BON., Consp. Gen. Av., vol. i, p. 83 (1850).—REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum. (1855), p. 9.—BON., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Mon. Troch., vol. iv, pl. 205.—ID., Intr. Troch., octavo ed., p. 116 (1861).—CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 61.—ELLIOT, Ibis (1872), p. 355.

*Orthorhynchus ornatus*, GOULD, Mon. Troch., vol. iv, pl. 206.—ID., Intr. Troch., octavo ed., p. 117 (1861).—ELLIOT, Ibis (1872), p. 355.

*Bellona cristata*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 193 (1876).

*Hab.* Islands of St. Vincent, Barbadoes, Martinique, St. Lucia.

*Male.* Forehead and crown golden-green, changing into deep blue on the lengthened crest feathers. Upper surface dark grass-green, darkest on the back of the neck. Wings purplish-brown. Throat smoky-brown. Under surface purplish-

black. Tail purplish-black. Bill and feet black. Total length, 3 in. Wing, 2 in. Tail,  $1\frac{3}{8}$  in. Bill along the gape,  $\frac{5}{8}$  in.

*Female.* Upper surface bronzy-green. Wings purplish-brown. Under surface smoky-gray. Median rectrices bronzy-green; lateral feathers purplish-brown, outermost ones tipped with gray. Bill and feet black.

## 2. *Bellona exilis.*

*Trochilus exilis*, GMEL., Syst. Nat., vol. i, p. 484 (1788).—LATH., Ind. Ornith., vol. i, p. 310 (1790).

*Trochilus cristatellus*, LATH., Ind. Ornith. Supp., p. xxxix (1790).

*Mellisuga exilis*, GRAY, Gen. Birds, vol. i, p. 113, sp. 98.

*Orthorhynchus chlorolophus*, BON., Consp. Gen. Av., vol. i, p. 83 (1850).

*Orthorhynchus exilis*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 9 (1855).—BON., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Mon. Troch., vol. iv, pl. 207.—ID., Intr. Troch., octavo ed., p. 117 (1861).—ELLIOT, Ibis (1872), p. 355.

*Bellona exilis*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 196 (1876).

*Hab.* Islands of Dominica, Nevis, St. Thomas, and St. Croix.

*Male.* Forehead and crown golden-green, blending into grass-green at the tip of the crest. Upper parts bronze-green. Throat smoke brown; under parts purplish-black, glossed with green on the flanks. Wings purple-brown. Middle rectrices dark bronze-green, rest dark purple. Bill and feet black. Total length,  $3\frac{2}{3}$  in. Wing, 2 in. Tail,  $1\frac{5}{8}$  in. Bill along gape,  $\frac{5}{8}$  in.

*Female*, exactly like the female of *O. cristatus*.

Although Gmelin's diagnosis of "*crista basi viridi, apice aurea*," is exactly transposed, for the base of the crest is *golden* and the *tip green*, I deem it most probable he intended to describe this species and therefore leave it under his name, by which it has been so long known.

## Genus XCII.—CEPHALOLEPIS.

*Cephallepis* (*lege Cephalolepis*), LODD., P. Z. S. (1830), p. 12.

*Smaragdites*, REICH. (nec BOIE., 1831), Syst. Av. Nat., pl. 40 (1849).

*Cephalolepis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 61 (1860).

✓ *Orthorhynchus*, BURM. (nec LACEP., 1799), Th. Bras. (1856).

### TYPE.

*T. delalandi*, Vieill.

*T. delalandi*, Vieill.

*T. delalandi*, Vieill.

*T. delalandi*, Vieill.

*Ch.* Bill straight, a little shorter than the head. Nostrils hidden. Head covered with a long rather loose crest, terminating in one, sometimes two, narrow feathers extending far beyond the rest. Wings long. Tail slightly rounded. Tarsi bare. Sexes unlike.

*Range.* Brazil.

I recognize but two species in this genus; which are remarkable for the single lengthened plume rising from the crest. Sometimes there are two of these, and I have one specimen possessing *three*. They are gracefully formed birds, with a pleasing plumage, though not highly luminous.

Fig. 100.



*Cephalolepis delalandi*. ♂ Brazil. Sharpe.

*Key to the species.*

- |  |                          |
|--|--------------------------|
| A. Crown and crest metallic grass-green ; lengthened plume black.    | 1. <i>C. delalandi</i> . |
| B. Crown and crest luminous lilaceous-blue ; lengthened plume black. | 2. <i>C. loddigesi</i> . |

**1. Cephalolepis delalandi.**

- Trochilus delalandi*, VIEILL., Nouv. Dict. Hist. Nat., tom. 22, p. 427, pl. G, 36, fig. 3.—ID., Ency. Méth., vol. ii, p. 558.—TEMM., Pl. Col., pl. 18, figs. 1, 2.—LESS., Ind. Syn. Troch., p. xxx.—SWAINS., B. Braz. pl. 22.
- Trochilus versicolor*, VIEILL., Nouv. Dict. Hist. Nat., tom. 23, p. 430.
- Cephalolepis delalandii*, LODD., P. Z. S. (1830), p. 12.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 187.
- Mellisuga delalandi*, GRAY, Gen. Birds, vol. i, p. 114, sp. 99.
- Cephalolepis lalandii*, BON., Consp. Gen. Av., vol. i, p. 83 (1850).—ID., Rev. and Mag. Zool. (1854), p. 256.
- Cephalolepis delalandi*, REICH., Aufz. der Colib., p. 12 (1853).—GOULD, Mon. Troch., vol. iv, pl. 208.—ID., Intr. Troch., octavo ed., p. 118 (1861).
- Orthorhynchus delalandii*, BURM., Th. Bras., pt. ii, p. 351 (1860).—REICH., Troch. Enum., p. 9 (1855).
- Cephalolepis delalandi*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 61.—SCLAT. and SALV., Nomen., p. 88 (1873).
- Cephalolepis beskii*, VON PELZ, Orn. Bras. (1868), p. 58.—ELLIOT, Ibis (1874), p. 262.

*Hab.* Southern Brazil.

*Male.* Forehead, crown, and short crest feathers glittering grass-green ; lengthened plume black. Upper surface bronzy-green. Small white spot behind the eye. Sides of neck and flanks and under tail coverts brownish-gray, rest of under parts shining violet-blue. Median rectrices bronze-green ; lateral one green at base, changing to black and tipped with white. Wings purplish-brown. Bill black, feet flesh-color. Total length,  $3\frac{3}{8}$  in. Wing, 2 in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{1}{2}$  in.

*Female.* Above bronzy-green ; beneath grayish-brown. Tail like that of the male.

**2. Cephalolepis loddigesi.**

- Trochilus loddigesi*, GOULD, P. Z. S. (1830), p. 12.—LESS., Troch., p. 138, pl. 51.—ID., Gen. Syn. Troch., p. xxx (1831).
- Trochilus opisthocomus*, "LICHT.," Nordm. Ermann. Reise, Verz. v. Thier. und pflanz. atlas, t. 2, fig. 3 (1835).
- Mellisuga loddigesi*, GRAY, Gen. Birds, vol. i, p. 114, sp. 100.
- Cephalolepis loddigesi*, BON., Consp. Gen. Av., vol. i, p. 83 (1850).—ID., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Mon. Troch., vol. iv, pl. 209.—ID., Intr. Troch., octavo ed., p. 118 (1861).
- Cephalolepis loddigesi*, REICH., Aufz. der Colib., p. 12 (1853).
- Orthorhynchus loddigesi*, REICH., Troch. Enum., p. 9 (1855).
- Cephalolepis loddigesi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 61 (note) (1860).
- Cephalolepis loddigesi*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 191 (1876).

*Hab.* Southeastern Brazil.

*Male.* Crown and short feathers of the crest lilaceous-blue ; lengthened plumes black. Upper surface bronze-green. White spot behind the eye. Chin, sides of the neck, flanks, and under tail coverts brownish-gray ; rest of under parts dark blue. Tail bronzy-green ; lateral feathers black near their extremities and tipped with white. Bill black, feet brown. Total length,  $3\frac{3}{4}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{9}{16}$  in.

*Female* like the male, except that the under surface is entirely dull grayish-brown.

## Genus XCIII.—ADELOMYIA.

*Adelomyia*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Adelisca*, CAB. and HEIN., Mus. Hein. Th., iii, p. 72 (1860).

*Ch.* Bill about equal in length to the head, straight. Tail slightly rounded. Wings rather long; primaries slightly curved inward near the tip. Tarsi naked. Sexes alike.

*Range.* Venezuela, Columbia, Ecuador, Peru, and Bolivia.

I recognize four species belonging to this genus. They are birds of small size and plain plumage, only one having any conspicuous metallic hues, and these confined to the throat.

*Key to the species.*

- |   |                            |
|---|----------------------------|
| A. Under parts buff; rufous on the flanks. Throat spotted with brown. | 1. <i>A. cervina</i> .     |
| B. Under parts brown, with bronze reflections on the flanks.          |                            |
| a. Throat spotted with blue.  | 2. <i>A. inornata</i> .    |
| b. Throat spotted with green  | 3. <i>A. chlorospila</i> . |
| c. Throat spotted with dark brown.                                    | 4. <i>A. melanogenys</i> . |

**1. *Adelomyia cervina*.**

*Adelomyia cervina*, GOULD, Ann. Mag. Nat. Hist. (1872), p. 453.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 131.

*Hab.* Columbia, Antioquia (Salmon).

*Adult.* Head and upper parts bronzy-green. Under parts dark buff, becoming rufous on the flanks. Throat spotted or streaked with dark brown. Wings purplish-brown. Tail dark bronze, with a purple gloss near the tips in some specimens, all the feathers tipped with buff. Bill black, feet brown. Total length,  $3\frac{3}{4}$  in. Wing, 2 in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in.

**2. *Adelomyia inornata*.**

*Trochilus* (—?) *inornatus*, GOULD, P. Z. S. (1846), p. 89.

*Mellisuga inornata*, GRAY, Gen. Birds, vol. i, p. 112, sp. 34.

*Rhamphomicron inornatus*, BON., Consp. Gen. Av., vol. i, p. 79 (1850).

*Adelomyia inornata*, GOULD, Mon. Troch., vol. iii, pl. 197.—ID., Intr. Troch., octavo ed., p. 113 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 127.—BON., Rev. and Mag. Zool. (1854), p. 253.—WYATT, Ibis (1871), p. 377.—WHITELEY, P. Z. S. (1873), p. 189.

*Metallura inornata*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5 (1855).

*Adelisca inornata*, CAB. and HEIN., Mus. Hein. Th., iii, p. 72 (note) (1860).

*Hab.* Peru and Bolivia.

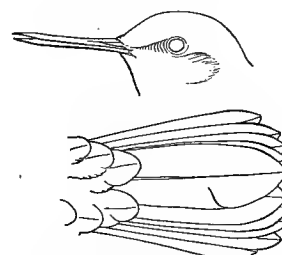
*Male.* Upper surface bronzy-green. Lores rufous, and a buff stripe over the eye. Ear coverts brownish-black. Under surface brown inclining to rufous on the flanks

## TYPE.

*T. melanogenys*, FRAS.

*T. melanogenys*, FRAS.

Fig. 101.



*Adelomyia melanogenys*. ♀. 24658.  
New Granada.

with bronzy reflections; and the feathers of the throat tipped with blue. Wings purple-brown. Tail bronze, tips buff, and a purple gloss beneath the buff. Bill black. Feet flesh-color. Total length,  $3\frac{3}{8}$  in. Wing, 2 in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{9}{16}$  in.

*Female* differs in having the throat spotted with brown.

### 3. *Adelomyia chlorospila*.

*Adelomyia chlorospila*, GOULD, Ann. and Mag. Nat. Hist. (1872), p. 452.—WHITELY, P. Z. S. (1873), p. 189.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 128 (1876).

*Hab.* Peru.

*Adult.* Upper parts bronzy-green, darkest on the head; white spot behind the eye, and a buff stripe over it. Ear coverts black. Under parts pale buff, washed with green on the flanks, and the throat spotted with light green. Wings purplish-brown. Tail bronze with a purple gloss, and tipped with buff. Bill black, feet flesh-color. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in.

Only to be distinguished from *A. inornata* by the green spots on the throat, which, however, are very small and indistinct.

### 4. *Adelomyia melanogenys*.

*Trochilus melanogenys*, FRAS., P. Z. S. (1840), p. 18.

*Trochilus sabinæ*, BOURC. and MULS., Ann. Soc. Ag., Lyon (1846), p. 323.—ID., Rev. Zool. (1846), p. 316.

*Mellisuga sabinæ*, GRAY, Gen. Birds, vol. i, p. 112, sp. 33 (1844-49).

*Mellisuga melanogenys*, GRAY, Gen. Birds, vol. i, p. 112, sp. 35.

*Rhamphomicron sabinæ*, BON., Consp. Gen. Av., p. 79 (1850).

*Rhamphomicron melanogenys*, BON., Consp. Gen. Av., vol. i, p. 79 (1850).

*Adelomyia melanogenys*, GOULD, Mon. Troch., vol. iii, pl. 198.—ID., Intr. Troch., octavo ed., p. 113.—MULS., Hist. Nat. Ois. Monch., tom. iii, p. 131 (1876).

*Metallura sabinæ*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 5, pl. 720, figs. 4636-37 (1855).

*Adelomyia sabinæ*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Adelisca melanogenys*, CAB. and HEIN., Mus. Hein. Th., iii, p. 72 (1860).

*Adelomyia maculata*, GOULD, Mon. Troch., pl. 199.—ID., Intr. Troch., octavo ed., p. 113 (1861).

*Hab.* Venezuela, Columbia, Ecuador, and Peru.

*Adult.* Upper surface golden-green. A white line behind the eye. Ear coverts brownish-black. Under surface brownish-white, washed with rufous and spotted with green on the flanks. Throat spotted with brown. Wings purplish-brown. Rectrices bronzy-brown, with the basal half of inner webs, and tips of the lateral ones buffy-white. Bill black. Length,  $3\frac{5}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in.

## Genus XCIV.—ANTHOCEPHALA.

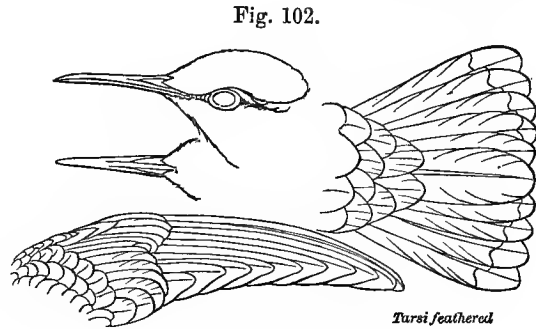
*Anthocephala*, CAB., Mus. Hein. Th., iii (1860), p. 72 (note).

TYPE.  
*T. floriceps*, Gould.

*Ch.* Bill straight, pointed, long as the head. Wings long pointed. Tail rounded.

*Range.* Columbia.

One species is known, and seems to be quite an aberrant form, though, perhaps, nearest allied to ADELOMYIA. It is a small bird, chiefly remarkable for the peculiar coloration of its crown.



*Anthocephala floriceps*. ♂. Type. Columbia. Gould.

1. \**Anthocephala floriceps*.

*Trochilus* (—?) *floriceps*, GOULD, P. Z. S. (1853), p. 62.

*Metallura floriceps*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Trochil. Enum., p. 5 (1855).

*Adelomyia floriceps*, GOULD, Mon. Troch., vol. iii, pl. 202.—BON., Rev. and Mag. Zool. (1854), p. 253.

*Anthocephala floriceps*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 72 (note).—GOULD, Intr. Troch., octavo ed., p. 114 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 125 (1876).

*Hab.* Columbia.

*Male.* "Forehead buffy-white, passing into a beautiful deep peach-blossom hue on the crown; throat gray, passing into the rufous of the abdomen; wings purplish-brown; middle tail feathers bronzy; lateral tail feathers bronzy at the base, passing into purplish-black, and largely tipped with buff; bill black; feet apparently light brown." (Gould, Mon. Troch.)

## Genus XCV.—ABEILLIA.

*Abeillia*, BON., Consp. Gen. Av., vol. i, p. 79 (1850) (*Rhamphomieron*, sp. 4).

*Baucis*, REICH., Aufz. der Colib., p. 13 (1853).

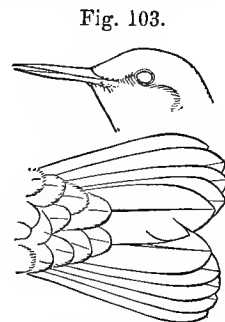
*Myiabeillia*, BON., Rev. and Mag. Zool. (1854), p. 253.

TYPE.  
*O. abeillei*, Delat. and Less.  
*O. abeillei*, Delat. and Less.  
*O. abeillai*, Delat. and Less.

*Ch.* Bill shorter than the head, straight, weak. Wings long pointed, reaching nearly to the end of the tail. The tail is slightly forked when closed. Size small. Sexes dissimilar.

*Range.* Mexico and Central America to Veragua.

But one species is known, and is the representative of a distinct generic form, having but little relationship with any other. The male is adorned with a luminous throat, but otherwise is plainly colored.



*Abeillia typica*, ♂. 50312.  
Guatemala City.

### 1. *Abeillia typica*.

*Ornismya abeillei*, DELATTR. and LESS., Rev. Zool. (1839), p. 16.

*Mellisuga abeillei*, GRAY, Gen. Birds, vol. i, p. 112, sp. 37.

*Rhamphomicron abeillei*, BON., Consp. Gen. Av., vol. i, p. 79 (*Abeillia typica*) (1850).

*Basalinna abeillei*, REICH., Aufz. der Colib., p. 13 (1853).

*Myiabeillia typica*, BON., Rev. and Mag. Zool. (1854), p. 253.—GOULD, Mon. Troch., vol. iv, pl. 211.—ID., Intr. Troch., octavo ed., p. 119.

*Baucis abeillei*, REICH., Troch. Enum., p. 11 (1855).—CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 72.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 144 (1876).

*Hab.* Mexico to Veragua into Central America.

*Male.* Upper surface and flanks shining grass-green. Wings purplish-brown. Throat luminous grass-green. Centre of chest dull black; abdomen ash-gray. Under tail coverts pale green margined with gray. Central rectrices dark grass-green, lateral ones black tipped with gray. Bill black, feet brown. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Under surface brownish-gray; rest like the male.

### Genus XCVI.—KLAIS.

*Klais*, REICH., Aufz. der Colib., p. 13 (1853).

*Basilinna*, CAB. and HEIN. (nec BOIE, 1831), Mus. Hein. Th., iii, p. 44 (1860).

*Guimeti*, "REICH.," BON., Ann. Sc. Nat. (1854), p. 137.

TYPE.

*T. guimeti*, Bourc.

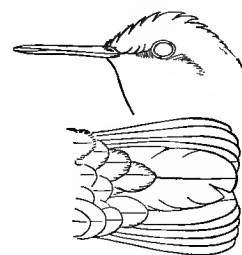
*T. guimeti*, Bourc.

*T. guimeti*, Bourc.?

*Ch.* Bill straight, little longer than the head, wide at base, graduating to a point. Wings long. Tail rounded. Tarsi clothed. Size small. Sexes different.

*Range.* Venezuela and Columbia, Costa Rica.

But one species is known, and appears best placed next to ABEILLIA.



*Klais guimeti*. ♂. Veragua. Boucard.

### 1. *Klais guimeti*.

*Trochilus guimeti*, BOURC. and MULS., Ann. Soc. d'Agr., Lyon (1843), p. 88, pl. 2.—ID., Rev. Zool. (1843), p. 72.

*Hylocharis guimeti*, GRAY, Gen. Birds, vol. i, p. 114, sp. 33.

*Klais guimeti*, REICH., Aufz. der Colib. (1853), p. 13.—ID., Troch. Enum., p. 11 (1855).—GOULD, Mon. Troch., vol. iv, pl. 210.—ID., Intr. Troch., octavo ed., p. 119 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 139 (1876).

*Myiabeillia guimeti*, BON., Rev. and Mag. Zool. (1854), p. 253.

*Basilinna guimeti*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 44.

*Mellisuga merrittii*, LAWR., Ann. Lyc. Nat. Hist. N. Y. (1860), vol. vii, p. 110.

*Clais guimeti*, SCLAT. and SALV., Nomencl., p. 88 (1873).

*Hab.* Costa Rica, Veragua, Venezuela, and Columbia.

*Male.* Top of head and throat dark rich blue. Upper surface bronzy-green. Wings purplish-brown. Feathers of the under surface, ashy at base, pale green at tips. A white spot behind the eye. Tail bronze-green like the back, the lateral



feathers blackish near their ends, and tipped with white. Bill black, feet brown. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{1}{2}$  in.

*Female*. Entire under surface gray, glossed with green on the flanks; rest like the male.

The Costa Rica specimens, named *merrittii* by Lawrence, are paler beneath, but cannot be separated specifically.

Between the last genus and AGLÆACTIS there is no relationship. In fact the birds of this genus stand alone. I have placed them here, however, on account of their peculiar coloration, which is distributed similarly to that seen in ERIOCNEMIS. The most brilliant part of each is the rump which is highly luminous, but the manner of exhibiting it is different, for to be able to perceive the full beauty of the AGLÆACTÆ it is necessary to look at them from behind, towards the head. In their short straight bills they also resemble the species of ERIOCNEMIS. They are rather large birds, with but little difference in the plumage of the sexes; the chief one being that the females have less brilliancy upon their rumps than the males.

#### Genus XCVII.—AGLÆACTIS.

*Aglæactis*, GOULD, P. Z. S. (1848), p. 11.  
*Aglæactis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 69 (1860).

TYPE.  
*T. cupripennis*, Bourc.  
*O. pamela*, D'Orb. and Lafres.

Fig. 105.



*Aglæactis cupripennis*. ♂. New Granada. Whitely.

*Ch.* Bill short, straight. Wings long, primaries falcate. Tail ample, forked when closed. Tarsi partially clothed. Hind toe and nail longer than the middle toe and nail. Sexes similar.

*Range.* Columbia, Ecuador, Peru, and Bolivia.

Four species are recognized.

*Key to the species.*

- A. Tuft of feathers on the breast pale buff.
- a. Entire under parts rufous. 1. *A. cupripennis*.
  - b. Breast dark bronzy-green; abdomen buff. 2. *A. caumatonota*.
- B. Tuft of feathers on the breast pure white.
- a. Rump metallic lilaceous-purple. 3. *A. castelnaudi*.
  - b. Rump metallic-green. 4. *A. pamela*.

**1. *Aglæactis cupripennis*.**

*Trochilus cupripennis*, BOURC. and MULS., Ann. Soc. d'Agr., Lyon (1843), t. vi, p. 46.—ID., Rev. Zool. (1843), p. 71.

*Mellisuga cupripennis*, GRAY, Gen. Birds, vol. i, p. 112, sp. 25.

*Aglæactis cupripennis*, BON., Consp. Gen. Av., vol. i, p. 73 (1850).—ID., Rev. and Mag. Zool. (1854), p. 253.  
—REICH., Aufz. der Colib., p. 9 (1853).—GOULD, Mon. Troch., vol. iii, pl. 179.—ID., Intr. Troch., octavo ed., p. 106.

*Helianthea cupripennis*, REICH., Troch. Enum., p. 6, pl. 737, figs. 4689-90 (1855).

*Aglæactis cupripennis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 69 (1860).

*Aglæactis æquatorialis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 70 (note) (1860).—GOULD, Intr. Troch., octavo ed., p. 106 (1861).

*Aglæactis parvula*, GOULD, Intr. Troch., octavo ed., p. 106 (1861).

*Aglæactis cupripennis*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 24 (1875).

*Hab.* Columbia, Ecuador, and Peru.

*Male.* Top of head and back blackish-brown. Viewed against the feathers, the back is luminous purplish-crimson, grass-green on upper tail coverts; wings purplish-brown; shaft of external feather rufous for three-fourths its length. A tuft of pale buff feathers on the breast, rest of under parts rufous. Middle rectrices rufous at their base, remaining portion bronze, lateral ones rufous margined and tipped with bronze. Maxilla black, mandible flesh-color, tip black. Total length,  $4\frac{5}{8}$  in. Wing,  $3\frac{1}{2}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female* like the male, less luminous on the back.

**2. *Aglæactis caumatonota*.**

*Aglæactis caumatonota*, GOULD, P. Z. S. (1848), p. 12.

*Aglæactis caumatonota*, BON., Consp. Gen. Av., vol. i, p. 73 (1850).—REICH., Aufz. der Colib., p. 9 (1853).

*Helianthea caumatonota*, REICH., Troch. Enum., p. 5 (1855).

*Aglæactis olivaceo-cauda*, LAWR., Ann. N. Y. Lyc. Nat. Hist. (1867), p. 470.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 26 (1875).

*Aglæactis caumatonota*, CAB. and HEIN., Mus. Hein. Th., iii, p. 70 (note 4) (1860).

*Aglæactis caumatonota*, GOULD, Intr. Troch., octavo ed., p. 106 (1861).—WHITELY, P. Z. S. (1873), p. 190.

*Hab.* Peru.

*Male.* Top of head, back, cheeks, and throat brownish-black. Loral space and spot behind the eye rufous. Lower part of back and rump when viewed from behind dark crimson, shading into green on the upper tail coverts. Upper part of breast and sides of neck deep buff. Tuft of buff feathers on the breast. Lower part of breast and flanks dark bronzy-green almost black. Abdomen and under tail coverts reddish-buff. Greater wing coverts olive-green, primaries and secondaries purplish-brown. Shaft of outer primary rufous for three-fourths its length.

Base of central rectrices bright rufous, remaining portion dark olive-green; lateral feathers have two-thirds of the basal portion of the inner webs rufous, rest dark olive-green. Bill and feet black. Total length,  $4\frac{5}{8}$  in. Wing,  $3\frac{1}{2}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{1}{8}$  in.

*Female*. Lighter colored than the male. Head, back, throat, and breast pale brown. Lower part of back less brilliant, rest of plumage like the male.

### 3. *Aglæactis castelnaudi*.

*Trochilus castelnaudii*, BOURC. and MULS., Rev. Zool. (1848), p. 270.

*Trochilus castelnaui*, GRAY, Gen. Birds, vol. iii, App., p. 30 a (1849).

*Aglæactis castelnaui*, GOULD, Mon. Troch., vol. iii, pl. 180.—BON., Rev. and Mag. Zool. (1854), p. 253.

*Aglæactis castelnaudi*, BON., Consp. Gen. Av., vol. i, p. 73 (1850).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 21.

*Aglæactis castelnaudi*, REICH., Aufz. der Colib., p. 9 (1853).—GOULD, Intr. Troch., octavo ed., p. 107 (1861).

—WHITELY, P. Z. S. (1873), p. 190.

*Helianthea castelnaudi*, REICH., Troch. Enum., p. 6, pl. 739, figs. 4693–94 (1855).

*Aglæactis castelnaui*, CAB. and HEIN., Mus. Hein. Th., iii, p. 69 (note 3) (1860).

*Hab.* Peru.

*Male*. Head, upper part of back, throat, breast, and flanks dark bronzy-brown. On lower part of throat is a rufous spot. A tuft of pure white elongated feathers on the breast. Centre of abdomen buff. Under tail coverts rufous. Lower part of back and upper tail covers deep metallic lilaceous-purple. Greater wing coverts olive-green, primaries and secondaries purplish-brown. Shaft of first primary rufous for two-thirds its basal length. Tail rufous, margined with bronzy-green. Bill black, with the exception of a flesh spot at base of mandible. Feet black. Total length,  $4\frac{5}{8}$  in. Wing,  $3\frac{1}{4}$  in. Tail,  $2\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

*Female* similar to the male, but without any luminous feathers on the rump.

### 4. *Aglæactis pamela*.

*Orthorhynchus pamela*, D'ORBIGN. and LAFR., Syn. Av., ii, p. 29, no. 14 (1838).—D'ORB., Voy. dans l'Amer. Mérid. Ois., tom. iv, p. 375, pl. 60, fig. 1.

*Hylocharis pamela*, GRAY, Gen. Birds, vol. i, p. 114, sp. 13.

*Aglæactis pamela*, GOULD, Mon. Troch., vol. iii, pl. 181.—ID., Intr. Troch., octavo ed., p. 107 (1861).

*Aglæactis pamela*, BON., Consp. Gen. Av., vol. i (1850), p. 73.—ID., Rev. and Mag. Zool. (1854), p. 253.—

MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 19.—ELLIOT, Ibis (1877), p. 137.

*Helianthea pamela*, REICH., Troch. Enum., p. 6, pl. 738, figs. 4691–92 (1855).

*Aglæactis pamela*, CAB. and HEIN., Mus. Hein. Th., iii, p. 69 (1860).

*Hab.* Bolivia.

*Male*. Head, upper part of back, and entire under surface, with the exception of a tuft of pure white feathers on the breast, jet-black. Under tail coverts light chestnut. Lower part of back and upper tail covert glittering metallic grass-green. Wings bronzy-brown. Tail chestnut, the feathers edged and tipped with bronzy-brown. Bill and feet black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{3}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female* only differs in not having the black of the plumage of such a velvety hue, but more inclined to a brownish shade.

The genus *ERIOCNEMIS* is one of the most strongly characterized of those composing the Trochilidæ. Many of the species possess a very brilliant plumage, the lower part of the back being especially luminous, and moreover they are distinguished by having large downy puffs upon the tarsi, completely concealing them. These downy feathers are black, white, pale buff, or brown and white. The species are moderate in size, but of a rather robust form, with straight strong bills, and long wings. The general hues of the species are various, and consist of dark gray, green, coppery-red, and purplish-black; while the metallic hues are golden-green, blue, bronze, and others of similar brilliancy. Although many genera have been proposed, I do not see that there are any characters to separate the species, and have kept them all in the term first given.

### Genus XCVIII.—ERIOCNEMIS.

- Eriopus*, GOULD, P. Z. S. (1847), p. 16 (nec TREITSCHKE., 1825, Lepid.).  
*Eriocnemis*, REICH., Syst. Av., pl. xl (1849).  
*Engyete*, REICH., Syst. Av., pl. xl (1849).  
*Threptria*, REICH., Syst. Av., pl. xl (1849).  
*Phemonœ*, REICH., Syst. Av., pl. xl (1849).  
*Eriocnemys!*, BON., Rev. and Mag. Zool. (1854), p. 252.  
<sup>1</sup>*Aline*, "REICH.," BON., Consp. Syst. Ornith., Ann. Sc. Nat., 4th ser. Zool. (1854), tom. i, p. 137.  
<sup>1</sup>*Mosqueria*, "REICH.," BON., Consp. Syst. Ornith., Ann. Sc. Nat., 4th ser. Zool. (1854), tom. i, p. 137.  
<sup>1</sup>*Luciani*, "REICH.," BON., Consp. Syst. Ornith., Ann. Sc. Nat., 4th ser. Zool. (1854), tom. i, p. 137.  
<sup>1</sup>*Derbomiya*, "REICH.," BON., Consp. Syst. Ornith., Ann. Sc. Nat., 4th ser. Zool. (1854), tom. i, p. 137.  
*Erebenna*, MULS. and VERR., Class. Troch. (1865), p. 66.  
*Niche*, MULS., Catal. Ois. Mouch., p. 21 (1875).  
*Pholoe*, MULS., Catal. Ois. Mouch. (1875), p. 22.  
*Nania*, MULS., Catal. Ois. Mouch. (1875), p. 21.  
*Eriona*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 28.

#### TYPE.

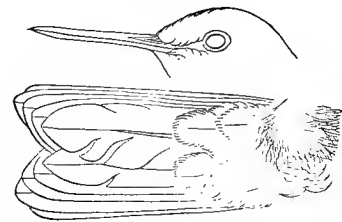
- O. vestita*, Longuem.  
*O. vestita*, Longuem.  
*O. alinae*, Bourc.  
*T. mosquera*, Bourc. and Delatt.  
*T. luciani*, Bourc.  
  
*O. alinae*, Bourc.?  
  
*T. mosquera*, Bourc.?  
  
*T. luciani*, Bourc.?  
  
*T. derbyi*, Bourc. and Delatt.?  
*T. derbyi*, Bourc. and Delatt.  
*T. glaucopoides*, D'Orb. and Lafr.  
*E. dyselæus*, Elliot.  
*T. cupreiventris*, Fras.  
*T. godini*, Bourc.

*Ch.* Bill straight, about as long as the head: nostrils exposed. Wings long pointed. Tail forked. Tarsi thickly clothed with lengthened downy feathers, forming a very conspicuous tuft. Sexes different.

*Range.* Venezuela, Columbia, Ecuador, Peru, and Bolivia.

Seventeen species are now known belonging to this genus.

Fig. 106.



*Eriocnemis aurella*. New Granada. Sharpe.

<sup>1</sup> These four genera are cited by Bonaparte as Reichenbach's. I have not found them in any of Reichenbach's publications that I have seen, and, as no species were given by Bonaparte, there are consequently no types for any of them.

*Key to the species.*

- |   |                                  |
|---|----------------------------------|
| A. Downy puffs on the tarsi, black.   | 1. <i>E. derbiana</i> .          |
| B. Downy puffs on the tarsi, pale brown.  | 2. <i>E. assimilis</i> .         |
| C. Downy puffs on the tarsi, pale chestnut and white.                               |                                  |
| a. Under surface bronzy-green, very dark almost black on the throat.                | 3. <i>E. aureliæ</i> .           |
| b. Under surface dark gray.   | 4. <i>E. squamata</i> .          |
| D. Downy puffs on tarsi, white.   |                                  |
| a. Under tail coverts dark gray.  | 5. <i>E. lugens</i> .            |
| b. Under tail coverts metallic-green.   |                                  |
| a'. Under surface metallic glittering green.  | 6. <i>E. alinæ</i> .             |
| b'. Throat and breast golden-bronze.  | 7. <i>E. mosquera</i> .          |
| c. Under tail coverts shining blue.   |                                  |
| a'. Forehead shining bluish-green.  | 8. <i>E. glaucopoides</i> .      |
| b'. Forehead violet-blue.   | 9. <i>E. luciani</i> .           |
| c'. Upper surface bronzy-green, abdomen copper-red.                                 | 10. <i>E. cupreiventris</i> .    |
| d'. Upper surface green with coppery reflections. Tail dark blue.                   | 11. <i>E. sapphiropygia</i> .    |
| e'. Throat metallic yellowish-green; general plumage copper-color, tail steel-blue. | 12. <i>E. chrySORAMA</i> .       |
| f'. Throat metallic-blue.   |                                  |
| a''. Under surface metallic glittering yellowish-green.                             | 13. <i>E. godini</i>             |
| b''. Breast dark green, black in certain lights, abdomen and flanks metallic-green. | 14. <i>E. vestita</i> .          |
| c''. Breast and under parts golden-green.   | 15. <i>E. smaragdinipectus</i> . |
| d''. General plumage black, with faint green reflections.                           | 16. <i>E. nigrivestis</i> .      |
| d. Under tail coverts purplish-black.   | 17. <i>E. dysclius</i> .         |

**1. *Eriocnemis derbiana*.**

*Trochilus derbyi*, DELATT. and BOURC., Rev. Zool. (1846), p. 306.

*Eriopus derbyi*, GOULD, P. Z. S. (1847), p. 17.—BON., Consp. Gen. Av., vol. i, p. 80 (1850).

*Eriocnemis (Threptia) derbyi*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, pl. 728, figs. 4666-67 (1855).

*Eriocnemys derbyanus*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Eriocnemis derbianus*, GOULD, Mon. Troch., vol. iv, pl. 279.

*Eriocnemis derbiana*, GOULD, Intr. Troch., octavo ed., p. 145 (1861).—ELLIOT, Ibis (1872), p. 295.

*Eriocnemis derbyi*, MULS., Hist. Nat. Ois. Monch., tom. iii, p. 40 (1875).

*Hab.* Ecuador.

*Male.* Forehead shining golden-green: rest of head and back golden-bronze. Under surface brilliant golden-green. Upper and under tail coverts extremely luminous metallic-green. Wings purplish-brown. Tail brownish-black. Tarsal tufts jet-black. Bill and feet black. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

*Female.* Differs in having the feathers of the under surface white at their base, tips golden-green. Tarsal tufts white. In other respects she resembles the male. (Type in my collection.)

**2. *Eriocnemis assimilis*.**

*Eriocnemis assimilis*, ELLIOT, Bull. Zool. Soc., France (1876), p. 227.

*Hab.* Environs of Tilotilo and Apollo, Bolivia.

*Adult.* Head, neck, and upper tail coverts coppery-red. Back and wing coverts shining green. Wings purple-brown. Under parts shining green with a coppery-lustre, lightest on the throat. Abdomen buff. Under tail coverts shining green, margined with buff. Tarsal tufts pale brown. Tail bronze at the base, passing to black at the tips. Bill black; feet light brown. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

### 3. *Eriocnemis aureliæ.*

*Trochilus aureliæ*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1846), p. 315, pl. 10.—ID., Rev. Zool. (1846), p. 316.

*Hylocharis aureliæ*, GRAY, Gen. Birds, vol. i, p. 114, sp. 8.

*Eriopus aureliæ*, BON., Consp. Gen. Av., vol. i, p. 80 (1850).

*Eriocnemis aureliæ*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, pl. 727, figs. 4660-61.—GOULD, Mon. Troch., vol. iv, pl. 283.—ID., Intr. Troch., octavo ed., p. 146 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 51 (1875).—ELLIOT, Ibis (1872), p. 295.

*Eriocnemys aureliæ*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Eriocnemys russata*, GOULD, P. Z. S. (1871), p. 505.

*Hab.* Columbia and Ecuador.

*Adult.* Upper surface bronzy-green with a rufous tinge on the head. Upper tail coverts coppery-bronze. Under surface bronzy-green, almost black on the throat; feathers of the vent fringed with white. Tarsal tufts pale chestnut and white. Under tail coverts grass-green. Bill black, feet flesh-color. Tail bluish-black. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.) The bill varies slightly in length among individuals, some reaching an inch in length; this is the *E. russata* of Gould.

### 4. *Eriocnemis squamata.*

*Eriocnemis squamata*, GOULD, P. Z. S. (1860), p. 311.—ID., Mon. Troch., vol. iv, pl. 281.—ID., Intr. Troch., octavo ed., p. 146 (1861).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 55 (1875).

*Hab.* Ecuador.

*Adult.* Upper surface bronzy-green, inclining to coppery-bronze on the head and upper tail coverts. Under parts dark leaden-gray, washed with green on the flanks, and the feathers of the throat edged with white. Front part of tarsal tufts white, hind portion buff. Tail blue-black. Wings purplish-brown. Bill black, feet brown. Total length, 4 in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{5}{8}$  in.

### 5. *Eriocnemis lugens.*

*Eriopus lugens*, GOULD, Jard. Contr. Ornith. (1851), p. 140.

*Eriocnemys lugens*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Eriocnemis (Threptria) lugens*, REICH., Troch. Enum., p. 6, pl. 740, figs. 4695-96.—ID., Aufz. der Colib., p. 9 (1853).

*Eriocnemis lugens*, GOULD, Mon. Troch., vol. iv, pl. 282.—ID., Intr. Troch., octavo ed., p. 146 (1861).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 53 (1875).

*Hab.* Ecuador.

*Adult.* Precisely the same in coloration as the *E. squamata*, except that the tarsal tufts are pure white. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

### 6. *Eriocnemis alinæ.*

- Ornismya alinæ*, BOURC., Ann. Soc. Agr., Lyon (1842), p. 343, pl. xx.—ID., Rev. Zool. (1842), p. 373.  
*Hylocharis alinæ*, GRAY, Gen. Birds, vol. i, p. 114, sp. 6.  
*Eriopus alinæ*, BON., Consp. Gen. Av., vol. i, p. 80 (1850).  
*Eriocnemis (Engyete) alinæ*, REICH., Aufz. der Colib., p. 9.—ID., Troch. Enum., p. 5, pl. 726, figs. 4655–56.  
*Eriocnemys alinæ*, BON., Rev. and Mag. Zool. (1854), p. 252.  
*Eriocnemis alinæ*, GOULD, Mon. Troch., vol. iv, pl. 280.—ID., Intr. Troch., octavo ed., p. 145.—CAB. and HEIN., Mus. Hein. Th., iii, p. 73 (1860).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 30 (1875).

*Hab.* Columbia.

*Adult.* Upper surface shining grass-green. Forehead and entire under surface, except a white spot on the breast, metallic glittering green. Tarsal tufts very long and thick, pure white. Tail dark shining green. Wings purplish-brown. Bill black, feet brown. Total length,  $3\frac{3}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

### 7. *Eriocnemis mosquera.*

- Trochilus mosquera*, BOURC. and DELATTRE., Rev. Zool. (1846), p. 306  
*Hylocharis mosquera*, GRAY, Gen. Birds, vol. i, p. 114, sp. 5.  
*Eriopus mosquera*, BON., Consp. Gen. Av., vol. i, p. 80 (1850).  
*Eriocnemis (Threptria) mosquera*, REICH., Troch. Enum., p. 6, pl. 728, figs. 4664–65.—ID., Aufz. der Colib., p. 9 (1853).  
*Eriocnemis mosquera*, GOULD, Mon. Troch., vol. iv, pl. 274.—ID., Intr. Troch., octavo ed., p. 144 (1861).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 49.  
*Eriocnemys mosquera*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Hab.* Columbia.

*Adult.* Upper surface bronzy-green, graduating into pure green on the rump, and becoming luminous on the upper tail coverts. Throat and breast golden-bronze, very luminous, this color passing over the sides of the neck on to the back. Flanks and abdomen shining bronzy-green. Tarsal tufts white. Under tail coverts shining green. Median rectrices bright green, lateral ones shining green at base, graduating into dark green at tips. Wings purplish-brown. Bill and feet black. Total length,  $4\frac{9}{16}$  in. Wing,  $2\frac{7}{8}$  in. Tail,  $2\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in.

### 8. \**Eriocnemis glaucopoides.*

- Ornismya glaucopoides*, D'ORB. and LAFR., Syn. Av., ii, p. 27, sp. 7 (1838).  
*Trochilus d'orbigny*, BOURC. and MULS., Ann. Sc. Phys. Nat., Lyons (1846), p. 320.  
*Hylocharis d'orbigny*, GRAY, Gen. Birds, vol. i, p. 114, sp. 10.  
*Thalurania glaucopoides*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 3 (1855).—BON., Rev. and Mag. Zool. (1854), p. 254.  
*Eriocnemis (Phemonè) d'orbigny*, REICH., Troch. Enum., t. 741, fig. 4697.—ID., Aufz. der Colib., p. 9 (1853).  
*Eriocnemys d'orbigny*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Eriocnemis d'orbigny*, GOULD, Mon. Troch., vol. iv, pl. 278.—ID., Intr. Troch., octavo ed., p. 145.—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 29 (1875).—SCLAT. and SALV., Nomencl., p. 91.

*Eriocnemis glaucopoides*, ELLIOT, Ibis (1877), p. 136.

*Hab.* Valle Grande Bolivia.

*Male.* Forehead violet-blue, a white spot behind the eye. Upper surface bronzy-green. Under surface glittering golden-green, washed with blue on the throat and chest. Tail bluish-black. Bill black. Tarsal tufts pure white. Under tail coverts shining blue. Total length,  $4\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in. Unique type in Paris Museum.

### 9. *Eriocnemis luciani*.

*Trochilus luciani*, BOURC., Ann. Soc. Agr., Lyon (1847), p. 624.

*Hylocharis luciani*, GRAY, Gen. Birds, vol. i, p. 114, sp. 4.

*Eriopus luciani*, BON., Consp. Gen. Av., vol. i, p. 80 (1850).

*Eriocnemis (Pheomonöe) luciani*, REICH., Troch. Enum., p. 6, pl. 730, figs. 4771-72.—ID., Aufz. der Colib., p. 9 (1853).

*Eriocnemis luciani*, GOULD, Mon. Troch., vol. iv, pl. 273.—ID., Intr. Troch., octavo ed., p. 144 (1861).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 47.

*Eriocnemys luciani*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Hab.* Ecuador.

*Adult.* Forehead shining bluish-green. Upper surface bronzy-green, becoming glittering grass-green on the upper tail coverts. Wings purplish-brown. Under surface glittering golden-green. Under tail coverts rich violet-blue. Tail blue-black. Bill black, feet brown. Total length,  $4\frac{7}{8}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $2\frac{1}{2}$  in. Culmen,  $\frac{1}{6}$  in.

*Female* like the male but a little smaller.

### 10. *Eriocnemis cupreiventris*.

*Ornismya vestita*, ♀, LONGUEM., Rev. Zool. (1838), p. 314.

*Trochilus cupreiventris*, FRAS., P. Z. S. (1848), p. 15.

*Eriopus simplex*, GOULD, P. Z. S. (1849), p. 96.

*Hylocharis cupreiventris*, GRAY, Gen. Birds, vol. i, p. 114, sp. 3.

*Eriopus cupreiventris*, BON., Consp. Gen. Av., vol. i, p. 80 (1850).

*Eriocnemis (Pheomonöe) cupreiventris*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, pl. 729, figs. 4668-69.

*Eriocnemys cupreiventris*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Eriocnemys simplex*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Eriocnemis cupreiventris*, GOULD, Mon. Troch., vol. iv, pl. 270.—ID., Intr. Troch., octavo ed., p. 143 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 73.—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 45 (1875).

*Eriocnemis simplex*, GOULD, Mon. Troch., vol. iv, pl. 271.—REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., pl. 729, fig. 4670 (1855).

*Hab.* Columbia.

*Adult.* Upper parts bronzy-green, passing into luminous grass-green on the upper tail coverts. Throat and breast shining grass-green passing into coppery-red on the abdomen. Under tail coverts dark shining blue. Tarsal tufts white. Tail blue-black. Bill and feet black. Wings purplish-brown. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.



**11. \*Eriocnemis sapphiropygia.**

*Eriocnemis sapphiropygia*, TACZAN., P. Z. S. (1874), p. 139.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 37 (1875).

*Hab.* Peru.

*Adult.* Upper parts bronzy-green, passing into pure green on the rump and upper tail coverts. Wings purplish-black. Under surface glittering green. Under tail coverts shining sapphire-blue. Tarsal tufts white. Tail dark blue. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail, 2 in. Bill along the gape,  $1\frac{1}{8}$  in.

**12. Eriocnemis chrysorama.**

*Eriocnemis chrysorama*, ELLIOT, Ann. Mag. Nat. Hist. (1874), p. 375.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 44.

*Hab.* Ecuador.

*Adult.* Upper and lower surface metallic fiery-copper color. Chin and throat metallic yellowish-green; golden-yellow in some lights. Upper tail coverts luminous yellowish-green. Under tail coverts white on their basal half, rest blue. Wings purplish-brown. Tail much forked, steel-black. Tarsal tufts pure white. Bill black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{4}$  in. Bill,  $\frac{7}{8}$  in. (Type in my collection.)

**13. Eriocnemis godini.**

*Trochilus godini*, BOURC., Compt. Rend., tom. xxxii, p. 186 (1851).

*Eriocnemis godini*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6 (1855).—GOULD, Mon. Troch., vol. iv, pl. 277.—ID., Intr. Troch., octavo ed., p. 145 (1861).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 36.

*Eriocnemys godini*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Hab.* Ecuador.

*Adult.* Head and back bronzy-green, rump and upper tail coverts luminous grass-green. Under surface golden-green, with a bright blue spot in the centre of the throat. Tarsal tufts pure white. Under tail coverts bright smalt. Wings purplish-brown. Tail blue-black. Bill and feet black. Total length, 4 in. Wing,  $2\frac{3}{16}$ . Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{5}{8}$  in. (Type in my collection.)

**14. Eriocnemis vestita.**

*Ornismya vestita*, LONGUEM., Rev. Zool. (1838), p. 314.

*Trochilus uropygialis*, FRAS., P. Z. S. (1840), p. 15.

*Hylocharis vestita*, GRAY, Gen. Birds, vol. i, p. 114, sp. 2.

*Ornismya glomata*, LESS., Echo du Monde Savant. (1843).

*Eriopus vestita*, BON., Cousp. Gen. Av., vol. i, p. 80 (1850).

*Eriocnemis vestita*, REICH., Aufz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6, pl. 726, figs. 4657-59.—GOULD, Mon. Troch., vol. iv, pl. 275.—ID., Intr. Troch., octavo ed., p. 145 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 73 (1860).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 33.—ELLIOT, Ibis (1876), p. 10.

*Eriocnemys vestitus*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Mellisuga ridolfi*, BENV., Ann. R. Mus. Flor. (1865), p. 205.

*Hab.* Venezuela and Columbia.

*Male.* Upper parts dark shining green. Rump and upper tail coverts metallic yellowish-green, intensely luminous. Throat and under tail coverts violet-blue. Breast dark green, black in certain lights; rest of under parts glittering metallic golden-green. Tarsal tufts pure white. Tail steel-black. Bill and feet black. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Differs in having the throat and upper part of the breast reddish-buff, feathers of the throat tipped with blue, those on the breast spangled with golden-green. Centre of abdomen and vent white. Under tail coverts blue margined with white. In all other respects she resembles the male.

Some male specimens, which may possibly be in partly immature dress, or seasonal state, have the breast more or less mottled with rufous.

### 15. *Eriocnemis smaragdinipectus.*

*Eriocnemis smaragdinipectus*, GOULD, Ann. Mag. Nat. Hist. (1868), p. 322.—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 35.

*Hab.* Ecuador.

*Adult.* This species only differs from the *E. vestita* by having the brilliant metallic-green of the breast extend quite to the throat mark, without the dark almost black hue that covers the breast of the common species. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.

### 16. *Eriocnemis nigrivestis.*

*Trochilus nigrivestis*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1852), p. 144.

*Eriocnemis nigriventris*, REICH., Aufz. der Colib., p. 9 (1853).

*Eriocnemys nigrivestis*, BON., Rev. and Mag. Zool. (1854), p. 252.

*Eriocnemis nigrivestis*, REICH., Troch. Enum., p. 6 (1855).—GOULD, Mon. Troch., vol. iv, pl. 276.—ID., Intr. Troch., octavo ed., p. 145 (1861).—ELLIOT, Ibis (1872), p. 295.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 38.

*Hab.* Ecuador.

*Male.* General plumage black, with green reflections. Throat metallic-blue. Wings purplish-black. Upper tail coverts indigo-blue; under tail coverts violet-blue. Tarsal tufts white. Tail blue-black. Bill and feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in. (Type in my collection.)

*Female.* Upper surface bronzy-green, becoming pure green on rump and upper tail coverts, these last luminous. Throat blue, breast golden-bronze. Under parts shining green. Tarsal tufts white. Under tail coverts violet-blue. Tail blue-black. Bill and feet black.

### 17. *Eriocnemis dyselius.*

*Eriocnemis dyselius*, ELLIOT, Ibis (1872), p. 294.—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 50.—SCLAT. and SALV., Nomencl., p. 91 (1873).

*Hab.* Ecuador.

Head and upper parts black with a purple gloss; upper tail coverts with a greenish gloss. Throat and under parts black, with a purple gloss on the abdomen and under tail coverts. Wings purplish-black. Tarsal tufts pure white. Tail deeply forked, steel-blue with purple reflections. Bill black, feet black. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

## Genus XCIX.—PANTERPE.

*Panterpe*, CAB. and HEIN., Mus. Hein. Th., iii, p. 43 (1860).

TYPE.

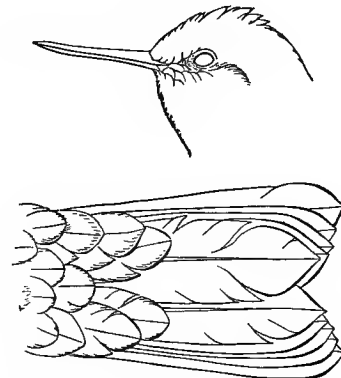
*P. insignis*, Cab. an. Hein.

*Ch.* Size large. Bill straight, slender, about as long as the head. Nostrils exposed. Wings long, first primary slightly falcate. Tail slightly forked when open. Feet large, tarsi bare. Sexes alike.

*Range.* Costa Rica, Chiriqui.

One species only is known, but a very beautiful one with a brilliant metallic throat. It is a large bird, and the sexes are apparently alike richly colored. I think it should be placed near to *ERIOC-NEMIS*.

Fig. 107.



*Panterpe insignis*. ♂. 74025. Costa Rica.

**1. *Panterpe insignis*.**

*Panterpe insignis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 43 (note) (1860).—GOULD, Mon. Troch., vol. v, pl. 336.—ID., Intr. Troch., octavo ed., p. 167 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 25.

*Hab.* Costa Rica, Chiriqui.

*Adult.* Crown of the head shining dark blue. Upper parts, lower part of abdomen, and under tail coverts bronzy-green. Nape of neck showing black in certain lights. Throat metallic-scarlet, bordered on the side with luminous yellow-green. Centre of breast deep blue. Upper tail coverts cobalt. Wings purplish-brown. Tail steel-blue. Bill black, base of mandible flesh-color. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{7}{8}$  in.

Between *PANTERPE* and *URANOMITRA* there is a gap. The members of the latter genus, which is now reached, are of moderate size, have a green and white plumage, metallic hues appearing chiefly upon the head and upper surface; and some species have bright red bills. There is no difference in the plumage of the sexes the female being as gayly dressed as the male.

## Genus C.—URANOMITRA.

*Uranomitra*, REICH., Aufz. der Colib. (1853), p. 10.  
*Cyanomyia*, BON., Rev. and Mag. Zool. (1854), p. 254.  
*Leucolia*, MULS., Catal. Ois. Mouch. (1875), p. 8.  
*Leucolia*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 24.

TYPE.

*T. francia*, Bourc.  
*T. cyanocephala*, Less.  
*C. viridifrons*, Elliot?  
*T. cyanicollis*, Gould.

*Ch.* Bill longer than the head, straight or slightly curved; broad and flat at base; nostrils exposed. Wings reaching nearly to the end of the tail, and pointed. Tail rather rounded. Tarsi partly clothed. Sexes alike.

*Range.* Mexico, Central America, Columbia, and Peru.

Seven species are known.

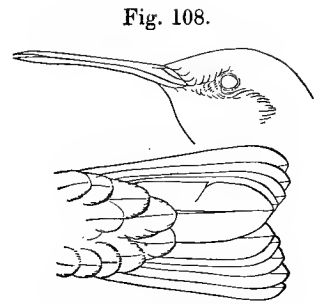


Fig. 108.  
*Uranomitra cyanocephala*. ♀. 28855.  
Tres Marias.

*Key to the species.*

- |  |                             |
|--|-----------------------------|
| A. Entire under parts pure white.  |                             |
| a. Tail olive-green; top of head metallic-blue, sometimes with purple reflections. | 1. <i>U. quadricolor</i> .  |
| b. Tail bronzy-red; top of head metallic-purple, sometimes with blue reflections.  | 2. <i>U. violiceps</i> .    |
| c. Tail metallic golden, tip bronzy-red; top of head dull metallic dark green.     | 3. <i>U. viridifrons</i> .  |
| B. Breast and abdomen white; flanks metallic-green or bronze.                      |                             |
| a. Under tail coverts greenish-gray.   | 4. <i>U. cyanocephala</i> . |
| b. Under tail coverts bronzy-red.  | 5. <i>U. microrhyncha</i> . |
| c. Under tail coverts white; top of head blue.                                     | 6. <i>U. franciæ</i> .      |
| d. Under tail coverts white; top of head and nape blue.                            | 7. <i>U. cyanicollis</i> .  |

## 1. *Uranomitra quadricolor*.

*Trochilus quadricolor*, VIEILL., Ency. Méth., p. 573, tom. ii.

*Polytmus quadricolor*, GRAY, Gen. Birds, vol. i, p. 119, sp. 85.

*Trochilus verticalis*, LICHT., Preis-Verz., Thier. (1830), nos. 27-28.

*Uranomitra quadricolor*, REICH., Aufz. der Colib., p. 10 (1853).—CAB. and HEIN., Mus. Hein. Th., iii, p. 41 (1860).

*Argyrtria (Uranomitra) quadricolor*, REICH., Troch. Enum., p. 7, pl. 761, figs. 4758-59 (1855).

*Cyanomyia quadricolor*, BON., Rev. and Mag. Zool. (1854), p. 254.—GOULD, Mon. Troch., vol. v, pl. 284.—ID., Intr. Troch., octavo ed., p. 147 (1861).—ELLIOT, Ibis (1876), p. 312.

*Leucolia quadricolor*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 217.

*Hab.* Northern Mexico.

*Adult.* Top of head rich metallic-blue, sometimes with purple reflections. Upper surface pale brown tinged with green. Wings purple-brown. Entire under surface pure white. Tail pale bronzy-brown. Bill coral-red, tip brown. Feet black. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{7}{8}$  in.

## 2. *Uranomitra violiceps*.

*Cyanomyia violiceps*, GOULD, Ann. Mag. Nat. Hist. (1859), p. 97.—SCLAT., P. Z. S. (1859), p. 386.—GOULD, Mon. Troch., vol. v, pl. 285.—ID., Intr. Troch., octavo ed., p. 147 (1861).—ELLIOT, Ibis (1876), p. 313.

*Uranomitra violiceps*, CAB. and HEIN., Mus. Hein. Th., iii, p. 41 (note 5) (1860).

*Leucolia violiceps*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 214.

*Hab.* Mexico.

*Adult.* Differs from the *U. quadricolor* in having the tail a bronzy-red hue. Dimensions the same.

**3. Uranomitra viridifrons.**

*Cyanomyia viridifrons*, ELLIOT, Ann. and Mag. Nat. Hist. (1871), vol. viii, p. 267.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 224.

*Hab.* Putla, Mexico.

*Adult.* Forehead dark green, metallic in some lights. Centre of crown dark gray. Upper part of back brilliant light green, lower part of back bronzy-brown. Wings purple. Upper tail coverts and tail rich coppery-bronze. Flanks grass-green. Entire under parts pure white. Bill reddish, black at tip. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in. (Type in my collection.)

**4. Uranomitra cyanocephala.**

*Ornismya cyanocephala*, LESS., Supp. Ois. Mouch., p. 134, pl. 18 (1831).

*Polytmus verticalis*, GRAY, Gen. Birds, vol. i, p. 109, sp. 86.

*Uranomitra cyanocephala*, REICH., Aufz. der Colib. (1853), p. 10.

*Agyrtria (Uranomitra) cyanocephala*, REICH., Troch. Enum., p. 7, pl. 760, figs. 4754-55 (1855).

*Agyrtria faustinae*, REICH., Troch. Enum., tom. i, p. 7, pl. 760, figs. 4756-57 (1855).

*Cyanomyia verticalis*, BON., Rev. and Mag. Zool. (1854), p. 254.

*Cyanomyia cyanocephala*, BON., Rev. and Mag. Zool. (1854), p. 254.—GOULD, Mon. Troch., vol. v, pl. 286.—

Id., Intr. Troch., octavo ed., p. 147 (1861).—ELLIOT, Ibis (1876), p. 314.

*Cyanomyia guatemalensis*, GOULD, Intr. Troch., octavo ed., p. 148 (1861).

*Uranomitra lessoni*, CAB. and HEIN., Mus. Hein. Th., iii, p. 41 (1860).

*Leucolia cyanocephala*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 219.

*Hab.* Mexico, Guatemala, Honduras.

*Adult.* Top of head shining greenish-blue. Upper surface and flanks bronzy-green. Wings purplish-bronze. Tail pale green-bronze. Throat and middle of abdomen white. Under tail coverts olive fringed with white. Maxilla black, mandible flesh-color, tip black. Feet black. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

**5. Uranomitra microrhyncha.**

*Cyanomyia microrhyncha*, ELLIOT, Ibis (1876), p. 316.

*Hab.* Honduras?

*Adult.* "Top of head and occiput dark metallic-blue. Hind neck and mantle shining metallic-green; rest of upper parts bronzy-red. Throat, upper part of breast, and centre of abdomen white, with a few metallic-green feathers scattered among the white ones. Flanks and under tail coverts metallic bronzy-red. Wings deep brown, slightly shaded with purple. Tail brilliant metallic-bronze. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{1}{2}$  in." (Type in my collection.)

**6. Uranomitra franciæ.**

*Trochilus franciæ*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1846), tom. ix, p. 324.

*Polytmus franciæ*, GRAY, Gen. Birds, vol. i, p. 109, sp. 87.

*Uranomitra franciæ*, REICH., Aufz. der Colib., p. 10 (1853)—CAB. and HEIN., Mus. Hein. Th., iii, p. 41 (1860).

*Agyrtria franciæ*, REICH., Troch. Enum., p. 7, pl. 761, figs. 4760-61 (1855).

- Cyanomyia franciæ*, BON., Rev. and Mag. Zool. (1854), p. 254.—GOULD, Mon. Troch., vol. v, pl. 287.—ID., Intr. Troch., octavo ed., p. 149 (1861).—ELLIOT, Ibis (1876), p. 316.  
*Leucolia franciæ*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 217.  
*Trochilus hypoleucus*, LICHT., Mus. Berlin.

*Hab.* Columbia.

*Adult.* Top of head and occiput shining blue. Sides and nape of neck brilliant metallic pale green. Upper parts bronzy-green, changing to coppery-red on the rump and upper tail coverts. Wings purplish-brown. Flanks bronzy-green. Entire rest of under parts pure white. Tail greenish-bronze. Maxilla and tip of mandible black, base of latter flesh-color. Feet black. Total length,  $3\frac{3}{4}$  in. Wing, 2 in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{8}$  in. (Type in my collection.)

*Young* have the crown green, and a dark band on the lateral rectrices.

### 7. \**Uranomitra cyanicollis*.

- Trochilus* (—?) *cyanicollis*, GOULD, P. Z. S. (1853), p. 61.  
*Uranomitra cyanicollis*, REICH., Aufz. der Colib. (1853), p. 10.—ID., Troch. Enum., p. 7 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 41 (note 4) (1860).  
*Cyanomyia cyanicollis*, BON., Rev. and Mag. Zool. (1854), p. 254.—GOULD, Mon. Troch., vol. v, pl. 288.—ID., Intr. Troch., octavo ed., p. 149 (1861).—ELLIOT, Ibis (1876), p. 316.  
*Leucolia cyanicollis*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 212.

*Hab.* Peru.

“Crown of the head, sides, and nape of the neck greenish-blue; upper surface bronzy-green; throat, centre of the abdomen, and under tail coverts white; flanks bronzy-brown; tail bronzy-green, all but the two middle feathers crossed near the tip with an obscure dusky band; upper mandible and tip of the lower mandible black, the remainder of the latter fleshy-white; feet dark brown.” (Gould, Mon. Troch.) Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{1}{2}$  in. Bill,  $\frac{7}{8}$  in.

### Genus CI.—LEUCIPPUS.

- <sup>1</sup>*Leucippus*, BON., Compt. Rend., p. 382 (1850).  
*Talaphorus*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 257.

TYPE.

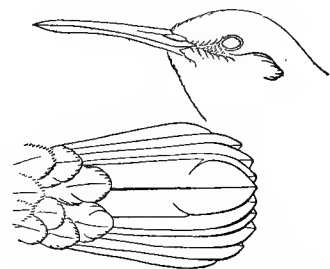
- T. chionogaster*, Tsch.  
*T. chlorocercus*, Gould.

Fig. 109.

*Ch.* Bill longer than the head, slightly curved, narrow and rounded at base, nostrils exposed; wings long and pointed. Tail rounded. Tarsi clothed to the toes. Sexes alike.

*Range.* Brazil, valley of the Amazon; Peru and Bolivia.

Two species are known.



*Leucippus chlorocercus*, ♂. 55378. Pebas, Peru.

<sup>1</sup> Bonaparte (l. c.) gives the *T. turneri*, Bourc. (= *T. chionogaster*, Tsch.), and *T. fallax*, Bourc., as the types of his genus LEUCIPPUS, but afterwards (1854) made the latter the type of his genus DOLEROMYIA.

*Key to the species.*

- A. Throat pure white; tail dark bronze-green. 1. *L. chionogaster*.  
 B. Throat spotted with brown, tail pale green, tipped with grayish-white. 2. *L. chlorocercus*.

This genus is extremely close to *Uranomitra*, and it may well be questioned if its members are really generically distinct from the species grouped together under the above term. A slight difference in the shape of the bill at its base appears to be the only generic character the two birds named above possess.

**1. *Leucippus chionogaster*.**

- Trochilus (Lampornis) leucogaster*, TSCH., Consp. Av., p. 37.  
*Trochilus chionogaster*, TSCH., Faun. Per., p. 247, pl. 22, fig. 2 (1844).  
*Trochilus turneri*, BOURC., Rev. Zool. (1846), p. 313.  
*Trochilus* (—?) *hypoleucus*, GOULD, P. Z. S. (1857), p. 90.  
*Polytmus chionogaster*, GRAY, Gen. Birds, vol. i, p. 108, sp. 49.  
*Polytmus hypoleucus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 56.  
*Thaumatias leucogaster*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).  
*Leucippus turneri*, BON., Consp. Gen. Av., vol. i, p. 73 (1850).—REICH., Aufz. der Colib. (1853), p. 11.—ID., Troch. Enum., p. 8 (1855).  
*Thaumatias chionogaster*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Leucippus nigrirostris*, REICH., Troch. Enum., p. 8, t. 779, fig. 4812? (1855).  
*Leucippus chionogaster*, GOULD, Mon. Troch., vol. v, pl. 290.—ID., Intr. Troch., octavo ed., p. 150.—CAB. and HEIN., Mus. Hein. Th., iii, p. 31 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 259.  
*Leucippus pallidus*, TACZANOW., P. Z. S. (1874), p. 542.  
*Leucippus leucogaster*, ELLIOT, Ibis (1876), p. 8.

*Hab.* Peru and Bolivia.

*Adult.* Upper parts and flanks bronzy-green. Under surface pure white. Under tail coverts pale green edged with white. Wings purplish-brown. Tail feathers dark bronzy-green, with the inner webs and shafts of lateral ones white. Maxilla and tip of mandible black, rest of latter flesh-color. Feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{8}$  in.

I have retained Tschudi's second name of *chionogaster* as being more strictly correct than *leucogaster*.

**2. *Leucippus chlorocercus*.**

*Leucippus chlorocercus*, GOULD, P. Z. S. (1866), p. 194.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 257.

*Hab.* Banks of the upper Ucayali, eastern Peru.

*Adult.* This species resembles closely the *L. chionogaster*, but differs in having the throat spotted with brown. Tail pale green, with a faint subterminal bar of darker green, and tipped with grayish-white, this extending as it goes outwards, until it covers the whole outer web of the external feather. Bill black, feet brown. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{8}$  in.

## Genus CII.—LEUCOCHLORIS.

*Leucochloris*, REICH., Aufz. der Colib., p. 10 (1853).

TYPE.

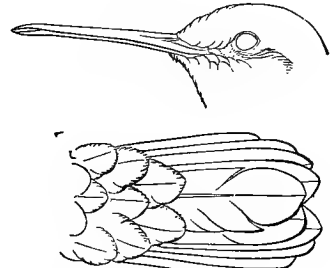
*T. albicollis*, Vieill.

Fig. 110.

*Ch.* Bill straight, slightly longer than head, wide at base; feathers of the forehead projecting slightly on the culmen, hiding the nostrils. Tail rounded. Tarsi clothed. Sexes alike.

*Range.* Brazil.

One species is known, and naturally finds its place here.

*Leucochloris albicollis*. 24783. Brazil.1. *Leucochloris albicollis*.

*Trochilus albicollis*, VIEILL., Nouv. Dict. Hist. Nat. (1818), tom. 23, p. 426.

*Ornismya albicollis*, LESS., Ois. Mouch., p. 184, pl. 63 (1829).—D'ORB. and LAFRES., Syn. Av., ii, p. 30, sp. 19 (1838).

*Colibri alboocularis*, SPIX., Av. Bras., t. i, p. 81, pl. 82, fig. 1 (1825).

*Basilinna albicollis*, LESS., Ind. Gen. and Syn. Ois. Genre. Troch., p. xxv (1831).

*Polytmus albicollis*, GRAY, Gen. Birds, vol. i, p. 108, sp. 43.

*Thaumatias albicollis*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).

*Leucochloris albicollis*, REICH., Aufz. der Colib., p. 10 (1853).—GOULD, Mon. Troch., vol. v, pl. 291.—ID., Intr. Troch., octavo ed., p. 151 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 261.—ELLIOT, Ibis (1877), p. 138.

*Thaumatias albicollis*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Leucippus albicollis*, REICH., Troch. Enum., p. 8, pl. 782, figs. 4818-19 (1855).

*Agyrtria albicollis*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 32.

*Hab.* Brazil.

*Adult.* Upper surface, chin, flanks, and abdomen shining grass-green. Throat, breast, abdomen, and under tail coverts white. Wings purplish-brown. Median rectrices dark grass-green; lateral ones black, the three outermost tipped with white. Maxilla and tip of mandible black, rest of latter flesh-color; feet black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{5}{8}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{1}{8}$  in.

The members of the next genus, which in the regular order of succession comes here, are birds of moderate size, and of a pleasing plumage, the chief colors of which are green and white. The genus comprises a large number of species, in fact is one of the most extensive among the Trochilidæ. Subsequent to the publication of Mr. Gould's Monograph of the Family, it has been known as the genus THAUMATIAs, but as this term was applied by Bonaparte to a bird belonging to an entirely different genus (viz., *Trochilus thaumantias*, Linn.), and was, moreover, preoccupied by Eschscholtz for a genus of Acalephs, it of course cannot be continued, and that of AGYRTRIA proposed by Reichenbach is the one that has priority.—There is no difference in the plumage of the sexes, the females having as much metallic coloring as the males.—For the discussion of the synonymy of the various species, and their relative claims to such a rank, I would suggest that my article published in the Ibis for January, 1878, upon the genus THAUMATIAs (Gould) should be consulted.



## Genus CIII.—AGYRTRIA.

*Thaumantias*, BON. (nec Eschsch., Acal., 1829, nec BON., Compt. Rend., 1850), Rev. and Mag. Zool. (1854), p. 255.

*Thaumantias*, GOULD (nec BON., Compt. Rend., 1850), Mon. Troch. Intr., octavo ed., p. 151 (1861).

*Agyrtria*, REICH., Troch. Enum., p. 7 (1855).

*Leucodora*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 309 (nec 1875).

## TYPE.

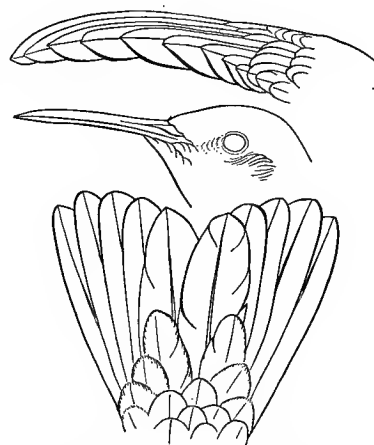
*T. candidus*, Bourc.  
*O. brevirostris*, Less.  
*T. norrissii*, Bourc.

*Ch.* Bill slightly longer than the head, straight or slightly curved. Feathers of the forehead not extending upon the culmen. Nostrils exposed. Wings long, narrow, pointed; first primary slightly falcate. Tail ample, even, or slightly rounded. Tarsi clothed. Sexes alike.

*Range.* Mexico, Central America, Islands of Tobago and Trinidad, Brazil, Guiana, Venezuela, Columbia, Ecuador, and Peru.

I recognize twenty species belonging to this genus.

Fig. 111.

*Agyrtria niveipectus*. ♂. Cayenne. Whitely.*Key to the species.*

- |  |                              |
|--|------------------------------|
| A. Throat and breast white.  |                              |
| a. Top of head brilliantly metallic.                                   |                              |
| a'. Bill black.  |                              |
| a''. Tail purplish-bronze.   | 1. <i>A. niveipectus</i> .   |
| b'. Bill; maxilla black, mandible flesh-color, tip black.              |                              |
| a''. Tail steel black, median feathers greenish-bronze.                | 2. <i>A. leucogaster</i>     |
| b''. Tail greenish-gray, barred with brown near tip, bill long, stout. | 3. <i>A. viridiceps</i> .    |
| c''. Tail greenish-gray, subterminal bar dark brown; bill short, weak. | 4. <i>A. milleri</i> .       |
| b. Top of head slightly metallic.                                      |                              |
| a'. Entire abdomen white.  |                              |
| a''. Tail greenish-bronze with a subterminal dark brown bar.           | 5. <i>A. candida</i> .       |
| b'. Abdomen and flanks pale rufous.                                    | 6. <i>A. norrissii</i> .     |
| c'. Centre of abdomen white.   |                              |
| a''. Tail pale bronze-green barred with brown, tip dusky.              | 7. <i>A. brevirostris</i> .  |
| b''. Tail blue-black.  | 8. <i>A. compsa</i> .        |
| B. Throat and upper part of breast blue.                               |                              |
| a. Tail pale greenish-bronze, with a subterminal blackish bar.         | 9. <i>A. neglecta</i> .      |
| b. Tail steel-blue.  | 10. <i>A. bartletti</i> .    |
| C. Throat and breast metallic-green.                                   |                              |
| a. Under tail coverts gray, with a central line of bronze-green.       |                              |
| a'. Crown of head and face glittering green.                           | 11. <i>A. nitidifrons</i> .  |
| b'. Crown of head and back of neck shining greenish-blue.              | 12. <i>A. caeruleiceps</i> . |

- b. Crown of head dull green.
- a'. Under tail coverts white with central brown or green streak.
- a''. Tail, median feathers except tips, and the basal portions of the others, bright green; central part of lateral ones blackish, tips gray. Throat and breast shining grass-green. 13. *A. lephrocephala*.
- b''. Tail, median feathers bronze-green, remainder black with pale tips. Throat and breast golden-green. 14. *A. tobaci*.
- c''. Tail black. Throat and breast grass-green, with a slight bluish tinge. 15. *A. fluvialtilis*.
- d''. Tail, median feathers green, broadly tipped with blue-black, rest black, tipped with white. Throat and breast golden-green. 16. *A. apicalis*.
- e''. Tail, median feathers green, tipped with black, next one on either side bronze-green for two-thirds their length, rest black; remaining feathers green at base, then black with a metallic-green spot on the tip which graduates into white on its upper edge. 17. *A. maculicauda*.
- f''. Tail bronze-green, lateral feathers with a subterminal purplish-bronze bar, tips ashy-gray. Throat and breast glittering bluish-green. 18. *A. lucixæ*.
- b'. Under tail coverts pure white.
- a''. Tail, all the feathers steel-black, median ones slightly tinged with green in certain lights. 19. *A. nigricauda*.
- b''. Tail, median pair of rectrices golden-green, remaining ones have the inner webs, except tips, black; outer webs metallic golden-green; all the lateral feathers are tipped with bright metallic golden green. 20. *A. nilidicauda*.

### 1. *Agyrtria niveipectus*.

*Thaumatias chionopectus*, GOULD, Mon. Troch., pt. xviii (1859), pl. 5; vol. v, pl. 293.—ID., Intr. Troch., octavo ed., p. 152 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 227.—ELLIOT, Ibis (1878), p. 40.

*Agyrtria niveipectus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 33 (note 10) (1860).

*Polytmus chionopectus*, LÉOT., Ois. Trinid., p. 140, no. 71 (1866).

*Hab.* Trinidad, Venezuela, Guiana.

*Adult.* Top of head and sides of neck glittering metallic-green. Upper surface coppery-green. Throat and centre of abdomen white; flanks golden-green. Under tail coverts grayish with whitish margins. Tail purplish-bronze, with a subterminal purplish-brown bar. Bill and feet black. Total length,  $3\frac{3}{4}$  in. Wing, 2 in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

### 2. *Agyrtria leucogaster*.

*Trochilus leucogaster*, GMEL., Syst. Nat. (1788), vol. i, p. 495.

*Ornismya albirostris*, LESS., Ois. Mouch., p. 212, pl. 78 (1829).

*Thaumatias leucogaster*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Thaumatias melhisuga*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).

*Agyrtria leucogastra*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 7, pl. 762, figs. 4762-64 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 34 (1860).

*Thaumatias leucogaster*, GOULD, Mon. Troch., vol. v, pl. 294.—ID., Intr. Troch., octavo ed., p. 152 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 231.—ELLIOT, Ibis (1878), p. 41.

*Hab.* Guiana and Brazil.

*Adult.* Upper parts and sides of neck metallic grass-green. Flanks bronzy-green. Throat, centre of the abdomen, and under tail coverts pure white. Median rectrices bronzy-green, lateral ones steel-black. Maxilla and tip of mandible black, rest of latter flesh-color. Feet black. Wings purple-brown. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{1}{8}$  in.

### 3. *Agyrtria viridiceps.*

*Thaumatias viridiceps*, GOULD, P. Z. S. (1860), p. 307.—*Id.*, Mon. Troch., vol. v, pl. 295.—*Id.*, Intr. Troch., octavo ed., p. 152 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 229.—ELLIOT, Ibis (1878), p. 42.

*Hab.* Ecuador.

*Adult.* Crown, nape, and sides of the neck metallic light green; upper parts luminous bronzy-green. Throat, abdomen, and under tail coverts pure white. Flanks washed with green. Wings purplish-green. Tail greenish-gray, with a subterminal bar of brown. Maxilla and tip of mandible black, rest of latter flesh-color, feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{7}{8}$  in.

### 4. *Agyrtria milleri.*

*Trochilus milleri*, BOURC., P. Z. S. (1847), p. 43.—*Id.*, Rev. Zool. (1847), p. 255.

*Polytmus milleri*, GRAY, Gen. Birds, vol. i, p. 108, sp. 46.

*Thaumatias milleri*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).—GOULD, Mon. Troch., vol. v, pl. 296.—*Id.*, Intr. Troch., octavo ed., p. 152.—ELLIOT, Ibis (1878), p. 42.

*Agyrtria milleri*, REICH., Anz. der Colib., p. 10 (1853).—*Id.*, Troch. Enum., p. 7, pl. 759, figs. 4752-53.—CAR. and HEIN., Mus. Hein. Th., iii, p. 33 (note 11) (1860).

*Thaumatias milleri*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Leucolia milleri*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 225.

*Hab.* Columbia.

*Adult.* This is a diminutive of the *T. viridiceps*, and can be distinguished from it only with difficulty. It is, however, much smaller in size. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{5}{16}$  in. Culmen,  $\frac{5}{8}$  in.

### 5. *Agyrtria candida.*

*Trochilus candidus*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1846), t. ix, p. 326.—*Id.*, Rev. Zool. (1846), p. 319.

*Ornismya senex*, LESS., Rev. Zool. (1838), p. 315, no. 11 (albino)?

*Polytmus candidus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 45.

*Thaumatias candidus*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).—GOULD, Mon. Troch., vol. v, pl. 292.—*Id.*, Intr. Troch., octavo ed., p. 151 (1861).—ELLIOT, Ibis (1878), p. 43.

*Agyrtria margaritaceus*, REICH. (nec GMEL.), Troch. Enum., p. 7, t. 758, figs. 4747-48 (1855).

*Agyrtria candida*, CAR. and HEIN., Mus. Hein. Th., iii, p. 33 (note 8).

*Thaumatias candidus*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Leucolia candida*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 233.

*Hab.* Mexico and Central America to Nicaragua.

*Adult.* Upper parts and flanks bronzy-green, inclining to brown on the crown. Throat, abdomen, and under tail coverts white. Wings purple. Tail greenish-bronze with a subterminal black bar. Maxilla and tip of mandible black, rest of

bill flesh-color. Feet black. Total length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  in.

### 6. \**Agyrtria norrisii*.

- Trochilus norrisii*, BOURC., P. Z. S. (1847), p. 47.  
*Polytmus norrisii*, GRAY, Gen. Birds, vol. i, p. 108, sp. 71.  
*Amazilia norrisii*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8 (1855).  
*Amazilius norrisii*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.  
*Pyrrhophæna norrisii*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (note 10) (1860).  
*Hemistilbon norrisii*, GOULD, Intr. Troch., octavo ed., p. 150 (1861).  
*Leucodora norrisii*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 309.  
*Thaumatias norrisii*, ELLIOT, Ibis (1878), p. 44.  
*Thaumatias lardi*, DEOCA, La Naturaleza Mex., tom. iii (1874), p. 24, sp. 7.

*Hab.* Mexico.

*Adult.* Upper parts golden-green. Throat and sides of the neck metallic golden-green; breast white; abdomen and flanks pale rufous; upper tail coverts light grayish-green; under tail coverts grayish-white. Wings pale green. Tail shining grayish-green. Feet flesh-color. Bill flesh-color black at the point. Wings, 55 mm. Tail, 35 mm. Bill, 18 mm. This description is taken from Bourcier's in the P. Z. S. (1847), p. 47.

### 7. *Agyrtria brevisrostris*.

- Trochilus brevisrostris*, LESS., Ois. Mouch., pp. xxxv and 211, pl. 77 (1829).  
*Basilinna brevisrostris*, LESS., Ind. Gen. and Syn. Gen. Troch., p. xxvi (1831).  
*Trochilus versicolor*, Nordm. in Erm. Reise (1835), atl., pl. 1, figs. 1, 2, 3?  
*Polytmus brevisrostris*, GRAY, Gen. Birds, vol. i, p. 108, sp. 44.  
*Hylocharis versicolor*, GRAY, Gen. Birds, vol. i, p. 115, sp. 45.—BON., Consp. Gen. Av. vol. i, p. 74, sp. 9 (1850).  
*Thaumatias brevisrostris*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).—GOULD, Mon. Troch., vol. v, pl. 298.—ID., Intr. Troch., octavo ed., p. 152 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 242.—ELLIOT, Ibis (1878), p. 44.  
*Agyrtria versicolor*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 7, pl. 759, figs. 4750-51 (1855).  
*Agyrtria brevisrostris*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 7, t. 759, fig. 4749.—CAB. and HEIN., Mus. Hein. Th., iii, p. 34, sp. 70.  
*Thaumatias versicolor*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Thaumatias brevisrostris*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Thaumatias affinis*, GOULD, Mon. Troch., vol. v, pl. 299.—ID., Intr. Troch., octavo ed., p. 153 (1861).  
*Agyrtria affinis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 33 (note 12) (1860).

*Hab.* Brazil.

*Adult.* Upper surface, sides of neck (and sometimes nearly all the throat), and flanks glittering bronzy-green. Centre of throat and abdomen white. Under tail coverts bronze-brown. Tail pale bronze-green, subterminal brown band, and tip dusky. Maxilla and tip of mandible black, rest of latter flesh-color. Total length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

### 8. \**Agyrtria compsa*.

- Agyrtria compsa*, HEIN., Journ. für Ornith. (1863), p. 185.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 256.  
*Agyrtria mellisuga*, CAB. and HEIN., Mus. Hein. Th., iii, p. 34 (1860).  
*Thaumatias compsa*, ELLIOT, Ibis (1878), p. 45.

*Hab.* Guiana.

“*Similis breviori, sed paulo minor, rostro longiore, splendide aureo-viridis; subtus alba maculis nitidis aureo-viridibus varia, pectoris epigastriique lateribus unicoloribus smaragdino-viridibus, abdomine medio unicolore albo tectricibus, caudæ inferioribus nitidi-smaragdineis; remigibus fuscis; rectricis nigro-chalybeo-cyaneis; maxilla fusco, mandibula brunnescente cornea; pedibus fuscis. Long. tot., 3'' 3''' ; al., 1'' 8''' ; caud., 1'' 1''' ; rostr. culm., 7'''.*”—(Hein., loc. cit.)

### 9. \**Agyrtria neglecta.*

*Ornismya bicolor*, D'ORB. and LAFR. (nec LESS., 1829), Syn. Av., ii, p. 30, sp. 21 (1838).  
*Thaumatias neglectus*, ELLIOT, Ibis (1877), p. 140.—(1878), p. 53.

*Hab.* Yungas and Moxos, Bolivia.

*Male.* Top of head, nape, and mantle metallic-green; throat and upper part of breast brilliant metallic-blue, white base of the feathers showing amid the blue; back, rump, and upper tail coverts light greenish-bronze. Wings purplish. Flanks and lower parts of breast shining green. Abdomen whitish. Under tail coverts pale brown, margined with white. Tail pale greenish-bronze, with a subterminal black bar on lateral feathers. Maxilla black, mandible flesh-color. Feet black. Total length,  $3\frac{1}{4}$  in. Wing, 2 in. Tail,  $1\frac{1}{2}$  in. Bill,  $\frac{3}{4}$  in.

*Female.* Upper parts, sides of throat, and flanks shining green. Centre of throat and under parts whitish, spotted with light metallic-green. Tail as in the male, tips of lateral feathers whitish. Under tail coverts white. Wings purple. Bill like the male. Feet black. Total length,  $3\frac{3}{4}$  in. Wing, 2 in. Tail,  $1\frac{1}{4}$  in. Bill,  $\frac{3}{4}$  in.

### 10. *Agyrtria bartletti.*

*Thaumatias bartletti*, GOULD, P. Z. S. (1866), p. 194.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 255.—ELLIOT, Ibis (1878), p. 53.

*Hab.* Banks of the Upper Ucayali, eastern Peru.

*Adult.* Upper parts and flanks dark grass-green. Throat and breast purplish-blue. Centre of abdomen grayish-white. Under tail coverts blackish-brown margined with grayish-white; upper tail coverts bronzy-green. Tail steel-black (in the female tipped with gray). Maxilla brownish, mandible flesh-color; feet blackish-brown. Wings purple. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

### 11. \**Agyrtria nitidifrons.*

*Thaumatias nitidifrons*, GOULD, P. Z. S. (1860), p. 308.—ID., Mon. Troch., vol. v, pl. 297.—ID., Intr. Troch., octavo ed., p. 153 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 238.—ELLIOT, Ibis (1878), p. 52.

*Hab.* Venezeula.?

*Adult.* “Crown of the head, face, chest, and neck glittering green; abdomen and flanks golden-green; back, shoulders, and rump bronzy-green; tail pale bronzy grayish-green, with a zone of purplish-brown crossing the four lateral feathers on each side near their tips; under tail coverts gray with a patch of bronzy-green in

the centre of each; tarsi grayish-brown; upper mandible black; under mandible yellow-black at tip. Total length,  $3\frac{1}{4}$  in. Bill,  $\frac{3}{4}$  in. Wing,  $1\frac{7}{8}$  in."—(Gould, loc. cit.)

### 12. \**Agyrtia cœruleiceps*.

*Thaumatias cœruleiceps*, GOULD, P. Z. S. (1860), p. 307.—ID., Intr. Troch., octavo ed., p. 152.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 240.—ELLIOT, Ibis (1878), p. 52.

*Hab.* Columbia.

*Adult.* "Crown of the head and back of the neck deep shining greenish-blue; back and shoulders green, passing into bronzy-green on the rump and upper tail coverts; tail nearly uniform bronze, with a very faint indication of a zone of brown across the outer feathers near the tip; wings purplish-brown; sides of the neck glittering bluish-green, the blue tint predominating on the ear and immediately under the eye; centre of the throat and chest broken glittering green and white; flanks bronzy-green; under tail coverts gray with brown centres; upper mandible dark brown; under mandible yellow, except the tip, which is dark brown. Total length,  $3\frac{1}{2}$  in. Bill,  $1\frac{5}{6}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $\frac{1}{2}$  in."—(Gould, loc. cit.)

### 13. *Agyrtia tephrocephala*.

*Trochilus tephrocephalus*, VIEILL., Nouv. Dict. Hist. Nat., tom. 23, p. 430.

*Ornismya tephrocephala*, LESS., Ois. Mouch., p. 182, pl. 62 (1829).

*Ornismya albiventris*, LESS., Ois. Mouch., p. 209, pl. 76 (1829).—ID., Troch., p. 94, pl. 32 (1831).—D'ORB. and LAFRES., Syn. Av., ii, p. 30, sp. 18 (1838).

*Polytmus thaumatias*, GRAY, Gen. Birds, vol. i, p. 108, sp. 40 (partim).

*Thaumatias albiventris*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).—GOULD, Mon. Troch., vol. v, pl. 301.—ID., Intr. Troch., octavo ed., p. 153 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 245.—ELLIOT, Ibis (1877), p. 138.

*Cœligena tephrocephala*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 3, pl. 687, fig. 4518 (1855).

*Thaumatias albiventris*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Agyrtia albiventris*, REICH., Troch. Enum., p. 7, pl. 757, fig. 4744-45.—CAB. and HEIN., Mus. Hein. Th., iii, p. 32 (1860).

*Thaumatias tephrocephalus*, ELLIOT, Ibis (1878), p. 48.

*Hab.* Brazil.

*Adult.* Upper surface dark green. Wings purple. Throat and chest shining grass-green, flanks dull green. Abdomen and under tail coverts white. Median rectrices, except the tips and basal portions of the rest, bronzy-green. Central parts of lateral ones blackish, tips gray. Tips of median pair blackish. Maxilla and point of mandible black, rest of latter flesh-color. Feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

### 14. *Agyrtia tobaci*.

*Trochilus tobaci*, GMEL., Syst. Av. (1788), p. 498.

*Trochilus tobagensis*, LATH., Ind. Orn. (1790), vol. i, p. 316.

*Trochilus maculatus*, VIEILL., Ois. Dcr., t. i, p. 87, pl. 44 (1802).

*Trochilus tobago*, SNAW., Gen. Zool., vol. viii, p. 350.

*Ornismya viridissima*, LESS., Ois. Mouch., p. 207, pl. 75 (1829).

*Saucerottia viridipectus*, REICH., Aufz. der Colib., p. 7 (1853).

- Chlorestes malvina*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, pl. 696, figs. 4550-51 (1855)?  
*Chlorestes (Saucerotia) viridipectus*, REICH., Troch. Enum., p. 4, pl. 702, figs. 4573-75 (1855).  
*Hylocharis lactea*, REICH., Troch. Enum., p. 7, pl. 773, fig. 4792 (1855).  
*Cœligena maugœi*, ♀, REICH., Mus. Berol. (teste Cab.).  
*Agyrtria maculata*, CAB. and HEIN., Mus. Hein. Th., iii, p. 33 (1860).  
*Thaumatias linnæi*, GOULD, Mon. Troch., vol. v, pl. 302.—ID., Intr. Troch., octavo ed., p. 153 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 248.  
*Agyrtria malvinæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 33 (note 9) (1860).  
*Thaumatias tobaci*, ELLIOT, Ibis (1878), p. 49.

*Hab.* Tobago, Trinidad, Venezuela, Guiana, Brazil.

*Adult.* Upper surface bronzy-green. Wings purplish-brown. Throat and breast glittering grass-green, becoming dull green on the flanks. Centre of abdomen and under tail coverts white. Median rectrices bronze-green, lateral ones black with pale tips. Maxilla and point of mandible black, rest of latter flesh-color. Feet black. Total length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{7}{8}$  in.

### 15. *Agyrtria fluviatilis*.

- Thaumatias fluviatilis*, GOULD, Intr. Troch., octavo ed., p. 154 (1861).—SCLAT. and SALV., P. Z. S. (1866), p. 194.—ELLIOT, Ibis (1878), p. 51.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 253.  
*Agyrtria fluviatilis*, HEINE, Journ. für Ornith. (1863), p. 184.

*Hab.* Eastern Peru.

*Adult.* Upper parts and flanks dark grass-green. Throat and breast luminous grass-green with a bluish tinge. A narrow streak of white on the abdomen. Vent white. Under tail coverts dark brown margined with white. Tail black. Maxilla and point of mandible black, rest of latter flesh-color. Feet black. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{3}{16}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in.

### 16. *Agyrtria apicalis*.

- Thaumatias apicalis*, GOULD, Intr. Troch., octavo ed., p. 154 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 252.—ELLIOT, Ibis (1878), p. 51.  
*Agyrtria apicalis*, HEINE, Journ. für Ornith. (1863), p. 184.  
*Agyrtria terpna*, HEINE, Journ. für Ornith. (1863), p. 184, sp. 9.

*Hab.* Columbia.

*Adult.* Upper parts bronzy-green. Throat and breast golden-green. Centre of abdomen white, under tail coverts white with dark brown centres. Median rectrices green, broadly tipped with bluish-black; lateral feathers black tipped with white. Maxilla and tip of mandible black, rest of latter flesh-color, perhaps red. Feet black. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{7}{8}$  in.

I place among the synonyms of this species the *A. terpna*, Heine, as from his description (l. c.) I cannot perceive any difference sufficient for the creation of a new species.

### 17. \**Agyrtria maculicauda*.

- Thaumatias maculicaudus*, GOULD, Intr. Troch., octavo ed., p. 154 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 250.—ELLIOT, Ibis (1878), p. 51.  
*Agyrtria maculicauda*, HEINE, Journ. für Ornith. (1863), p. 184, sp. 10.

*Hab.* Guiana.

*Adult.* "This is a very little species, with a long thin bill; its breast is green as in the others. Centre of the abdomen white; under tail coverts white, except in the centre, when they are dark brown; two centre tail feathers bronzy-green, except at the extreme tip which is greenish-black, the next on each side bronze for half their length, then black; the three outer ones on each side bronzy-green at base, then broadly zoned with black, next to which they are green, and lastly white. Total length,  $3\frac{1}{2}$  in. Bill,  $\frac{7}{8}$  in. Wing, 2 in. Tail,  $1\frac{1}{8}$  in."—(Gould, loc. cit.)

### 18. \**Agyrtria luciaë*.

*Thaumatias luciaë*, LAWRE., Proc. Acad. Nat. Sc. Phil. (1867), p. 233.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 241.—ELLIOT, Ibis (1878), p. 52.

*Hab.* Honduras.

"Upper plumage dull bronzy dark green, crown duller; upper tail coverts a lighter bronzy-green, somewhat golden; tail feathers dull bronzy-green, all except the two central ones broadly marked near their ends with dark purplish-bronze, the tips being ashy-gray; the throat and breast are glittering bluish-green, middle of the abdomen white; wings brownish-purple. Upper mandible black, the under yellow with the end blackish; feet black. Length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{3}{8}$  in. Bill,  $1\frac{2}{6}$  in."—(Lawr., loc. cit.)

### 19. *Agyrtria nigricauda*.

*Thaumatias nigricauda*, ELLIOT, Ibis (1878), p. 47.

*Hab.* Trinidad, Guiana, northeastern Brazil.

*Adult.* Upper parts bronzy-green, darkest on the head, and shading into purple on the upper tail coverts. Throat and breast shining metallic grass-green. Flanks dark green with scarcely any lustre. Middle of abdomen, vent, and under tail coverts pure white. Tail steel-black, the two outermost feathers greenish-gray at their tips, the next merely edged with white on the tip. Maxilla brownish-black; mandible flesh-color, tip black. Feet black. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Bill on culmen,  $\frac{5}{8}$  in. (From type in my collection.)

### 20. *Agyrtria nitidicauda*.

*Thaumatias nitidicauda*, ELLIOT, Ibis (1878), p. 48.

*Hab.* Guiana.

*Adult.* Upper part bright bronze-green, with a slight coppery tinge on the head. Chin white. Throat, breast, and sides of the neck bright metallic grass-green. Flanks and abdomen dull green. Middle of abdomen, vent, and under tail coverts pure white. Median rectrices bronze-green. Lateral ones purplish-black, the edges of the outer webs and tips bronze-green. Wings purplish-brown. Bill flesh-color (perhaps red in life), with a dark tip. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Bill along culmen,  $\frac{3}{4}$  in. (Type in my collection.)



## Genus CIV.—ARINIA.

*Arinia*, MULS., Ann. Soc. Linn., 1877 (Oct.).

TYPE.  
*A. boucardi*.

*Ch.* Bill subcylindrical, until near the point, when it is slightly swollen; shorter than half the body. Tail slightly forked. Wings narrow, reaching for three-fourths the length of the median rectrices. The external rectrices are slightly shorter than the ones next to them. Sexes unlike in plumage.

*Range.* Costa Rica.

But one species is known, brought from Costa Rica by M. Boucard. It is very close to the genus AGYRTRIA, and were the male alone known, the propriety of separating it from that genus might possibly be questioned, but as the female is quite different in the coloring of her plumage from the male, while the sexes of AGYRTRIA do not differ in their dress, it would seem to be best to allow the present species a distinct generic rank. This genus connects AGYRTRIA with ELVIRA.

1. \**Arinia boucardi*.

*Arinia boucardi*, MULS., Ann. Soc. Linn., Lyon, 1877 (Oct.).

*Male.* Upper surface and flanks bronzy-green, darkest on the head. Throat and breast shining bluish-green. Abdomen and under tail coverts pure white. Median pair of rectrices dark bronze-green; next bronze-green with black tip, remaining lateral feathers bronze-green at base, rest black, the bronze-green decreasing in extent as it goes towards the external feather. All the lateral feathers edged with white at their tips. Maxilla black, mandible flesh-color, tip black. Feet black. Total length,  $3\frac{1}{6}$  in. Wing, 2 in. Tail,  $1\frac{9}{16}$  in. Culmen,  $\frac{1}{8}$  in.

*Female.* Differs in having the middle of the throat, breast, and under parts pure white. Median rectrices bronzy-green, lateral feathers green at base, then black and tipped with gray. Rest like the male.

Allied to the members of the genus AGYRTRIA are the two species placed respectively by Messrs. Lawrence and Gould in the genera EUPHERUSA and THAUMATIAS. They, however, differ in many ways from the members of those genera, especially in the shape of the bill, and the dissimilarity in the plumage of the sexes. I have employed for these birds the term ELVIRA, proposed by M. Mulsant, as I consider they represent a very distinct generic form. They are small in size, with the greater portion of the plumage metallic-green, but the tails are almost entirely pure white, a very uncommon feature among the Trochilidæ.

## Genus CV.—ELVIRA.

TYPE.

*Elvira*, MULS. and VERR., Class. Troch. (1865), p. 32 (nec 1875, Cat. Ois. Mouch. p. 9). *T. chionurus*, Gould.

*Ch.* Bill shorter than the head, curved, nostrils partly exposed. Wings long, narrow, pointed. Tail very slightly rounded. Tarsi clothed. Sexes dissimilar.

*Range.* Costa Rica and Veragua.

Two species are known.

Fig. 112.

*Elvira cupreiceps*. Costa Rica. Van Patton.*Key to the species.*

- A. Under parts shining green. Under tail coverts pure white.
- a. Median rectrices coppery-bronze, lateral ones white tipped with bronze. 1. *E. cupreiceps*.
  - b. Median rectrices bronzy-green; lateral ones white, apical portions black. 2. *E. chionura*.

**1. *Elvira cupreiceps*.**

*Eupherusa cupreiceps*, LAWRE., Ann. N. Y. Lyc. Nat. Hist. (1866), vol. viii, p. 348.

*Thaumatias cupreiceps*, SCLAT. and SALV., Nomencl., p. 92 (1873).

*Elvira cupreiceps*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 268.

*Hab.* Costa Rica.

*Male.* Top of head shining coppery-green; upper surface bronzy-green, changing to coppery-red on the upper tail coverts. Under surface luminous emerald-green, brightest on the throat and breast. Vent and under tail coverts pure white. Wings purple. Median rectrices coppery-bronze; lateral ones white tipped with bronze. Bill and feet black. Total length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{9}{16}$  in.

*Female* differs in having the top of head bronzy-green, and entire under parts except the flanks pure white. Otherwise like the male.

**2. *Elvira chionura*.**

*Trochilus* (*Thaumatias*?) *chionurus*, GOULD, P. Z. S. (1850), p. 162.

*Leucippus chionurus*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 8, pl. 780, figs. 4813–15 (1855).

*Thaumatias chionura*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Aggrtria chionura*, CAB. and HEIN., Mus. Hein. Th., iii, p. 32 (note 7) (1860).

*Thaumatias chionurus*, GOULD, Mon. Troch., vol. v, pl. 300.—ID., Intr. Troch., octavo ed., p. 153 (1861).—ELLIOT, Ibis (1878), p. 48.

*Elvira chionura*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 266.

*Hab.* Veragua and Costa Rica.

*Male.* Upper surface dark grass-green; under surface luminous emerald-green, lightest on the throat, centre of abdomen and under tail coverts white. Wings purple. Median rectrices bronzy-green; lateral ones white, with their apical portions black. Bill black, flesh-colored spot at base of mandible. Feet black. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female*. Differs in having the under surface white, except the flanks which are green, and by having the white lateral tail feathers crossed obliquely by a black bar. In all other respects she resembles the male.

### Genus CVI.—CALLIPHARUS.

*Clotho*, MULS., Cat. Ois. Mouch. (1875), p. 9 (nec FANJ., 1808, Mollus., nec WALK., Arachn., 1809, nec GRAY, Rept., 1840).

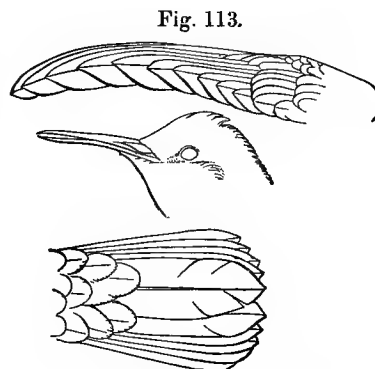
TYPE.

*E. nigriventris*, Lawr.

*Ch.* Bill about as long as the head, straight, wide at base graduating to a point at the tip. Frontal feathers not projecting on to the culmen. Wings long and broad for their length. Tail moderate, slightly rounded. Under tail coverts reaching half the length of the rectrices. Feet small; tarsi partly clothed. Sexes entirely unlike in the color of their plumage.

*Range*. Costa Rica and Veragua.

But one species is known, a miniature EUPHERUSA in many particulars, which seems to find its natural place between the members of that genus and those of ELVIRA. The term *Clotho*, bestowed on this species by M. Mulsant, having been previously employed in various branches of zoology, I propose in its place CALLIPHARUS.



*Callipharus nigriventris*. ♂. Veragua. Salvín.

### 1. *Callipharus nigriventris*.

*Eupherusa nigriventris*, LAWRE., Proc. Acad. Nat. Sc. Phila. (1867), p. 232.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 270.

*Eupherusa (Clotho) nigriventris*, MULS., Cat. Ois. Mouch. (1875), p. 9.

*Thaumantias nigriventris*, SCLAT. and SALV., Nomencl., p. 92 (1873).

*Hab.* Costa Rica and Veragua.

*Male*. Forehead and entire under surface jet-black. Occiput and upper surface bronzy-green. Four central rectrices purplish-black, three lateral ones pure white tipped with brownish-black. Wing coverts bronzy-green; secondaries chestnut at their bases, tips purple. Vent and under tail coverts white. Bill and feet black. Total length,  $3\frac{3}{4}$  in. Wing, 2 in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female*. Upper surface bronzy-green. Under surface grayish-white, washed on the flanks with green. Four median rectrices dark grass-green, remainder white. Maxilla and apical half of mandible black, basal half of latter flesh-color. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{1}{2}$  in.

In the style of coloration observed in the wing, this species resembles those of the next genus.

The members of the genus EUPHERUSA are birds of moderate size, differing chiefly in the coloration of their tails. They resemble each other in the hues of their

plumage, which is mainly metallic-green and white; and also in having the secondaries chestnut. The sexes are very different in their appearance.

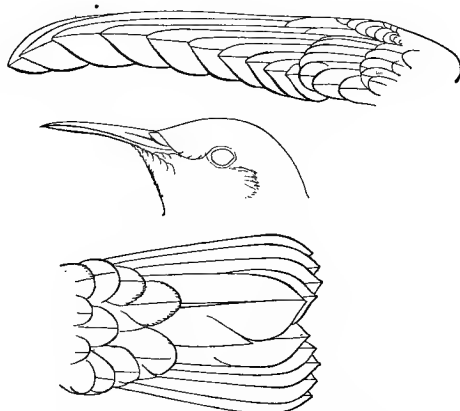
### Genus CVII.—EUPHERUSA.

*Eupherusa*, GOULD, Mon. Troch., pt. xiv (1857); and Intr. Troch., octavo ed., p. 145 (1861).

TYPE.

*O. eximia*, Delatt.

Fig. 114.



*Eupherusa eximia*. ♂. Guatemala. Cook.]

*Ch.* "Bill nearly straight and longer than the head; wing rather long; tail rounded; tarsi clothed; feet small; hind toe rather shorter than the middle toe." (Gould, loc. cit.)—Sexes dissimilar.

*Range.* Mexico and Central America.

Three species are here allotted to this genus.

#### Key to the species.

- |   |                           |
|---|---------------------------|
| A. Tail, two median rectrices light bronze-green, lateral ones white margined with purplish-gray. | 1. <i>E. poliocerca</i> . |
| B. Tail dark greenish-bronze; two outermost feathers with basal two-thirds of inner webs white.   | 2. <i>E. eximia</i> .     |
| C. Tail, four median rectrices dark greenish-bronze, remainder white margined with black.         | 3. <i>E. egregia</i> .    |

### 1. *Eupherusa poliocerca*.

*Eupherusa poliocerca*, ELLIOT, Ann. and Mag. Nat. Hist. (1871), p. 266.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 271.—SCLAT. and SALV., Nomencl., p. 92 (1873).

*Hab.* Putla, Mexico.

*Adult male.* Top of head and upper surface bronzy-green; entire under parts brilliant grass-green. Wings purple; secondaries chestnut-red. Under tail coverts pure white. Two central tail feathers light bronze-green, purplish at the tips, remaining ones white, purplish-gray on the edges of outer webs and on the tips. Bill black, feet flesh-color. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

*Female.* Unknown.

### 2. *Eupherusa eximia*.

*Ornismya eximia*, DELATT., Echo du Monde Sav. (1843), p. 1069.

*Saucerottia eximia*, REICH., Aufz. der Colib., p. 8 (1853).—BON., Rev. and Mag. Zool. (1854), p. 255.

*Amazilia eximia*, REICH., Troch. Enum., p. 8, pl. 776, fig. 4802 (1855).

*Eupherusa eximia*, GOULD, Mon. Troch., vol. v, pl. 324.—ID., Intr. Troch., octavo ed., p. 163 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 272.

*Hab.* Guatemala.

*Male.* Upper surface dark shining green, becoming bronzy on the upper tail coverts. Under surface luminous grass-green. Base of primaries and secondaries chestnut-red, rest of primaries purplish-brown. Under tail coverts white. Tail very dark greenish-bronze, almost black on the lateral feathers, with the basal two-thirds of inner webs of the two outermost rectrices white. Bill black, feet brown. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Differs in having the entire under surface grayish-white, mottled with green and buff on the flanks. Base of four middle tail feathers bronzy-green, tips black. Rest of plumage like that of the male. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{5}{16}$  in. Culmen,  $\frac{1}{16}$  in.

### 3. *Eupherusa egregia.*

*Eupherusa egregia*, SCLAT. and SALV., P. Z. S. (1868), p. 389; (1870), p. 210.—LAWR., Ann. N. Y. Lyc. Nat. Hist. (1869), p. 146.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 274.

*Hab.* Costa Rica, Veragua.

*Male.* Plumage of body as in *E. eximia*. Tail differs in having the four central feathers dark greenish-bronze, remainder white margined with black. Bill black, feet flesh-color. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

The three species comprising the next genus have been assigned to various positions among the Trochilidæ, but I think they are best placed here. They possess characters that would ally them to various genera, and it cannot be said that they are especially related to the members of any particular one of those known. This of course makes it impossible to find a position for them as yet, which it would seem they are especially designed to fill, and as is the case with many others, we must wait further discoveries in the Family, before their exact place can be ascertained. They are rather large birds, with a green plumage, and tails of green and white, the feathers being narrow and pointed.

### Genus CVIII.—POLYTMUS.

*Polytmus*, BRISS., Ornith. (1760).

<sup>1</sup>*Thaumatias*, BON., Compt. Rend. (1850), p. 382, vol. 30.

*Chrysobronchus*, BON., Rev. and Mag. Zool. (1854), p. 252.

#### TYPE.

*T. thaumantias*, LINN.

*T. thaumantias*, LINN.

*T. thaumantias*, LINN.

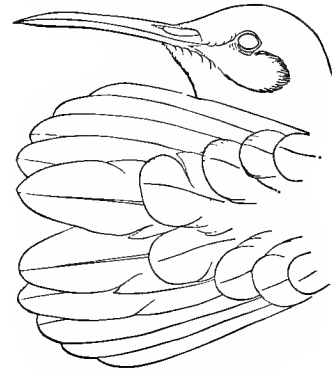
<sup>1</sup> Bonaparte expressly states in the article here indicated that "*Thaumatias* a pour type *T. thaumantias* (lege *thaumantias*), LINN.," which clearly proves, as I have already shown in the Ibis, 1878, p. 36, that Mr. Gould and others are in error to refer Bonaparte's term to the members of the genus AGYRTRIA, with which the *T. thaumantias* has nothing whatever to do. The fact that Bonaparte afterwards classed with the type of his genus, species of AGYRTRIA is not surprising, as his knowledge of the Trochilidæ was limited, and he knew many species only by their names; therefore, it was not unusual for him in his writings to group together under one genus, numerous species with little or no relationship, and belonging to very different genera. By no method can *Thaumatias*, BON., be properly construed as intended for any other species than the one here given as *Polytmus thaumantias*, and its allies included in the same genus.

*Ch.* Bill much longer than the head, slightly curved; wide at the base, graduating to a point; nostrils exposed. Wings long and pointed, reaching to two-thirds the length of the tail. Rectrices narrow; tail rounded. Sexes alike.

*Range.* Trinidad, Venezuela, Guiana, Amazonian region of Brazil and Peru.

Three species are recognized.

Fig. 115.

*Polytmus thaumantias*. ♂ ad. Cayenne. Bourcier.

*Key to the species.*

- |   |                             |
|---|-----------------------------|
| A. Tail green, with a stripe of white on basal portion of outer web of the lateral feathers and their tips grayish-white. | 1. <i>P. thaumantias</i> .  |
| B. Tail entirely metallic-green.  |                             |
| a. Under coverts metallic dark green.   | 2. <i>P. viridissimus</i> . |
| b. Under coverts white.   | 3. <i>P. leucorrhous</i> .  |

### 1. *Polytmus thaumantias*.

- Trochilus thaumantias*, LINN., Syst. Nat. (1766), vol. i, p. 489.  
*Trochilus virescens*, DUMONT., Dict. Sc. Nat. (1818), p. 49.  
*Trochilus chrysobronchus*, SHAW., Gen. Zool., vol. viii, p. 287.  
*Trochilus viridis*, VIEILL., Nouv. Dict. Hist. Nat., tom. vii, p. 354 (1817).—D'ORB. and LAFRES., Syn. Av., ii, p. 32, sp. 30 (1838).  
*Ornismya viridis*, LESS., Ois. Mouch., p. 178, t. 60 (1829).—ID., Troch., p. 144, pl. 54, juv. (1831).  
*Polytmus chrysobronchus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 52.  
*Aggyrtria thaumantias*, REICH., Aufz. der Colib., p. 10.—ID., Troch. Enum., p. 7, t. 756, figs. 4738-39 (1855).  
*Leucippus chrysobronchus*, REICH., Aufz. der Colib., p. 11 (1853).—ID., Troch. Enum., p. 8, pl. 781, figs. 4816-17.  
*Thaumantias linnæi*, BON., Rev. and Mag. Zool. (1854), p. 255, sp. 245.  
*Chrysobronchus virescens*, BON., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Mon. Troch., vol. iv, pl. 230.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 276.  
*Polytmus thaumantias*, CAB. and LEIN., Mus. Hein. Th., iii, p. 5 (1860).  
*Polytmus virescens*, GOULD, Intr. Troch., octavo ed., p. 126 (1861).—ELLIOT, Ibis (1877), p. 142.

*Hab.* Trinidad, Venezuela, and Brazil.

*Adult.* Upper surface golden-green; under surface metallic yellowish-green. Vent white. Under tail coverts shining green edged with white. Tail shining green, the lateral feathers having a stripe of grayish-white on the outer web at the base, and the tips grayish-white. Maxilla black, mandible and feet flesh-color. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{7}{8}$  in.

*Young.* Under surface fawn, with a line of yellowish-green feathers in the centre of the throat.

### 2. *Polytmus viridissimus*.

- Trochilus viridissimus*, VIEILL. (nec GMEL.), Ois. Dor., tom. i, p. 84, pl. 42 (1802).  
*Ornismya viridis*, LESS., Troch., p. 96, pl. 33 (1831).  
*Trochilus theresiæ*, DASILVA, Mai. Min. Bras. (1843) p. 2.  
*Amazilia viridissima*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).  
*Smaragdites viridissima*, REICH., Aufz. der Colib., p. 7? (1853).

- Chrysobronchus viridissimus*, BON., Rev. and Mag. Zool. (1854), p. 252.—GOULD, Intr. Troch., octavo ed., p. 127 (1861).—MULS., Hist. Nat. Ois. Monch., tom. i, p. 279.  
*Chrysobronchus viridicaudus*, GOULD, Mon. Troch., vol. iv, pl. 231.  
*Chlorestes viridissimus*, REICH., Troch. Enum., p. 4, pl. 695, figs. 4547-48 (1855).  
*Thaumatias viridissimus*, BURM., Th. Bras., tom. ii, p. 344 (1856).  
*Thaumatias chrysurus*, BURM., Th. Bras., tom. ii, p. 345 (1856).  
*Polytmus theresiæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 5 (1860).

*Hab.* Guiana and Venezuela.

*Adult.* Upper surface bronzy-green; under parts shining grass-green. Tail metallic grass-green. Under tail coverts grass-green. Bill, maxilla black, mandible flesh-color, tip black. Total length, 4 in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{7}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Young.* Beneath gray washed with green. Under tail coverts green margined with white.

### 3. *Polytmus leucorrhous*.

- Polytmus leucorrhous*, SCLAT. and SALV., P. Z. S. (1867), p. 584.—GOULD, P. Z. S. (1871), p. 505.  
*Polytmus leucoproctus*, GRAY, Handl. B., pt. i, p. 128, no. 1626.  
*Chrysobronchus leucorrhous*, SCLAT. and SALV., Nomencl., p. 89.

*Hab.* Rio Negro, Brazil (Wallace), Rio Huallaga, Peru (Bartlett).

*Male.* Entire plumage shining green, except the head which is brown above, and the under tail coverts which are pure white. Tail like *C. viridissimus*. Total length,  $3\frac{5}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Female* differs in having the outer tail feathers tipped with white.

In the following genus, I have placed species, which, although they differ in coloration, possess so far as I can perceive the same generic characters. They have been divided by various authors into a number of genera, of which the chief if not the only character has, in certain cases at least, been that of color. Messrs. Sclater and Salvin in their Nomenclator have reduced the genera to two, AMAZILIA and SAUCEROTTIA, but having been unable to find characters that were essentially structural to distinguish these, I have suppressed the latter also. As I have frequently said in this work, color cannot be considered a generic character for Humming-birds, when unsupported by any structural peculiarities, for if it is accepted in one instance, to be consistent, it must be in all, and then but few *species*, comparatively, could be passed over without being elevated to *generic* rank. The birds that are now reviewed are of moderate size, certain species having a greater or less resemblance to each other in their style of coloration, and the sexes are alike in plumage. In numbers it is one of the most extensive genera of the Trochilidæ.

## Genus CIX.—AMAZILIA.

*Amazilis*, LESS., Ind. Gen. and Syn. du Gen. Trochilus (1832), p. xxvii.  
*Amazilia*, REICH., Avium Syst. Nat., pl. 39 (1849).  
*Amazilius*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).  
*Pyrrhophæna*, CAB. and HEIN., Mus. Hein. Th., iii, p. 35 (1860).  
*Hemithylaca*, CAB. and HEIN., Mus. Hein. Th., iii, p. 37 (1860).  
*Hemistilbon*, GOULD, Intr. Mon. Troch., p. 149 (1860).  
*Eranna*, HEINE, Journ. für Ornith., p. 187 (1863).  
*Eratina*, HEINE, Journ. für Ornith., pp. 190, 191 (1863).  
*Ariana*, MULS. and VERR., Class. Troch. (1865), p. 36.  
*Ariana*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 315.  
*Myletes*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 284.  
*Saucerottia*, BON., Compt. Rend., p. 381 (1850).  
*Erythronota*, GOULD, Intr. Troch., octavo ed., p. 169 (1861).  
*Eratopis*, HEINE, Journ. für Ornith. (1863), p. 191.  
*Erasuria*, HEINE, Journ. für Ornith. (1863), p. 191.  
*Lisoria*, MULS., Cat. Ois. Mouch. (1875), p. 11.

*Ch.* Bill as long as the head, slightly curved; broad at base, graduating to an acute point. Feathers of forehead not projecting on to the culmen. Nostrils exposed, covered by a scale. Wings rather long, pointed. Tail even or slightly forked. Tarsi clothed. Sexes alike.

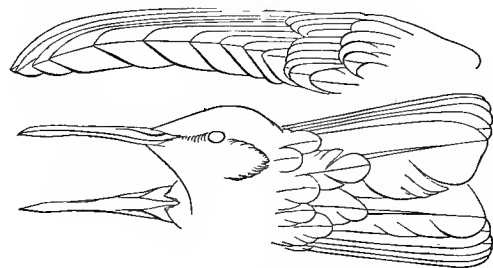
*Range.* Mexico, Central America, Tres Marias Islands, Columbia, Ecuador, and Peru.

Twenty-four species are here recognized as belonging to this genus.

## TYPE.

*O. amazili*, Less.  
*O. amazili*, Less.?  
*O. amazili*, Less.  
*O. amazili*, Less.  
*T. niveiventris*, Gould.  
*A. ocai*, Gould.  
*O. cinnamomea*, Less.  
*T. iodurus*, Heine.  
*T. niveiventris*, Gould.  
*T. fuscicaudatus*, Fras.  
*T. yucatanensis*, Cabot.  
*O. erythronota*, Less.  
*T. saucerottii*, Bourc.  
*O. erythronota*, Less.  
*T. cyanifrons*, Bourc.  
*E. elegans*, Gould.  
*H. warszewiczi*, Cab.

Fig. 116.

*Amazilia pristina*. ♂. Peru. Bourcier.

<sup>1</sup> I can find no generic characters by which the species, that have been placed under *Amazilia*, *Pyrrhophæna*, *Erythronota*, *Saucerottia*, *Hemithylaca*, *Hemistilbon*, etc., can be separated or distinguished. Even those authors, who consider that the color of the plumage alone is sufficient to constitute a genus, have not been able to arrange the birds, here kept in the one genus *Amazilia*, so as to make the members of each of their groups similar in coloration. Thus the *Pyrrhophænae* as restricted by Gould in the Introduction to the Trochilidæ do not all have metallic breasts (witness *P. cinnamomea*); nor do the *Erythronotæ* all have red backs (vide *E. feliciæ*); which last species, although closely allied to *E. antiqua*, Gould, is almost identical in its coloration with species of *Saucerottia*; while *Hemithylaca cyanifrons* has only its blue head to present as a claim for generic distinction.—M. Mulsant, who has carried the generic divisions of this Family to a far greater extent than any other author, and whose characters are almost entirely those of color, has not been successful in the separations of his groups, as his *Amaziliæ* do not all have white and red breasts (vide *cinnamomea* and *graysoni*), but are a mixture of species with non-metallic and metallic coloring of the body; in *Leucodora* he has placed with *edwardi* and *niveiventris*, the *T. norrissii*, Bourc., which has the coloration of *AGYRTRIA*, and apparently belongs to that genus; and with *Ariana* (!) he has grouped together such species as *fuscicaudata*, Fras., and *erythronota* and *cyanifrons* (!). It will thus be seen that when color is taken as the generic guide, it is impossible to make a satisfactory arrangement, unless, indeed, the group is still farther divided until there would be almost as many genera as species. Believing, therefore, that there are already far too many genera instituted for this especial group of birds, I have preferred to keep them all under the one genus *AMAZILIA*.



*Key to the species.*

- A. Chest white.
  - a. Tail pale chestnut.
    - a'. Abdomen and flanks rufous.
      - a''. Throat metallic emerald-green. 1. *A. pristina*.
      - b''. Throat metallic golden-green. 2. *A. leucophæa*.
    - b'. Abdomen white, flanks rufous. 3. *A. alticola*.
  - b. Tail pale bronzy-green. 4. *A. dumerili*.
- B. Entire under parts rufous.
  - a. Tail deep chestnut tipped with bronze. 5. *A. cinnamomea*.
  - b. Large race of above, "tail cinnamon tipped with golden-bronze." 6. *A. graysoni*.
- C. Throat and breast metallic-green.
  - a. Abdomen and under tail coverts fawn. 7. *A. yucatanensis*.
  - b. Abdomen and flanks bronzy-green.
    - a'. Wings purplish-brown.
      - a''. Tail reddish-chestnut. 8. *A. fuscicaudata*.
      - b''. Tail shining dark violet. 9. *A. viridiventris*.
    - b'. Wings purplish-brown, base of primaries and secondaries chestnut-red.
      - a''. Tail greenish-bronze. 10. *A. ocai*.
      - b''. Tail shining purplish-bronze. 11. *A. beryllina*.
  - c. Abdomen white.
    - a'. Tail bronzy-purple. 12. *A. edwardi*.
    - b'. Tail purplish-black. 13. *A. niveiventris*.
- D. Entire under surface green.
  - a. Wings purplish-brown, base of primaries and secondaries chestnut-red at base.
    - a'. Upper tail coverts dark purple, tail brilliant purple. 14. *A. mariaæ*.
    - b'. Upper and under tail coverts and tail deep blue. 15. *A. cyanura*.
    - c'. Tail purplish-violet; under tail coverts white. 16. *A. iodura*.
  - b. Wings all purplish-brown.
    - a'. Upper tail coverts golden-bronze, tail reddish-bronze, tip black. 17. *A. lucida*.
    - b'. Rump and upper tail coverts coppery-red. Tail steel-blue. 18. *A. erythronota*.
    - c'. Rump green like the back, upper tail coverts and tail bluish-black. 19. *A. felicixæ*.
    - d'. Upper tail coverts and tail deep-blue.
      - a''. Rump bronzy-purple. 20. *A. sophixæ*.
      - b''. Rump green like the back. 21. *A. warszewiczi*.
    - e'. Upper tail coverts and tail steel-black. 22. *A. saucerotti*.
    - f'. Top of head deep blue. 23. *A. cyanifrons*.
    - g'. Upper tail coverts purplish-red, tail long forked, purplish-violet. 24. *A. elegans*.

**1. *Amazilia pristina*.**

*Orthorhynchus amazili*, LESS., Voy. Coq., pl. 31, fig. 3 (1826).  
*Ornismya amazili*, LESS., Ois. Mouch., pp. xxvii, 67, pls. 12, 13 (1829).—ID., Ind. Syn. Genr. Troch., p. xxvii (1831).  
*Trochilus (Lampornis) amazilia*, TSCHUD., Consp. Av., p. 37.—ID., Faun. Per., p. 246 (1844-46).  
*Polytmus amazili*, GRAY, Gen. Birds, vol. i, p. 108, sp. 70.  
*Amazilia latirostris*, BON. (nec SWAIN.), Consp. Gen. Av., vol. i, p. 77 (1850).  
*Amazilia pristina*, GOULD, Mon. Troch., vol. v, pl. 303.—ID., Intr. Troch., octavo ed., p. 155 (1861).  
*Pyrrhophæna amazilia*, CAB. and HEIN., Mus. Hein. Th., iii, p. 35 (1860).  
*Amazilia lessoni*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 293.  
 28 January, 1879.

*Hab.* Ecuador and Peru.

*Adult.* Upper surface greenish-bronze. Throat emerald-green; chest white; under surface rufous. Under tail coverts white washed with rufous. Upper tail coverts rufous. Tail pale chestnut, glossed on the edges and tips of central feathers with bronze. Wings purple. Bill flesh-color, tip black. Feet brown. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

## 2. *Amazilia leucophæa*.

*Amazilia leucophæa*, REICH., Aufz. der Colib., pp. 10, 24 (1853).—GOULD, Mon. Troch., vol. v, pl. 306.—ID., Intr. Troch., octavo ed., p. 156.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 291.  
*Amazilia amazicula*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8, pl. 777, figs. 4803-4 (1855).  
*Pyrhophæna leucophæa*, CAB. and HEIN., Mus. Hein. Th., iii, p. 35 (1860).

*Hab.* Peru.

*Adult.* Top of head and back golden-green; rump and upper tail coverts rufous. Wings pale brown. Throat and sides of neck metallic golden-green; chest white; under surface rufous; under tail coverts buffy-white. Bill flesh-color, tip brownish-black; feet black. Tail rufous, median feathers washed with bronze at the tips. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{3}{16}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{5}{8}$  in.

## 3. *Amazilia alticola*.

*Amazilia alticola*, GOULD, P. Z. S. (1860), p. 309.—ID., Mon. Troch., vol. v, pl. 304.—ID., Intr. Troch., octavo ed., p. 156 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 289.

*Hab.* Ecuador.

*Adult.* Upper parts bronzy-green, darkest on the head. Upper parts of throat and sides of the neck golden metallic-green. Rest of under parts white except flanks which are buff. The white under tail coverts are washed with buff. Upper tail coverts and tail chestnut, median rectrices tipped with bronzy-green. Wings purplish-brown. Bill flesh-color with a black tip; feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{3}{4}$  in.

Specimens vary in their coloration, and some are almost entirely white beneath, with just a few feathers of the throat tipped with golden-green.

## 4. *Amazilia dumerili*.

*Ornismya dumerili*, LESS., Ois. Mouch. Supp., p. 172, pl. 36 (1831).—ID., Ind. Gen. and Syn. Troch., p. xxviii.  
*Polytmus dumerili*, GRAY, Gen. Birds, vol. i, p. 109, sp. 79.  
*Amazilius dumerili*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.  
*Amazilia dumerili*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8, pl. 777, figs. 4805-6.—GOULD, Mon. Troch., vol. v, pl. 305.—ID., Intr. Troch., octavo ed., p. 156 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 287.  
*Pyrhophæna dumerili*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (note 7) (1860).

*Hab.* Ecuador.

This species is distinguished from the three preceding by having the upper tail coverts and tail bronzy-green. In other respects it is very similar in its coloration;

having a metallic-green throat, white breast, rufous abdomen and flanks, and white under tail coverts. Bill flesh-color, tip black. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

### 5. *Amazilia cinnamomea*.

- Ornismya cinnamomea*, LESS., Rev. Zool. (1842), p. 175.  
*Ornismya rutila*, DELATT., Echo Monde Savant. (1843), p. 1069.  
*Trochilus corallirostris*, BOURC. and MULS., Ann. Soc. Agr., Lyon (1846), t. ix, p. 328.  
*Amazilicus erythrorhynchus*, BON., Compt. Rend. (1850), p. 382.  
*Amazilicus hæmatorhynchus*, BON., Compt. Rend. (1850), p. 382.  
*Amazilius corallirostris*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.  
*Amazilia corallirostris*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8, pl. 776, figs. 4800-1 (1855).—GOULD, Mon. Troch., vol. v, pl. 307.  
*Pyrrhophæna corallirostris*, CAB. and HEIN., Mus. Hein. Th., iii, p. 35 (note 6) (1860).  
*Pyrrhophæna cinnamomea*, GOULD, Intr. Troch., octavo ed., p. 156 (1861).  
*Eranna cinnamomea*, HEINE, Journ. für Ornith. (1863), p. 187.

*Hab.* Guatemala and Costa Rica.

*Adult.* Upper surface bronzy-green. Wings purplish-brown. Entire under surface bright cinnamon. Tail deep chestnut tipped with bronze, sometimes margined with black. Bill red, feet brown. Total length, 4 in. Tail,  $1\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Culmen,  $\frac{7}{8}$  in. (Bourcier's type.)

### 6. \**Amazilia graysoni*.

- Amazilia (Pyrrhophæna) graysoni*, LAWR., Ann. N. Y. Lyc. Nat. Hist. (1867), p. 404.  
*Amazilia graysoni*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 286.

*Hab.* Islands of Tres Marias.

Like *A. cinnamomea*, but larger. Total length,  $4\frac{3}{4}$  in. Wing,  $2\frac{11}{16}$  in. Tail,  $1\frac{7}{8}$  in. Bill,  $\frac{1}{2}\frac{5}{8}$  in.

### 7. *Amazilia yucatanensis*.

- Trochilus yucatanensis*, CABOT, Proc. Nat. Hist. Soc. Bost. (1845), p. 74.  
*Amazilia yucatanensis*, GOULD, Mon. Troch., vol. v, pl. 308.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 295.  
*Amazilius cerviniventris*, GOULD, P. Z. S. (1856), p. 150.  
*Pyrrhophæna yucatanensis*, GOULD, Intr. Troch., octavo ed., p. 157 (1861).  
*Amazilia cerviniventris*, GOULD, Mon. Troch., vol. v, pl. 309.  
*Pyrrhophæna cerviniventris*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (note 9) (1860).—GOULD, Intr. Troch., octavo ed., p. 157.  
*Eranna yucatanensis*, HEINE, Journ. für Ornith. (1863), p. 187.  
*Eranna cerviniventris*, HEINE, Journ. für Ornith. (1863), p. 187.

*Hab.* Mexico and Yucatan.

*Adult.* Upper surface bronzy-green. Throat and breast metallic emerald-green: flanks grass-green. Abdomen and under tail coverts dark fawn. Thighs white. Tail chestnut-red tipped with bronze. Wings purple. Bill flesh-color, tip black. Total length, 4 in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{1}{2}\frac{3}{8}$  in.

I can perceive no difference between Mexican and Yucatan specimens, and have placed the *A. cerviniventris*, Gould, as a synonym of Cabot's species.

**8. *Amazilia fuscicaudata*.**

- Trochilus fuscicaudata*, FRAS., P. Z. S. (1840), p. 17.  
*Trochilus riefferi*, BOURC., Rev. Zool. (1843), p. 103.  
*Trochilus aglaia*, BOURC. and MULS., Ann. Soc. Phys. and Sc., Lyon (1846), p. 329.—ID., Rev. Zool. (1846), p. 318.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 319.  
*Hylocharis fuscicaudatus*, GRAY, Gen. Birds, vol. i, p. 114, sp. 26.  
*Amazilia riefferi*, REICH., Aufz. Av. Syst. Nat., pl. 39 (1849).—ID., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8, t. 775, figs. 4798-99 (1855).—GOULD, Mon. Troch., vol. v, pl. 311.  
*Amazilius aglaia*, BON., Consp. Gen. Av., vol. i, p. 71 (1850).  
*Amazilius riefferi*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).—ID., Rev. and Mag. Zool. (1854), p. 254.  
*Trochilus dubusi*, BOURC., Soc. Agr., Lyon (1852), p. 141.  
*Polytmus aglaia*, GRAY, Gen. Birds, vol. i, p. 109, sp. 73 (1844-49).  
*Saucerottia aglaia*, REICH., Aufz. der Colib., p. 10 (1853).  
*Amazilia dubusi*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8, t. 778, figs. 4809-10 (1855).  
*Saucerottia fuscicauda*, REICH., Troch. Enum., p. 8, t. 696, fig. 4552-53.  
*Amazilius dubusi*, BON., Rev. and Mag. Zool. (1854), p. 254.  
*Chlorestes aglaia*, REICH., Troch. Enum., p. 4 (1855).  
*Pyrrhophæna riefferi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (1860).—GOULD, Intr. Troch., octavo ed., p. 158 (1861).  
*Pyrrhophæna dubusi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (1860).  
*Pyrrhophæna suavis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (note 8) (1860).  
*Hemithylaca aglaia*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (note 13) (1860).  
*Eranna jacunda*, HEINE, Journ. für Ornith. (1863), p. 188.

*Hab.* Mexico, Central America, Columbia, and Ecuador.

*Adult.* Upper surface bronze-green. Throat and breast brilliant grass-green. Abdomen and flanks bronzy-green, pale brown near the vent. Under tail coverts rufous. Upper tail coverts and tail reddish-chestnut, the latter with bronze tips. Wings purple. Bill flesh-color, tip black. Feet black. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

**9. *Amazilia viridiventris*.**

- Trochilus viridigaster*, BOURC., Rev. Zool. (1843), p. 105.  
*Hylocharis viridigaster*, BON., Consp. Gen. Av., vol. i, p. 74, sp. 5 (1850).—GRAY, Gen. Birds, vol. i, p. 115, sp. 41.  
*Saucerottia viridiventris*, REICH., Aufz. der Colib., p. 8 (1853).—ID., Troch. Enum., p. 4, pl. 699, figs. 4564-65 (1855).  
*Saucerottia viridigaster*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Amazilia viridigaster*, GOULD, Mon. Troch., vol. v, pl. 314.  
*Hemithylaca viridiventris*, CAB. and HEIN., Mus. Hein. Th., iii, p. 38 (1860).  
*Pyrrhophæna viridigaster*, GOULD, Intr. Troch., octavo ed., p. 159 (1861).  
*Ariana viridigaster*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 320.

*Hab.* Columbia.

*Adult.* Top of head and back bronzy-green, lower part of back grayish-brown shading into purple on the upper tail coverts. Under parts shining green, passing into smoky-brown on the abdomen; under tail coverts grayish-buff with light edges. Tail shining dark violet. Wings purple-brown. Bill and feet black. Total length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

**10. \**Amazilia ocai*.**

*Amazilia ocai*, GOULD, Ann. Mag. Nat. Hist., vol. iv (1859), 3d ser., p. 96.—*Id.*, Mon. Troch., vol. v, pl. 289.  
*Pyrrhophæna ocai*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (note 11) (1860).  
*Hemistilbon ocai*, GOULD, Intr. Troch., octavo ed., p. 150 (1861).

*Hab.* Xalapa, Mexico.

*Adult.* "Crown, sides of the head, throat, and breast glittering grass-green, with a few of the white bases of the feathers showing on the centre of the throat; back of the neck, and upper part of the back deep green; upper and under wing coverts, flanks, lower part of the back, upper tail coverts and tail greenish-bronze; under surface of the base of the outer tail feathers reddish-buff; wings purplish-brown; base of the secondaries reddish-buff; abdomen pale brown; under tail coverts light bronze margined with white, bill black, lighter beneath; feet brown."—(Gould, Mon. Troch.) Total length, 4 in. Wing, 2 in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{1}{16}$  in.

**11. *Amazilia beryllina*.**

*Trochilus beryllinus*, LICHT., Preis-Verz., Mex. Thier. ges. v. Deppe und Schiede (1830), no. 26.  
*Ornismya arsinöe*, LESS., Supp. Ois. Mouch., pp. 154, 156, pls. 28, 29 (1829).—*Id.*, Rev. and Mag. Zool. (1838), p. 314, and (1839), p. 18.  
*Polytmus arsinöe*, GRAY, Gen. Birds, vol. i, p. 109, sp. 9.  
*Amazilius arsinöe*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—*Id.*, Rev. and Mag. Zool. (1854), p. 254.  
*Amazilia arsinöe*, REICH., Aufz. der Colib., p. 10 (1853).—*Id.*, Troch. Enum., p. 8, t. 774, figs. 4794-97 (1855).  
*Amazillia beryllina*, GOULD, Mon. Troch., vol. v, pl. 312.  
*Amazilia castaneiventris*, GOULD, P. Z. S. (1856), p. 150.—*Id.*, Mon. Troch., vol. v, pl. 309.  
*Pyrrhophæna beryllina*, CAB. and HEIN., Mus. Hein. Th., iii, p. 36 (partim, 1860).—GOULD, Intr. Troch., octavo ed., p. 158.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 303.  
*Pyrrhophæna castaneiventris*, GOULD, Intr. Troch., octavo ed., p. 157 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 300.  
*Eranna castaneiventris*, HEINE, Journ. für Ornith. (1863), p. 187.

*Hab.* Mexico, Columbia?.

*Adult.* Head and back shining bronzy-green; rump and upper tail coverts purplish-bronze. Throat and breast metallic grass-green. Abdomen and under tail coverts dark reddish-fawn, the latter edged with pale buff. Tail shining purplish-bronze. Primaries and secondaries chestnut-red at base, remainder purple. Maxilla black. Mandible flesh-color, tip black; feet black. Total length, 4 in. Wing,  $2\frac{3}{16}$  in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{3}{4}$  in.

The specimen described by Mr Gould (l. c.) as *A. castaneiventris*, I believe to be only a somewhat lighter-colored individual of this species, and have, therefore, placed it among the synonyms.

**12. *Amazilia edwardi*.**

*Trochilus edward*, DELATT. and BOURC., Rev. Zool. (1846), p. 308.  
*Polytmus edwardsii*, GRAY, Gen. Birds, vol. i, p. 109, sp. 77 (1844-49).  
*Amazilius edwardi*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).  
*Saucerottia edwardsii*, REICH., Aufz. der Colib., p. 8 (1853).  
*Thaumantias edward*, BON., Rev. and Mag. Zool. (1854), p. 255.

- Chlorestes edwardsii*, REICH., Troch. Enum., p. 4, pl. 698, figs. 4658-59 (1855).  
*Erythronota edwardi*, GOULD, Mon. Troch., vol. v, pl. 318.—ID., Intr. Troch., octavo ed., p. 161 (1861).  
*Hemithylaca edwardi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 37 (1860).  
*Eratina edwardi*, HEINE, Journ. für Ornith. (1863), t. ix, p. 191.  
*Leucodora edwardi*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 311.

*Hab.* Panama.

*Adult.* Top of head and back green, rump and upper tail coverts bronzy-purple. Throat, breast, and flanks glittering grass-green. Abdomen white. Under tail coverts dark brown bordered with grayish-white. Wings purple. Tail bronzy-purple. Maxilla and tip of mandible black, rest of latter flesh-color. Feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

### 13. *Amazilia niveiventris*.

- Trochilus* (—?) *niveoventer*, GOULD, P. Z. S. (1850), p. 164.  
*Saucerottia niveoventer*, REICH., Aufz. der Colib., p. 8 (1853).—SCLAT. and SALV., Nomencl., p. 92 (1873).  
*Chlorestes niveiventris*, REICH., Troch. Enum., p. 4, pl. 700, figs. 4566-67 (1855).  
*Thaumantias niveoventer*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Hemithylaca niveiventris*, CAB. and HEIN., Mus. Hein. Th., iii, p. 37 (1860).  
*Erythronota niveiventris*, GOULD, Mon. Troch., vol. v, pl. 319 (1861).—ID., Intr. Troch., octavo ed., p. 161.  
*Leucodora niveiventris*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 313.

*Hab.* Veragua, Panama.

*Adult.* This species in its general plumage is almost precisely like the *A. edwardi*, but may be at all times distinguished by its tail, which is *purplish-black*, instead of bright bronzy-purple. Total length,  $3\frac{3}{4}$  in. Wing, 2 in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

### 14. *Amazilia mariae*.

- Trochilus mariae*, BOURC., Ann. Soc. Agr., Lyon (1846), t. ix, p. 319.  
*Trochilus devillii*, BOURC., Rev. Zool. (1848), p. 272.—GRAY, Gen. Birds, vol. iii, app., p. 30a.  
*Hylocharis mariae*, BON., Consp. Gen. Av., vol. i, p. 74 (1850).  
*Amazilia devillei*, REICH., Aufz. der Colib. (1853), p. 10.—ID., Troch. Enum., p. 8, t. 778, figs. 4807-8 (1855).  
 —GOULD, Mon. Troch., vol. v, pl. 313 (1861).  
*Smaragdites mariae*, REICH., Aufz. der Colib., p. 7 (1855).  
*Amazilius divillei*, BON., Rev. and Mag. Zool. (1854), p. 254.  
*Saucerottia maria*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Chlorestes maria*, REICH., Troch. Enum., p. 4, pl. 695, fig. 4549 (1855).  
*Panychlora mariae*, CAB. and HEIN., Mus. Hein. Th., iii, p. 49 (note) (1860).  
*Amazilia dumerili*, SALV., Ibis (1860), p. 270.  
*Eranna devillei*, HEINE, Journ. für Ornith. (1863), p. 188.

*Hab.* Guatemala.

*Adult.* Head and back dark green. Rump bronze. Upper tail coverts dark purple. Wings purplish-brown, base of primaries and secondaries rufous. Under surface metallic grass-green. Thighs white. Under tail coverts rufous with light edges. Tail brilliant purple. Maxilla and tip of mandible black, rest of latter flesh-color. Feet brownish-black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{3}{16}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{1}{16}$  in.

The *T. mariae*, BOURC., is this species not fully adult, and the name takes precedence of *devillei*, which has been generally employed.

**15. \*Amazilia cyanura.**

*Amazilia cyanura*, GOULD, Mon. Troch., pt. xviii (1850), and vnl. v, pl. 315.

*Hemithylaca cyanura*, CAB. and HEIN., Mus. Hein. Th., iii, p. 38 (note 14) (1860).

*Pyrrhophæna cyanura*, GOULD, Intr. Troch., octavo ed., p. 160 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 308.

*Hab.* Guatemala, Nicaragua.

*Adult.* "Head, all the upper surface, and wing coverts dark bronzy-green, passing into coppery-bronze on the lower part of the back; wings purplish-brown; the base of the primaries and secondaries both above and beneath chestnut-red; under surface shining grass-green; upper and under tail coverts and tail dark steel-blue, the under coverts fringed with gray; thighs white. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{4}$  in. Bill,  $\frac{7}{8}$  in."—(Gould, Mon. Troch.)

**16. \*Amazilia iodura.**

*Trochilus iodurus*, SAUCEROTTE, Mus. Hein.

*Saucerottia iodura*, REICH., Aufz. der Colib., p. 8 (1853).

*Chlorestes iodurus*, REICH., Troch. Enum., p. 4, t. 698, figs. 4560-61 (1855).

*Hemithylaca iodura*, CAB. and HEIN., Mus. Hein. Th., iii, p. 39 (1860).

*Pyrrhophæna iodura*, GOULD, Intr. Troch., octavo ed., p. 159 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 299.

*Eratina iodura*, HEINE, Journ. für Ornith. (1863), p. 190.

*Hab.* Columbia.

"Capite, collo, pectore, dorso superiore, tectricibusque alarum splendide virescentibus, gula paululum albo intermixta; alis cæruleo-virescentibus latissime pallide fulvescente-limbatis; cauda splendide purpureo-violacea; abdomine fulvescente; crisso albido.—Long. tot., 3'' 3'''; al., 2''; caud., 1'' 2'''; rostr. culm., 9'''.—" (Cab. and Hein., loc. cit.)

I have not seen this species.

**17. Amazilia lucida.**

*Amazilia lucida*, ELLIOT, Ann. and Mag. Nat. Hist. (1877).

*Hab.* Columbia.

*Adult.* Crown of the head dark metallic grass-green; upper surface shining grass-green, lighter than the head. Upper tail coverts golden-bronze. Throat, breast, abdomen, and flanks metallic grass-green, a light mouse-colored spot on the lower part of the abdomen. Thighs white, feathers fluffy. Under tail coverts dark bronzy-brown, edged with white. Wings dark purple. Tail reddish-bronze, darkest in the centre of the feathers along the shafts, with the tips of the lateral rectrices bluish-black, their edges reddish-bronze. This bluish-black color almost resolves itself into a subterminal bar, and is especially conspicuous on the under side of the tail. Bill brownish-red, flesh-color in life, tip blackish. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

**18. *Amazilia erythronota*.**

- Ornismya erythronotos*, LESS., Ois. Mouch., pl. 61, p. 181 (1829).  
*Ornismya erythronotus*, LESS., Rev. Zool. (1839), p. 19.  
*Polytmus erythronotus*, GRAY, Gen. Birds, vol. i, p. 108, sp. 78.  
*Saucerottia erythronota*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—REICH., Aufz. der Colib., p. 8 (1853).—  
 BON., Rev. and Mag. Zool. (1854), p. 255.  
*Chlorestes erythronotus*, REICH., Troch. Enum., p. 4, t. 699, figs. 4562–63 (1855).  
*Hemithylaca erythronota*, CAB. and HEIN., Mus. Hein. Th., iii, p. 37 (1860).  
*Erythronota antiqua*, GOULD, Mon. Troch., vol. v, pl. 316.—ID., Intr. Troch., octavo ed., p. 160 (1861).  
*Ariana erythronota*, MULS., Hist. Nat. Ois. Mouch. tom. i, p. 323.

*Hab.* Islands of Tobago and Trinidad, Venezuela, and Columbia.

*Adult.* Forehead and upper part of back shining green; nape, lower part of back, and upper tail coverts coppery-red. Wings purple. Under surface shining grass-green. Under tail coverts vary, in some specimens they are rufous, in others gray. A patch of white on the flanks. Tail steel-blue. Maxilla black, mandible flesh-color, tip black. Feet black. Total length,  $3\frac{5}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

**19. *Amazilia feliciæ*.**

- Ornismya feliciæ*, LESS., Rev. Zool. (1840), p. 72.  
*Ornismya felicianana*, LESS., Rev. Zool. (1844), p. 433.  
*Saucerottia feliciæ*, REICH., Aufz. der Colib., p. 7 (1853).—BON., Rev. and Mag. Zool. (1854), p. 255.  
*Saucerottia felicia*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Chlorestes feliciæ*, REICH., Troch. Enum., p. 4, t. 697, figs. 455–57 (1855).  
*Hemithylaca feliciæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 38 (note 10) (1860).  
*Erythronota feliciæ*, GOULD, Mon. Troch., vol. v, pl. 317.—ID., Intr. Troch., octavo ed., p. 161 (1861).

*Hab.* Venezuela.

*Adult.* General plumage shining grass-green, darkest on the head, and lightest and most brilliant on the under parts. Thighs white. Upper tail coverts and tail bluish-black. Under tail coverts dark bronzy-brown, margined with white. Maxilla black, mandible flesh-color, tip black. Feet black. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{1}{6}$  in.

**20. *Amazilia sophiæ*.**

- Trochilus sophiæ*, BURC. and MULS., Ann. Soc. Agr., Lyon (1846), t. ix, p. 318.—ID., Rev. Zool. (1846), p. 316.  
*Trochilus caligatus*, GOULD, P. Z. S. (1848), p. 14.  
*Polytmus sophiæ*, GRAY, Gen. Birds, vol. i, p. 109, sp. 76.  
*Amazilius sophiæ*, BON., Consp. Gen. Av., p. 78 (1850).  
*Saucerottia caligata*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—REICH., Aufz. der Colib., p. 8 (1853).  
*Saucerottia sophiæ*, REICH., Aufz. der Colib., p. 8 (1853).—BON., Rev. and Mag. Zool. (1854), p. 255.  
*Chlorestes sophiæ*, REICH., Troch. Enum., p. 4, t. 697, figs. 4554–55? (1855).  
*Chlorestes caligata*, REICH., Troch. Enum., p. 4 (1855).  
*Hemithylaca hoffmanni*, CAB. and HEIN., Mus. Hein. Th., iii, p. 38, sp. 80 (1860).  
*Hemithylaca caligata*, CAB. and HEIN., Mus. Hein. Th., iii, p. 39, sp. 82 (1860).  
*Hemithylaca sophiæ*, CAB. and HEIN., Mus. Hein. Th., iii, p. 38 (note 11) (1860).  
*Saucerottia sophiæ*, GOULD, Mon. Troch., vol. v, pl. 322.—ID., Intr. Troch., octavo ed., p. 162 (1861).  
*Hemithylaca braccata*, HEINE, Journ. für Ornith. (1863), p. 193.  
*Ariana sophiæ*, MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 328.

*Hab.* Costa Rica.



*Adult.* Head and upper surface dark green; purplish-red on the rump. Under parts shining grass-green. Thighs white. Upper tail coverts and tail deep blue, the under coverts fringed with grayish-white. Wings purple. Maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{5}{8}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

## 21. *Amazilia warszewiczi*.

*Hemithylaca warszewiczi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 38 (1860).

*Saucerottia warszewiczi*, GOULD, Intr. Troch., octavo ed., p. 163 (1861).

*Ariana warszewiczi*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 327.

*Hab.* Columbia, Bank of the Magdalena.

*Adult.* This species differs from *A. sopherice* in being slightly smaller, in having the rump green like the back, and the tail a brighter blue. Total length,  $3\frac{5}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

## 22. *Amazilia saucerottii*.

*Trochilus saucerottei*, BOURC. and DELATT., Rev. Zool. (1846), p. 311.

*Polytmus saucerottii*, GRAY, Gen. Birds, vol. i, p. 108, sp. 67.

*Saucerottia typica*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—ID., Rev. and Mag. Zool. (1854), p. 255.—REICH., Aufz. der Colib., p. 7 (1853).—GOULD, Intr. Troch., octavo ed., p. 162 (1861).

*Chlorestes typica*, REICH., Troch. Enum., p. 4, pl. 701, figs. 4569-70 (1855).

*Erythronota saucerottei*, GOULD, Mon. Troch., vol. v, pl. 321.—MULS., Hist. Nat. Ois. Mouch., tom. i, p. 331.

*Hemithylaca saucerottei*, CAB. and HEIN., Mus. Hein. Th., iii, p. 38 (note 12) (1860).

*Ariana saucerottei*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 316.

*Hab.* Columbia.

*Adult.* Top of head and upper surface dark grass-green; under surface luminous green, much lighter than the upper parts. Vent white. Under tail coverts dark bronzy-brown edged with grayish-white. Wings purple. Upper tail coverts and tail steel-black. Maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

## 23. *Amazilia cyanifrons*.

*Trochilus cyanifrons*, BOURC., Rev. Zool. (1843), p. 100.—ID., Ann. Soc. Agr., Lyon (1843), p. 42.

*Polytmus cyanifrons*, GRAY, Gen. Birds, vol. i, p. 108, sp. 66 (1844-49).

*Thalurania cyanifrons*, BON., Consp. Gen. Av., p. 77 (1850).

*Saucerottia cyanifrons*, REICH., Aufz. der Colib., p. 8 (1853).—BON., Rev. and Mag. Zool. (1854), p. 255.—GOULD, Mon. Troch., vol. v, pl. 323.

*Chlorestes cyanifrons*, REICH., Troch. Enum., p. 4, pl. 701, figs. 4571-72 (1855).

*Hemithylaca cyanifrons*, CAB. and HEIN., Mus. Hein. Th., iii, p. 39, sp. 83 (1860).—GOULD, Intr. Troch., octavo ed., p. 163 (1861).

*Eratopis cyanifrons*, HEINE, Journ. für Ornith. (1863), p. 191.

*Ariana cyanifrons*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 332.

*Hab.* Columbia.

*Adult.* Top of head deep blue; upper surface bronzy-green. Under surface luminous grass-green. Under tail coverts purplish-olive, margined with grayish-

white. Tail bluish-black. Maxilla black, mandible flesh-color, tip black. Feet brownish-black. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in. (Type in my collection.)

#### 24. \**Amazilia elegans*.

*Erythronota? elegans*, GOULD, P. Z. S. (1860), p. 307.—ID., Intr. Troch., octavo ed., p. 162 (1861).

*Erasinia elegans*, HEINE, Journ. für Ornith. (1863), p. 191.

*Sporadinus incertus*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 76.

*Hab.* —?

“Crown and all the under surface of the body glittering light green; back of the neck and back golden or orange-green; upper tail coverts purplish-red or puce color; tail long forked, and of a purplish-violet hue with green reflections on the tips of the two centre feathers; wings purplish-brown; tarsi white; under tail coverts gray with bronzy-purple centres; maxilla flesh-color at the base, and black for the remainder of its length; mandible flesh-color except at the tip, which is black. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $\frac{7}{8}$  in. Bill,  $1\frac{1}{2}$  in.”—(Gould, Mon. Troch.)

The members composing the next genus, usually known as *Heliopædica*, Gould, but which is antedated thirty years by BASILINNA, Boie, have usually been placed, since Mr. Gould's arrangement was published, near to CÆLIGENA (*Delattria*). I do not see that it has any affinity whatever for the species of that genus, but is closely related to EUCEPHALA. Indeed, if the *B. leucotis* is compared with the *E. GRAYI*, it will readily be seen how close is the resemblance of the two birds, the principal difference being that *leucotis* has a stripe over the eye, and which was one of the chief reasons, it would seem, that these birds were placed near CÆLIGENA.—The two species are small birds, with brilliant metallic plumage, and the sexes are altogether differently clothed.

#### Genus CX.—BASILINNA.

*Basilinna*, BOIE, Isis (1831), p. 546.

*Heliopædica*, GOULD, Intr. Troch., octavo ed. (1861), p. 60.

*Ch.* Bill straight, about equal to the head. Wings long. Tail almost square, feathers broad; tarsi clothed; hind toe shorter than the middle one. Sexes dissimilar in plumage.

*Range.* Cape St. Lucas, California, Mexico, Guatemala.

Two species are known.

#### *Key to the species.*

A. Upper parts bronzy-green.

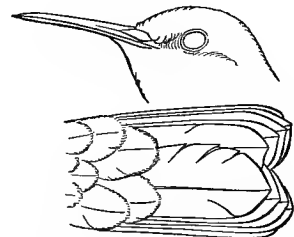
- a. Median rectrices bronze-green, rest black, bronze tips.
- b. Tail deep chestnut, tipped with bronze.

TYPE.

*T. leucotis*, Vieill.

*T. leucotis*, Vieill.

Fig. 117.



*Basilinna leucotis*. ♂. Oaxaca, Sallé.

1. *B. leucotis*.
2. *B. xanthusi*.

**1. *Basilinna leucotis*.**

- Trochilus leucotis*, VIEILL., Nouv. Dict. Hist. Nat., 2d ed. t. xxii, p. 428.—Ency. Méth., vol. ii, p. 559.  
*Trochilus melanotis*, SWAIN., Phil. Mag. (1827), p. 441.  
*Ornismya arsenii*, LESS., Ois. Mouch., p. 60, pl. 9 (1829).  
*Hylocharis leucotis*, GRAY, Gen. Birds, vol. i, p. 114, sp. 28.  
*Basilinna leucoti*, BOIE, Isis (1831), p. 546.—REICHEN., Aufz. der Colib., p. 13 (1853).—ID., Troch. Enum., p. 11 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 45.  
*Heliopædica melanotis*, GOULD, Mon. Troch., vol. ii, pl. 64.—ID., Intr. Troch., octavo ed., p. 60 (1861).  
*Thaumantias leucotis*, BON., Consp. Gen. Av., p. 78 (1850).  
*Sapphironia lucida*, SCLAT., P. Z. S. (1858), p. 297, and (1859), p. 386.  
*Cœligena leucotis*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 187.

*Hab.* Mexico and Guatemala.

*Male.* Front and chin sapphire-blue. Occiput bronze. Upper parts grass-green on back shading into bronze on the rump. Throat and breast metallic emerald-green. Ear coverts black; a white line above and behind the eye. Abdomen and under tail coverts grayish-brown. Wings purple. Median rectrices bronze-green, rest black with bronze edges and tips. Bill red, with black tips. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Feathers of the crown rufous, margined with dark brown. Under surface buffy-white spotted with green. Rectrices like the male, but the lateral ones are tipped with grayish-white. Bill black.

**2. *Basilinna xanthusi*.**

- Amazilia xanthusi*, LAW., Ann. Lyc. Nat. Hist., N. Y. (1860), p. 109 ♀.  
*Heliopædica castaneo-cauda*, LAW., Ann. Lyc. Nat. Hist., N. Y. (1860), p. 145, ♂.  
*Heliopædica xanthusi*, GOULD, Mon. Troch., vol. ii, pl. 64.—ID., Intr. Troch., octavo ed., p. 60 (1861).—ELLIOT, B. N. Amer., vol. i, pl. 22 (1869).  
*Cœligena xanthusi*, MULS., Hist. Nat. Ois. Mouch., tom. i, p. 190.

*Hab.* Cape St. Lucas, California.

*Male.* Differs from the *B. leucotis*, in having the under parts rufous; throat pale grass-green; and tail dark chestnut tipped with bronze. Bill red, tip black. Total length,  $3\frac{3}{8}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female* or *young male.* Upper parts shining green. Front and entire under parts uniform rufous. Median rectrices green, lateral rufous with black spots on the webs near the tips.

One of the least understood of the various groups composing the Trochilidæ is that one forming the genus EUCEPHALA, and this arises mainly from the great rarity of the majority of the birds, for six of the types I believe, out of the nine known species, still remain unique.—They are small birds, the prevailing tints of whose plumage is metallic-blue and green; the females differing greatly from the males in appearance.

**Genus CXI.—EUCEPHALA.**

*Eucephala*, REICH., Aufz. der Colibri. (1853), p. 10.  
*Chlorestes*, REICH., Aufz. der Colib., p. 7 (1853).

TYPE.  
*T. grayi*, Delatt. and Bourc.  
*T. cyanogenys*, Wied.

*Halia*, MULS. and VERR., Class. Troch. (1865), p. 41.

*Ulysses*, MULS., Cat. Ois. Mouch., p. 12 (1875).—ID., Hist. Nat. Ois. Mouch., tom. ii, p. 41.

*T. cæruleus*, Vieill.

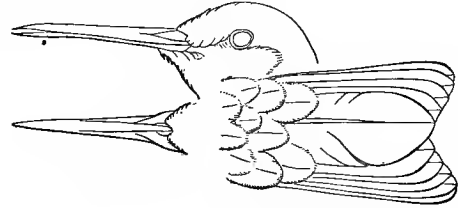
*T. grayi*, Delatt. and Bourc.

*Ch.* Bill slightly longer than the head, rather broad at base, sharply pointed at tip, nostrils exposed. Wings long and pointed. Tarsi clothed. Tail rounded or slightly forked. Sexes dissimilar.

*Range.* Island of Trinidad, Venezuela, Guiana, Brazil, and Ecuador.

Nine species are known.

Fig. 118.



*Eucephala grayi*, ♂. New Granada. Gould.

*Key to the species.*

- |  |                                 |
|--|---------------------------------|
| A. Top of head blue.   |                                 |
| a. Chin deep blue; under surface golden-green.   | 1. <i>E. grayi</i> .            |
| b. Chin greenish-blue, under surface grass-green.  | 2. <i>E. smaragdo-cærulea</i> . |
| c. Throat and chest bright greenish-blue.  | 3. <i>E. cæruleo-lavata</i> .   |
| B. Top of head green.  |                                 |
| a. Throat and chest blue. Abdomen brownish-black, under tail coverts brown, centres blue.      | 4. <i>E. scapulata</i> .        |
| b. Throat and chest blue, upper tail coverts reddish-bronze, under brownish-black.             | 5. <i>E. hypocyanea</i> .       |
| c. Throat, breast, and abdomen cærulean-blue, upper and under tail coverts dark green.         | 6. <i>E. subcærulea</i> .       |
| d. Chin blue, under surface glittering green.  | 7. <i>E. cærulea</i> .          |
| e. Chin, throat, and breast shining grass-green. Under tail coverts olive margined with white. | 8. <i>E. chlorocephala</i> .    |
| f. Entire under parts green, with a bluish-shade on the throat.                                | 9. <i>E. cyanogcnys</i> .       |

## 1. *Eucephala grayi*.

*Trochilus grayi*, DELATT. and BOURC., Rev. Zool. (1846), p. 307.

*Hylocharis grayi*, GRAY, Gen. Birds, vol. i, p. 115, sp. 38.—BON., Consp. Gen. Av., vol. i, p. 74 (1850).

*Eucephala grayi*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8, t. 772, figs. 4789–91.—GOULD, Mon. Troch., vol. v, pl. 330.—ID., Intr. Troch., octavo ed., p. 166 (1861).—CAB. and HEIN., Mus. Hein. Th., iii, p. 43 (1860).—ELLIOT, Ibis (1874), p. 88.

*Sapphironia grayi*, BON., Rev. and Mag. Zool. (1854), p. 256.

*Ulysses grayi*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 41.

*Hab.* Ecuador.

*Male.* Head and chin shining deep blue. Upper and under surface golden-green. Wings purplish-brown. Under tail coverts shining green edged with grayish-white. Tail steel-blue. Bill red, tip brownish-black. Feet brown. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{1}{2}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{8}$  in.

*Female.* Upper parts golden-green. Under parts white spangled with bronzy-green. Under tail coverts gray with dark centres. Base of tail bronzy-green shading into blue, and tipped on the outer feathers with grayish-white. Bill red, tip black. Total length,  $3\frac{7}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{7}{8}$  in. (Type in my collection.)

**2. \*Eucephala smaragdo-cærulea.**

*Augasma smaragdineum*, GOULD, P. Z. S. (1860), p. 305.

*Eucephala smaragdo-cærulea*, GOULD, Mon. Troch., vol. v, pl. 331.—ID., Intr. Troch., octavo ed., p. 166 (1861).  
—ELLIOT, Ibis (1874), p. 88.

*Eucephala smaragdinea*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 37.

*Hab.* Brazil, Novo Friburgo.

“Crown of the head and throat glittering greenish-blue, imperceptibly passing into the glittering green of the breast, back of the neck and upper surface golden-green; upper tail coverts grass-green; under tail coverts green, inclining to purple on some of the feathers; thighs brown; tail bluish-black, the two outer feathers on each side slightly tipped with white; bill black with the exception of the basal half of the under mandible which is flesh-color. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{3}{8}$  in. Bill,  $\frac{7}{8}$  in.”—(Gould, loc. cit.)

**3. \*Eucephala cæruleo-lavata.**

*Eucephala cæruleo-lavata*, GOULD, P. Z. S. (1860), p. 306.—ID., Mon. Troch., vol. v, pl. 333.—ID., Intr. Troch., octavo ed., p. 166 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 40.—ELLIOT, Ibis (1874), p. 88.

*Hab.* Brazil, Province of San Paulo.

“Crown of the head greenish-blue, not very brilliant, but having a few conspicuous small bright blue feathers intermingled; throat and chest bright greenish-blue, passing into purer green on the flanks; back of the neck and back deep grass-green; wings purplish-brown; upper tail coverts bronzy-orange; under tail coverts bronzy purplish-brown; two middle tail feathers deep purplish-bronze, the next on each side is washed with bronze on its outer margin, the remaining feathers purplish-black; thighs grayish-white, the bill appears to have been reddish flesh-color at the base of both mandibles, and black at the tip. Total length,  $3\frac{3}{4}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{1}{2}$  in. Bill,  $\frac{7}{8}$  in.”—(Gould, loc. cit.)

**4. \*Eucephala scapulata.**

*Eucephala scapulata*, GOULD, Intr. Troch., octavo ed., p. 166 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 34.—ELLIOT, Ibis (1874), p. 88.

*Hab.* Guiana?

“Crown of the head, back of the neck, and lower part of the back very deep dull green; throat and chest glittering greenish-blue, imperceptibly passing into the dull brownish-black of the abdomen; under tail coverts brown, with a wash of dull blue in the centre of each feather; a mark of blue on each side at the insertion of the wing, forming an indistinct band across the back; upper tail coverts bronzy-green; tail steely-black, rather short for the size of the bird, and slightly forked; wings deep purplish-brown; tarsi clothed with intermingled grayish-white and brown feathers; upper mandible black; basal half of the under mandible fleshy, the apical half black. Total length,  $3\frac{3}{4}$  in. Bill,  $\frac{7}{8}$  in. Wing,  $2\frac{1}{16}$  in. Tail,  $1\frac{3}{8}$  in.”—(Gould, loc. cit.)

### 5. \**Eucephala hypocyanea*.

*Eucephala hypocyanea*, GOULD, P. Z. S. (1860), p. 306.—ID., Mon. Troch., vol. v, pl. 334.—ID., Intr. Troch., octavo ed., p. 166 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 36.—ELLIOT, Ibis (1874), p. 88.

*Hab.* Brazil?

“Crown of the head, back of the neck, back and flanks, somewhat dull green; throat and chest brilliant blue, passing into glittering green on the centre of the abdomen; wings purplish-brown; upper tail coverts reddish-bronze; under tail coverts brownish-black, with bronzy tips; tail steel-black; thighs brown; upper mandible black; basal two-thirds of the lower mandible flesh-color, the apical third black. Total length,  $3\frac{1}{4}$  in. Bill,  $\frac{3}{4}$  in. Wing, 2 in. Tail,  $1\frac{3}{8}$  in.”—(Gould, loc. cit.)

### 6. *Eucephala subcærulea*.

*Eucephala subcærulea*, ELLIOT, Ibis (1874), p. 87.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 35.

*Hab.* Brazil?

*Adult.* Upper part of head and back dull green, rest of back and upper tail coverts dark green, with a rufous tinge dispersed all over those parts; throat, breast, and centre of abdomen beautiful metallic cærulean-blue; flanks shining grass-green. Lower part of abdomen covered by fluffy-white feathers. Under tail coverts metallic-green. Wings purple. Tail bluish-black. Maxilla black; mandible yellow (in life possibly red) for its entire length, save the tip which is black. Feet brownish-black. Thighs buffy-white. Total length,  $3\frac{1}{4}$  in. Wing, 2 in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in. (Type in my collection.)

### 7. *Eucephala cærulea*.

*Trochilus cæruleus*, VIEILL., Nouv. Dict. Hist. Nat., tom. 7, p. 361 (1817).

*Ornismya audebertii*, LESS., Ois. Mouch., pp. xxx, 164, pl. 51 (1829).

*Trochilus audeberti*, PRINZ. MAX., Betr., t. iv, p. 67.

*Hylocharis cærulea*, GRAY, Gen. Birds, vol. i, p. 114, sp. 34.—BON., Rev. and Mag. Zool. (1854), p. 255.

*Thaumatias cæruleus*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).

*Chlorestes cærulea*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, t. 692, figs. 4534–35 (1855).  
—CAB. and HEIN., Mus. Hein. Th., iii, p. 46 (note) (1860).

*Eucephala cærulea*, GOULD, Mon. Troch., vol. v, pl. 335.—ID., Intr. Troch., octavo ed., p. 167 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 32.—ELLIOT, Ibis (1874), p. 89.

*Chlorestes mentalis*, CAB., Journ. für Ornith. (1866), p. 159.

*Hab.* Trinidad, Venezeula, Guiana, Brazil.

*Male.* Upper surface dark grass-green; chin shining deep blue; entire under surface luminous yellowish-green, very brilliant. Wings purplish-brown. Tail steel-blue, maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Differs in having the under parts white, feathers of the throat and flanks tipped with green. Rest like the male. Total length,  $3\frac{3}{16}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

8. \**Eucephala chlorocephala*.

- Hylocharis chlorocephala*, BOURC., Rev. and Mag. Zool. (1854), p. 457.—BON., Rev. and Mag. Zool. (1854), p. 255.  
*Agyrtria chlorocephala*, REICH., Troch. Enum., p. 7 (1855).  
*Leupidopyga chlorocephala*, CAB. and HEIN., Mus. Hein. Th., iii, p. 40 (note 2) (1860).  
*Eucephala chlorocephala*, GOULD, Mou. Troch., vol. v, pl. 332.—ID., Intr. Troch., octavo ed., p. 166 (1861).  
*Hylocharis chlorocephalus*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Hab.* Ecuador.

Top of head greenish-blue; upper parts bronzy-green, upper tail coverts coppery-bronze. Chin, throat, and abdomen shining grass-green; thighs white; under tail coverts dark olive margined with white. Tail steel-blue. Bill black, base of mandible flesh-color. "Length of bill, 33 millim.; wing, 55 millim.; tail, 38 millim.; middle feathers, 30 millim."—Bourc.

9. \**Eucephala cyanogenys*.

- Trochilus cyanogenys*, PRINZ. MAX., Beit., t. iv, p. 10 (1825-33).  
*Ornismya wiedi*, LESS., Supp. Ois. Mouch., p. 150, pl. 26 (1829).  
*Hylocharis cyanogenys*, GRAY, Gen. Birds, vol. i, p. 115, sp. 40.  
*Saucerottia cyanogenys*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).  
*Chlorestes cyanogenys*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, pl. 692, figs. 4536-37 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 46, sp. 101 (1860).  
*Hylocharis wiedi*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Eucephala cyanogenys*, GOULD, Intr. Troch., octavo ed., p. 167 (1861).—ELLIOT, Ibis (1874), p. 89.

*Hab.* Brazil.

*Male.* Maxilla and feet black, the mandible flesh-color, tip black. Upper part golden-green with reddish-bronze reflections. Primaries purplish-brown. Tail dark steel-blue with blue and golden reflections. Chin beautiful blue as in *E. cœruleus*. Anal region white. Total length, about 3 in. Wing,  $1\frac{1}{6}$  in. Tail,  $\frac{7}{8}$  in. Bill,  $\frac{5}{8}$  in.

*Female* differs in having the under parts grayish-white.—(Pr. Max., l. c.)

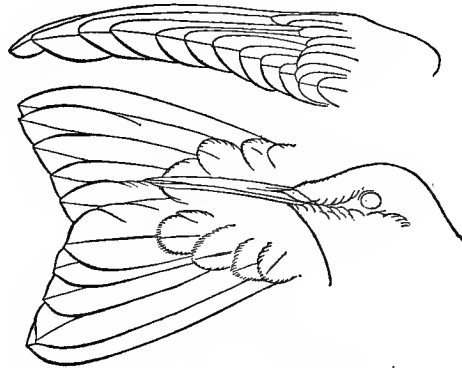
I have never seen a specimen of this species; and the type which should be in the American Museum of Natural History, New York, appears to have been lost.

## Genus CXII.—TIMOLIA.

*Timolia*, MULS., Cat. Ois. Mouch. (1875), p. 23.

TYPE.  
*T. lerchi*, Muls. and Verr.

Fig. 119.



*Timolia lerchi*. ♂. New Granada. (Type.)

*Ch.* Nearly allied to EUCEPHALA. Bill longer than head, curved; feathers of forehead projecting on to the culmen, nostrils hidden. Tail forked. Tarsi clothed.

*Range.* Columbia.

But one species is known.

### 1. *Timolia lerchi*.

*Thalurania lerchi*, MULS. and VERR., Ann. Linn. Soc., Lyon (1868).—SALV. and ELLIOT, Ibis (1873), p. 360.  
ELLIOT, Ibis (1874), p. 264.

*Timolia lerchi*, MULS., Cat. Ois. Mouch. (1875), p. 23.

*Hab.* Columbia.

*Male.* Fore part of head and a spot on the chin shining deep blue. Upper parts dark grass-green, passing into reddish-bronze on the upper tail coverts. Entire under parts grass-green. Under tail coverts olive-green. Wings purplish-brown. Tail steel-black. Maxilla black, mandible flesh-color, tip black. Total length,  $4\frac{1}{8}$  in. Wing,  $2\frac{1}{4}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{1}{16}$  in. (Type in my collection, unique.)

Following EUCEPHALA comes the genus JULIAMYIA, composed of small birds, with plumage of glittering green and dark blue. Two species only are known, differing from each other in the coloration of their crowns.

### Genus CXIII.—JULIAMYIA.

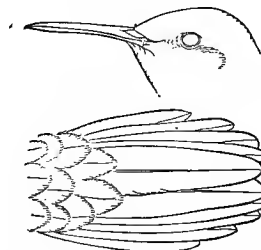
*Juliamyia*, BON., Rev. and Mag. Zool. (1854), p. 255.

TYPE.  
*T. julie*, Bourc.

Fig. 120.

*Ch.* Bill as long as the head, straight, slender; nostrils partly exposed. Tail cuneate, feathers narrow and pointed. Wings moderate. Tarsi bare. Sexes unlike.

*Range.* Panama, Columbia, and Ecuador.



*Juliamyia typica*. ♂ 24732. New Granada.

#### Key to the species.

- A. Throat and breast glittering green. Abdomen rich blue.  
a. Top of head dull green.  
b. Top of head metallic grass-green.

1. *J. typica*.  
2. *J. feliciana*.

This genus was established by Bonaparte (l. c.), employing as his type (if the first species given is to be so considered) the *Trochilus julie*, Bourc., and the *T. amabilis*, Gould, as the second species. A year previous, Reichenbach, Aufz. der Colib., p. 7, instituted the genus *Damophila* with *T. julie*, Bourc., as his type, and *T. amabilis* as the other species. Strictly speaking I suppose Reichenbach's term would stand for the *T. julie*, but in order to avoid confusion I have employed the term JULIAMYIA for *typica* and its ally, and DAMOPHILA for *amabilis*, as has been done by other authors.



### 1. *Juliamyia typica*.

*Ornismyia julie*, BOURC., Rev. Zool. (1842), p. 373.

*Ornismyia julie*, BOURC., Ann. Soc. Agr., Lyon (1842), t. v, p. 345, pl. xxi.

*Hylocharis julie*, GRAY, Gen. Birds, vol. i, p. 114, sp. 24.

*Damophila julia*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 3, t. 681, figs. 4494–95 (1855).

—CAB. and HEIN., Mus. Hein. Th., iii, p. 40 (1860).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 56.

*Juliamyia typica*, BON., Rev. and Mag. Zool. (1854), p. 255.—GOULD, Intr. Troch., octavo ed., p. 168 (1861).

*Juliamyia typica*, GOULD, Mon. Troch., vol. v, pl. 337.

*Hab.* Panama and Columbia.

*Male.* Top of head and upper parts dark green passing into bronze on the lower part of the back. Sides of the neck and throat glittering metallic grass-green. Rest of under parts shining prussian-blue. Under tail coverts blue-black. Tail steel-black. Wings purplish-brown. Maxilla black, mandible flesh-color, tip black. Total length, 3 in. Wing,  $1\frac{3}{4}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Differs in having the entire under surface grayish-white, washed with green on the flanks; and the outer tail feathers tipped with white.

### 2. *Juliamyia feliciana*.

*Ornismyia feliciana*, LESS., Rev. Zool. (1844), p. 433.

*Hylocharis feliciana*, GRAY, Gen. Birds, vol. i, p. 114, sp. 27.

*Juliamyia feliciana*, GOULD, Intr. Troch., octavo ed., p. 168 (1861).

*Damophila feliciana*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 60.

*Hab.* Ecuador.

*Male.* This species is precisely like the *J. typica*, except that the crown of the head is metallic glittering green like the throat. In all other respects it is a fac-simile of the preceding species. Total length, 3 in. Wing,  $1\frac{3}{4}$  in. Tail,  $\frac{1}{2}$  in. Culmen,  $\frac{1}{2}$  in.

*Female* like that of *J. typica*.

### Genus CXIV.—DAMOPHILA.

*Damophila*, REICH., Aufz. der Colib., p. 7 (1853).

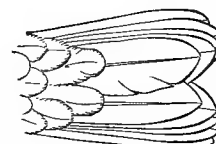
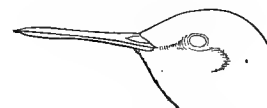
*Polyerata*, HEINE, Journ. für Ornith. (1863), p. 194.

TYPE.

*T. julie*, Bourc.

*T. amabilis*, Gould.

Fig. 121.



*Damophila amabilis*, ♂. 74113 Panama.

*Ch.* Bill longer than the head, straight, rather broad at base, terminating in a sharp point. Nostrils exposed. Tail even, or slightly forked when open. Feet small, tarsi clothed. Sexes dissimilar.

*Range.* Costa Rica, Panama, Columbia, Ecuador.

But one species is known, and is apparently properly placed after JULIAMYIA.

### 1. *Damophila amabilis*.

*Trochilus* (—?) *amabilis*, GOULD, P. Z. S. (1851), p. 115.

*Damophila amabilis*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Intr. Troch. Enum., p. 3, t. 681, figs. 4496-97 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 40 (1860).—GOULD, Mon. Troch., vol. v, pl. 341.—ID., Intr. Troch., octavo ed., p. 170 (1861).

*Juliameya amabilis*, BON., Rev. and Mag. Zool. (1854), p. 53.

*Polyerata amabilis*, HEINE, Journ. für Ornith. (1863), p. 194.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 52.

*Hab.* Costa Rica, to and including Ecuador.

*Male.* Top of head shining metallic-green. Under surface bronzy-green; chin black; throat and breast violet-blue. Sides of neck green like the crown. Under surface gray washed with green on the flanks. Upper tail coverts and median rectrices reddish-bronze, lateral rectrices black. Wings purplish-brown. Maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{1}{4}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Above bronzy-green, beneath gray. Median rectrices bronzy-green, lateral ones bronze at base, then black, and tipped with grayish-white. Dimensions like the male.

Some specimens have the metallic-green of the crown continued on to the occiput, even on to the nape. I do not think, however, that this in any way indicates the existence of two species.

Next to DAMOPHILA comes the genus IACHE, consisting of three species, two of which are extremely rare and but little known. They are small birds with considerable brilliancy in their plumage, and it is believed that the coloration of the sexes is totally unlike in all the species. The generic term *Circe*, in which these birds have generally been placed, cannot be continued, as it is preoccupied for a group of Acaleps; I therefore propose IACHE, which I believe has not been previously employed.

#### Genus CXV.—IACHE.<sup>1</sup>

*Circe*, GOULD, Intr. Troch., octavo ed., p. 168 (nec MERT., 1835, Acal.).

*Ch.* "Bill rather longer than the head, slightly curved, and tapering towards the tip; wings rather long; primaries rigid (!); tail rather short and slightly forked, the feathers broad; tarsi clothed; feet small; hind toe short."—(Gould, l. c.) Sexes unlike.

*Range.* Mexico.

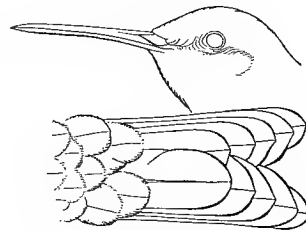
#### Key to the species.

- A. Top of head not brilliant.
  - a. Throat sapphire-blue.
  - b. Throat metallic bluish-green.
- B. Top of head brilliant metallic, throat shining dark blue.

TYPE.

*C. latirostris*, Swains.

Fig. 122.



*Iache latirostris*. ♂. Mexico. Dresser.

- 1. *I. latirostris*.
- 2. *I. magica*.
- 3. *I. doubledayi*.

<sup>1</sup>  $\iota\alpha\chi\eta$ , Nom. Prop.

### 1. Iache latirostris.

- Cynanthus latirostris*, SWAINS., Phil. Mag. (1827), p. 441.  
*Ornismya lessoni*, DELATT., Rev. Zool. (1839), p. 15, ♀.  
*Cyanophaia lazula*, REICH., Aufz. der Colib., p. 10 (1853).  
*Amazilia latirostris*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8 (1855).  
*Hylocharis lazula*, REICH., Troch. Enum., pl. 770, figs. 4783-84 (1855).  
*Amazilius latirostris*, BON., Rev. and Mag. Zool. (1854), p. 254.  
*Hylocharis doubledayi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 44 (partim) (1860).  
*Circe latirostris*, GOULD, Mon. Troch., vol. v, pl. 338.—ID., Intr. Troch., octavo ed., p. 169 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 46 (1876).

*Hab.* Mexico.

*Male.* Upper and under surface bronzy-green, brownish on top of the head. Throat bright sapphire-blue. Under tail coverts white. Wings pale brown. Tail steel-blue, tipped with gray. Bill red, tip black. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{9}{16}$  in. Culmen,  $\frac{7}{8}$  in. (Type in my collection.)

*Female.* Differs in having entire under parts dark gray. Tail bronzy-green at base, rest bluish-black, the lateral feathers tipped with gray.

### 2. Iache magica.

- Hylocharis magica*, MULS. and J. VERR., Ann. Soc. Linn., Lyon (1872), t. xviii, p. 110.  
*Circe magica*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 49.—SCLAT. and SALV., Nomencl., p. 93.

*Hab.* Mazatlan, Lower California.

*Male.* Upper parts reddish-bronze. Throat and upper parts of breast metallic bluish-green; under parts bronzy-green with a coppery lustre. Under tail coverts white. Wings pale brown. Tail brownish-black, lateral feathers slightly tipped with gray. Bill red, tip black. Total length,  $3\frac{1}{4}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{1}{8}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

### 3. Iache doubledayi.

- Trochilus doubledayi*, BOURC., P. Z. S. (1847), p. 46.—ID., Rev. Zool. (1847), p. 259.  
*Hylocharis doubledayi*, GRAY, Gen. Birds, vol. i, p. 114, sp. 32.  
*Thaumatias doubledayi*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).  
*Cyanophia doubledayi*, REICH., Aufz. der Colib., p. 10 (1853).  
*Sapphironia doubledayi*, BON., Rev. and Mag. Zool. (1854), p. 256.  
*Sapphironia circe*, BON., Rev. and Mag. Zool. (1854), p. 256.  
*Hylocharis (Cyanophaia) circe*, REICH., Troch. Enum., p. 8, pl. 771, figs. 4786-88 (1855).  
*Circe doubledayi*, GOULD, Mon. Troch., vol. v, pl. 339.—ID., Intr. Troch., octavo ed., p. 169 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 44 (1876).  
*Hylocharis doubledayi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 44 (partim) (1860).

*Hab.* Mexico, Tehuantepec (Chihuitan).

*Male.* Top of head metallic bluish-green. Upper surface and abdomen dark bronzy-green, with a bluish shade on the abdomen. Throat brilliant blue. Under tail coverts dark brown edged with gray. Wings pale brown. Tail steel-blue tipped with gray. Bill red, tip black. Total length,  $3\frac{3}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $1\frac{1}{8}$  in. (Bourcier's specimen in my collection.)

The next genus *HYLOCHARIS*, which follows naturally the last one, also consists of three species, the males robed in different shades of blue and green. They are slightly larger birds than the members of the genus *LACHE*, with one exception, and as is the case with the species of that genus, the sexes are very differently attired.

### Genus CXVI.—*HYLOCHARIS*.

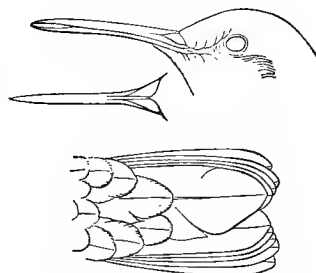
*Hylocharis*, BORE, Isis (1831), p. 546.  
*Sapphironia*, BON., Rev. and Mag. Zool. (1854), p. 256.

TYPE.  
*T. sapphirinus*, Gmel.  
*T. sapphirinus*, Gmel.

Fig. 123.

*Ch.* Bill longer than head, straight, broad and flat at base; wings long, pointed, reaching nearly to the end of the tail. Tail even; feet large; tarsi clothed. Sexes unlike.

*Range.* Brazil.



*Hylocharis sapphirina*. ♂. 24,758. Brazil.

#### Key to the species.

- |   |                           |
|---|---------------------------|
| A. Throat and sides of the neck violet-blue.                        | 1. <i>H. lactea</i> .     |
| B. Chin rufous; breast bright sapphirine-blue.                      | 2. <i>H. sapphirina</i> . |
| C. Chin whitish; breast shining dark blue, with violet reflections. | 3. <i>H. cyanea</i> .     |

### 1. *Hylocharis lactea*.

*Le Saphir*, LESS., Hist. Nat. Ois. Mouch., pl. 56 (1829).  
*Ornismya lactea*, LESS., Ind. Gen. Syn. Ois. Genr. Troch., p. xxxviii (1831).  
*Hylocharis lactea*, GRAY, Gen. Birds, vol. i, p. 115, sp. 37.—BON., Consp. Gen. Av., vol. i, p. 74 (1850).—CAB. and HEIN., Mus. Hein. Th., iii, p. 43 (note) (1860).—GOULD, Mon. Troch., vol. v, pl. 343.—ID., Intr. Troch., octavo ed., p. 171 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 23 (1876).  
*Cyanochloris lactea*, REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 8, pl. 773, fig. 4793 (1855).  
*Sapphironia lactea*, BON., Rev. and Mag. Zool. (1854), p. 256.

*Hab.* Brazil.

*Male.* Upper parts brownish bronzy-green; throat and sides of neck shining violet-blue; flanks gray washed with green. Middle of abdomen, vent, and under tail coverts white. Total length,  $3\frac{3}{8}$  in. Wing, 2 in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{5}{8}$  in.

The sexes of this species are apparently alike in plumage; but I have not seen an authenticated female.

### 2. *Hylocharis sapphirina*.

*Trochilus sapphirinus*, GMEL., Syst. Nat. (1788), tom. i, p. 496.—LATH., Ind. Orn., tom. i, p. 313 (1790).  
*Trochilus fulvifrons*, LATH., Ind. Orn. Supp., vol. ii, p. 172 (1790).  
*Trochilus latirostris*, WIED., Beitr., vol. iv, p. 64 (1825).  
*Ornismya sapphirina*, LESS., Ois. Mouch., p. 172, ts. 55, 57 (1829).—ID., Troch., p. 53, pl. 14 (1831).  
*Hylocharis sapphirina*, GRAY, Gen. Birds, vol. i, p. 115, sp. 36.—REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch. Enum., p. 7, pl. 769, figs. 4780–82 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 43 (1860).—GOULD, Intr. Troch., octavo ed., p. 171 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 16.

*Hylocharis latirostris*, REICH., Aufz. der Colib., p. 10 (1853).

*Sapphironia sapphirina*, BON., Rev. and Mag. Zool. (1854), p. 256.

*Hylocharis sapphirinus*, GOULD, Mon. Troch., vol. v, pl. 342.—BON., Consp. Gen. Av., vol. i, p. 74 (1850).

*Hab.* Brazil.

*Male.* Upper surface, flanks, and abdomen shining dark grass-green. Chin rufous; throat and breast dark sapphirine-blue. Upper tail coverts reddish-bronze; under chestnut. Wings purple. Middle rectrices reddish-bronze, lateral ones chestnut, edged with blackish. Bill flesh-color, tip black. Total length, 4 in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Under surface grayish-white. Rectrices purple-bronze, lateral ones tipped with white. Chin rufous, rest of plumage like the male.

### 3. *Hylocharis cyanea*.

*Trochilus cyaneus*, VIEILL., Nouv. Dict. Hist. Nat., tom. xxiii, p. 426.

*Ornismya bicolor*, LESS., Ois. Mouch., p. 161, pls. 49, 50 (1829).—ID., Troch., p. 58, pl. 16? (1831).

*Ornismya cyanea*, LESS., Ois. Mouch., p. 199, pl. 71 (1829); Supp., p. 143, pl. 23 (1831).

*Ornismya cayana*, D'ORB. and LAFRES., Syn. Av., ii, p. 30, sp. 17 (1838).

*Hylocharis cyanea*, GRAY, Gen. Birds, vol. i, p. 114, sp. 31.—REICH., Aufz. der Colib., p. 10 (1853).—ID., Troch.

Enum., p. 7, pl. 768, figs. 4777-79 (1855).—CAB. and HEIN., Mus. Hein. Th., iii, p. 44 (1860).—GOULD,

Intr. Troch., octavo ed., p. 171 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 19.—ELLIOT, Ibis (1877), p. 138.

*Thaumatias cyaneus*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).

*Hylocharis cyaneus*, GOULD, Mon. Troch., vol. v, pl. 344.

*Hab.* Brazil.

*Male.* Head, throat, and breast shining dark blue with violet reflections; few feathers on the chin white; back bronzy-green passing into reddish-bronze on the rump and upper tail coverts; under surface green; under tail coverts blue-black with grayish-edges. Tail blue-black. Bill flesh-color, tip black. Total length,  $3\frac{1}{2}$  in. Wing,  $2\frac{1}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{3}{4}$  in.

*Female.* Differs in having the throat spotted with pale blue, the under surface gray glossed with green on the flanks; and the lateral tail feathers tipped with white.

We now come to CYANOPHAIA, which, although it is allied to the preceding genera, we may consider as the one which commences the series of "green" humming-birds. The species have a highly metallic plumage, are of moderate size and graceful forms; one species having a blue breast, and the others green, while the sexes are very different in their coloration.

### Genus CXVII.—CYANOPHAIA.

*Cyanophaia*, REICH., Aufz. der Colib., p. 10 (1853).

*Hylocharis*, BON. (nec BON., 1831), Rev. and Mag. Zool. (1854), p. 255.

*Lepidopyga*, REICH., Troch. Enum., p. 7 (1855).

*Emilia*, MULS. and VERR., Class. Troch. (1865), p. 41.

#### TYPE.

*T. cæruleigularis*, Gould.

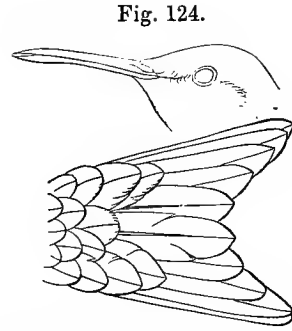
*T. goudoti*, Bourc.

*T. cæruleigularis*, Gould.

*T. goudoti*, Bourc.

*Ch.* Bill a little longer than the head, slightly curved. Tail forked, feathers narrow and pointed. Wings long, narrow. Feet small, tarsi covered. Sexes unlike.

*Range.* Veragua and Columbia.  
Three species are recognized.



*Cyanophaia goudoti*. ♂. (Type.) New Granada.

*Key to the species.*

- |  |                               |
|--|-------------------------------|
| A. Throat and chest violet-blue, abdomen green.  | 1. <i>C. cæruleigularis</i> . |
| B. Under parts glittering yellowish-green; under tail coverts white, centres metallic-green. | 2. <i>C. goudoti</i> .        |
| C. Entire under parts deep bluish-green; under tail coverts dark green edged with gray.      | 3. <i>C. luminosa</i> .       |

There appears to be some confusion in reference to the generic term for these species. In 1853, Reichenbach (l. c.) instituted the genus *Cyanophaia*, including in it various species now considered to belong to different genera. The first one named by him is *Trochilus bicolor*, Linn. (1766).—There is no such species given by Linnæus, and the *T. bicolor*, Gmelin, is the species generally known as *Thalurania wagleri*. The next species *Trochilus cærulescens*, “Lodd.,” is the *T. cæruleigularis*, Gould, which should be the type of *CYANOPHAIA*, as the other species named *T. lazulus*, Vieill., and *T. doubledayi*, Bourc., belong respectively to *HYLOCHARIS*, BOIE, and *IACHE*, of this work. There remains only *duchassaingii*, Bourc. which is the same as *CÆRULEIGULARIS*, Gould.—In 1854, Bonaparte in *Rev. and Mag. Zool.*, p. 256, proposed the genus *SAPPHIRONIA*, including many species of various genera. His first species is *grayi*, belonging to *EUCEPHALA*, Reich., and then follow *lucida*, Shaw (= *Basilinna leucotis*), *circe*, Bourc., and *doubledayi*, Bourc., (now placed in the genus *IACHE*); *lactea*, Less., and *sapphironia*, Gmel., comprised in *HYLOCHARIS*, Boie; *bicolor*, Linn.(!) not existing, *duchassengii*, Bourc., and *cæruleigularis*, Gould, forming Reichenbach’s genus *CYANOPHAIA*. Under these circumstances Bonaparte’s term *Sapphironia* must become a synonym of *HYLOCHARIS*, Boie, and Reichenbach’s *CYANOPHAIA* be employed for *CÆRULEIGULARIS* and *GOUDOTI*. *LEPIDOPYGA*, Reich., and *EMILIA*, Muls., are unnecessary.

### 1. *Cyanophaia cæruleigularis*.

*Trochilus cæruleigularis*, GOULD, P. Z. S. (1850), p. 163.

*Trochilus duchaissingii*, BOURC., *Compt. Rend.*, tom. xxxii, p. 187 (1851), ♂, juv.

*Cyanophaia cærulescens*, “Lodd.,” REICH., *Aufz. der Colib.*, p. 10 (1853).—ID., *Troch. Enum.*, p. 8, t. 770, fig. 4785.

*Cyanophaia duchassainii*, REICH., *Aufz. der Colib.*, p. 10.—ID., *Troch. Enum.*, p. 8 (1855).

*Cyanochloris cæruleigularis*, REICH., *Aufz. der Colib.*, p. 10 (1853).

*Lepidopyga cæruleigularis*, REICH., *Troch. Enum.*, p. 7, t. 764, fig. 4768–70 (1855).—CAB. and HEIN., *Mus. Hein. Th.*, iii, p. 40 (1860).

*Sapphironia duchassaingii*, BON., *Rev. and Mag. Zool.* (1854), p. 256.

*Sapphironia cæruleigularis*, BON., Rev. and Mag. Zool. (1854), p. 256.—GOULD, Mon. Troch., vol. v, pl. 346.

—ID., Intr. Troch., octavo ed., p. 172 (1861).

*Thalurania cælina*, BOURC., Rev. and Mag. Zool. (1856), p. 552.

*Lepidopyga cæruleo-gularis*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 68 (1876).

*Hab.* Veragua.

*Male.* Upper parts, abdomen, and flanks grass-green; throat and chest violet-blue. Wings purplish-brown. Tail, central feathers bronzy-green; lateral ones black. Under tail coverts shining green margined with grayish-white. Maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{3}{8}$  in. Wing, 2 in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{1}{6}$  in.

*Young male.* Like the male, but lighter beneath, and the throat only spotted with blue. (Type of *T. duchassaigui*, BOURC., in my collection.)

*Female.* Upper parts green; tail purplish-black, two central feathers glossed with bronze, the four lateral ones tipped with white; centre of the throat, abdomen, and under tail coverts white.—(Gould, Mon. Troch.)

## 2. *Cyanophaia goudoti*.

*Trochilus goudoti*, BOURC., Rev. Zool. (1843), p. 100.—ID., Ann. Soc. Agr., Lyon (1843), p. 47.

*Polytmus goudoti*, GRAY, Gen. Birds, vol. i, p. 77, sp. 6.

*Saucerottia goudoti*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).

*Chalybura goudoti*, REICH., Aufz. der Colib., p. 10 (1853).

*Hylocharis goudoti*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Agyrria goudoti*, REICH., Troch. Enum., p. 7, t. 763, fig. 4765-66 (1855).

*Sapphironia goudoti*, GOULD, Mon. Troch., vol. v, pl. 345.—ID., Intr. Troch., octavo ed., p. 172 (1861).

*Lepidopyga goudoti*, CAB. and HEIN., Mus. Hein. Th., iii, p. 40 (note 3) (1860).

*Emilia goudoti*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 64.

*Hab.* Columbia.

*Adult.* Upper surface grass-green; beneath glittering yellowish-green with a slight tinge of blue on the throat. Under tail coverts white, with metallic-green centres. Median rectrices bronzy-green; lateral ones purplish-black. Wings purplish-brown. Maxilla black, mandible flesh-color, tip black. Total length,  $3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1\frac{3}{8}$  in. Culmen,  $\frac{3}{4}$  in. (Type in my collection.)

## 3. \**Cyanophaia luminosa*.

*Sapphironia luminosa*, LAWR., ANN. N. Y. Lyc. Nat. Hist. vol. vii (1862), p. 458.

*Lepidopyga luminosa*, HEINE, Journ. für Ornith. (1863), p. 194.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 67 (1875).

*Hab.* Columbia.

“Upper plumage glittering grass-green, inclining to golden on the rump, the crown not so bright and of a very deep green; entire under surface of a very brilliant bluish-green, the sides of the neck golden-orange; tail forked and of a rich steel-blue, the two middle feathers green like the rump, the next feather bronzed on the outer web at the end; wings dull purple; under tail coverts deep green, very narrowly edged with bluish-white, thighs clothed with grayish-white feathers; upper mandible black, under yellowish with the end black; feet and claws black. Length,  $3\frac{3}{4}$  in. Wing,  $1\frac{7}{8}$  in. Bill,  $\frac{1}{6}$  in. Tail,  $1\frac{1}{4}$  in.”—(Lavr., l. c.)

Two generic terms were originally proposed for the following birds, viz., *Riccordia*, Reich., and *Sporadinus*, Bon. The first has priority of date by almost a year; but the latter has always been employed by the majority of writers. As neither of these genera was ever defined, I should be authorized, I suppose, in rejecting both; but as my desire is to unravel the existing confusion in this Family<sup>1</sup> and not to increase it, I have retained Bonaparte's term as being most generally familiar to Ornithologists. To create a new generic name for these birds would only make matters worse. The three known species are of moderate size, possessing graceful forms, and deeply forked tails, and while the males are clothed in a highly metallic plumage, the females have in comparison a very sombre appearance. They lead us naturally to the genus *Chlorostilbon*.

### Genus CXVIII.—SPORADINUS.

- Riccordia*, REICH., Aufz. der Colib. (1853), p. 10.  
*Sporadinus*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Sporadicus*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 25.  
*Erasmia*, HEINE, Journ. für Ornith. (1863), p. 191.  
*Marsyas*, MULS. (nec OPEN., 1815, nec PUTZ., 1845), Cat. Ois. Mouch., p. 13 (1875), and Hist. Nat. Ois. Mouch., tom. ii, p. 77.

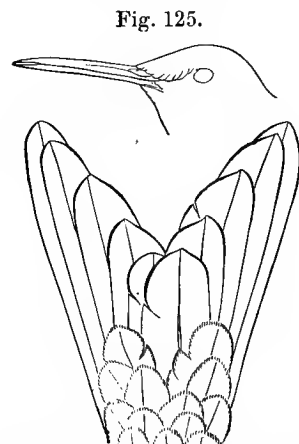
#### TYPE.

- O. riccordi*, Gerv.  
*O. riccordi*, Gerv.  
*T. elegans*, Aud. and Vieill.  
*T. maugæi*, Vieill.

*Ch.* Bill as long as the head, straight, nostrils exposed; wings long, reaching two-thirds the length of the tail. Tail long, deeply forked, feathers narrow. Tarsi partly clothed. Sexes unlike.

*Range.* West India Islands.

Three species are recognized.<sup>1</sup>



*Sporadinus elegans*. ♂. St. Domingo. Bourcier.

<sup>1</sup> SPORADINUS BRACEI, LAWRE., N. Y. Acad. Scien., vol. i (1877), p. 50.

"*Male.* Crown and gorget of a glittering pale green; back, upper tail coverts, the two central and the next pair of tail feathers, bronzed golden-green; the other tail feathers are purplish-black, with their outer edges bronzed green; quills blackish-purple; breast and abdomen dull bronzy-green; under tail coverts dark ash bordered with white; bill and feet black. Length,  $3\frac{3}{8}$  in.; wing,  $1\frac{3}{4}$  in.; tail,  $1\frac{1}{8}$  in.; bill,  $\frac{3}{4}$  in. Type in National Museum, Washington.

*Hab.* Island of New Providence, Bahamas."—(Lawr., loc. cit.)

The unique type of this form was described by Mr. Lawrence as above. It is a mummy, and the feathers of the body are consequently much disarranged, and the tail feathers are not fully developed. It much resembles the *S. riccordi*, and I compared the specimen with the type of that species in the Paris Museum, but was not able to satisfy myself that it was certainly distinct. More specimens of this bird, and perfect ones, are necessary before its proper specific position can be fully determined.



*Key to the species.*

- |   |                         |
|---|-------------------------|
| A. Throat metallic-green, under surface dull green, breast black. | 1. <i>S. elegans</i> .  |
| B. Under surface glittering grass-green.                          |                         |
| a. Under tail coverts white.                                      | 2. <i>S. riccordi</i> . |
| b. Under tail coverts green.                                      | 3. <i>S. maugæi</i> .   |

**1. *Sporadinus elegans*.**

- Trochilus elegans*, VIEILL., Ois. Dor., vol. i, p. 32, pl. 14 (1802).  
*Ornismya swainsonii*, LESS., Ois. Mouch., pp. xvii, 197, pl. 70 (1829).  
*Trochilus swainsonii*, Nat. Libr. Humming-birds, vol. ii (1833), p. 132, pl. 30.  
*Hylocharis elegans*, GRAY, Gen. Birds, vol. i, p. 114, sp. 18 (1844-49).  
*Lampornis elegans*, BON., Consp. Gen. Av., vol. i, p. 72 (1850).  
*Riccordia elegans*, REICH., Aufz. der Colib., p. 8 (1853).  
*Sporadinus elegans*, BON., Rev. and Mag. Zool. (1854), p. 255.—GOULD, Mon. Troch., vol. v, pl. 347.—ID., Intr. Troch., octavo ed., p. 173 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 72.  
*Chlorestes elegans*, REICH., Troch. Enum., p. 4, pl. 704, figs. 4587 (1855).  
*Sporadicus elegans*, CAB. and HEIN., Mus. Hein. Th., iii, p. 25 (1860).

*Hab.* Island of Hayti.

*Male.* Upper surface, flanks, and abdomen dark green. Throat metallic grass-green. Breast black. Wings purplish-brown. Tail black, with a bronze lustre. Under tail coverts dark green. Maxilla black; mandible flesh-color, tip black. Total length,  $4\frac{1}{4}$  in. Wing,  $2\frac{3}{8}$  in. Tail, 2 in. Culmen,  $\frac{5}{8}$  in.

*Female.* Upper parts bronzy-green, top of head brownish. Under parts brownish-gray. Central tail feathers bronzy-green, lateral ones gray, with a subterminal black bar, and glossed with green. Wings purplish-brown. Total length, 4 in. Wing,  $2\frac{3}{8}$  in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{5}{8}$  in.

**2. *Sporadinus riccordi*.**

- Trochilus riccordi*, GERV., Rev. and Mag. Zool. (1835), pls. 41, 42.—BON., Consp. Gen. Av., vol. i, p. 81 (1850).  
*Ornismya parzudaki*, LESS., Rev. Zool. (1838), p. 315.  
*Orthorhynchus riccordi*, R. DELA SAGRA, Hist. de Cuba, p. 128, t. 21, fig. 2 (1840).  
*Hylocharis riccordi*, GRAY, Gen. Birds, vol. i, p. 114, sp. 23.  
*Riccordia raimondi*, REICH., Aufz. der Colib., p. 8 (1853).  
*Sporadinus riccordi*, BON., Rev. and Mag. Zool. (1854), p. 255.—GOULD, Mon. Troch., vol. v, pl. 348.—ID., Intr. Troch., octavo ed., p. 173 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 74 (1875).  
*Chlorestes raimondi*, REICH., Troch. Enum., p. 4, pl. 704, figs. 4584-86 (1855).  
*Chlorestes riccordi*, GUNDL., Journ. für Ornith. (1856), p. 99.  
*Sporadicus riccordi*, CAB. and HEIN., Mus. Hein. Th., iii, p. 25 (note 2) (1860).

*Hab.* Cuba; and Abajo of the Bahamas.

*Male.* General plumage bronzy-green, very luminous on the under surface. Wings purplish-brown. Four central rectrices dark bronze; rest black, glossed with bronze. Under tail coverts white. Maxilla black; mandible flesh-color, tip black. Total length,  $3\frac{5}{8}$  in. Wing, 2 in. Tail,  $1\frac{3}{4}$  in. Culmen,  $\frac{5}{8}$  in.

Specimens vary considerably in their coloration, some, perhaps the majority, being bronzy-green as described above, while others are a bright golden-green. The hue of the mandible also varies, and I have seen examples with this portion of the bill almost entirely black, like the maxilla. Also, the length of the bill is not always

the same. These differences are, however, of no specific importance, but are characteristic of nearly all species of "green Humming-birds."

*Female.* Differs in having the throat and centre of abdomen pale buff, and under tail coverts buffy-white.

### 3. *Sporadinus maugæi*.

*Trochilus maugæus*, VIEILL., Dict. Hist. Nat., tom. vii (1817), p. 568.—*Id.*, Ois. Dor., t. i, pp. 77, 78, 79, 80, pls. 37, 38.—*Id.*, Ency. Méth., tom. ii, p. 567.

*Ornismya maugæi*, LESS., Ois. Mouch., p. 194, pls. 68, 69 (1829).

*Thaumatias ourissia*, BON., Consp. Gen. Av., vol. i, p. 79 (1850).

*Sporadinus maugæi*, BON., Rev. and Mag. Zool. (1854), p. 255.—GOULD, Mon. Troch., vol. v, pl. 349.—*Id.*, Intr. Troch., octavo ed., p. 173 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 77.

*Chlorestes gertrudis*, GUNDL., Journ. für Ornith. (1874), p. 315.

*Chlorolampis gertrudis*, CAB., Journ. für Ornith. (1875), p. 223.

*Sporadinus (Marsyas) maugæi*, MULS., Cat. Ois. Mouch. (1875), p. 13.

*Hab.* Porto Rico.

*Male.* Crown glittering green, upper surface dark green, under surface glittering green, with a wash of blue on the breast. Tail steel-blue; under tail coverts green. Maxilla black, mandible reddish, tip black. Total length,  $3\frac{1}{2}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Differs in having the under surface grayish-white. Central tail feathers green; rest greenish-gray at the base, with a steel-blue band near the tip; the two outermost rectrices tipped with grayish-white.

The species of CHLOROSTILBON have always been most perplexing to all Ornithologists, caused,—by the variation in the colors of individuals belonging to the same species—by the close relationship of the various species—and by the great want of sufficient specimens to enable these facts to be adequately appreciated. I would refer those who desire to study this interesting though perplexing group to my review of the genus published in the Ibis for the year 1875, p. 149.—The plumage is metallic-green of various shades, and the species can only be distinguished apart by the coloring of the bills, and the shape of the tails.—In one case only does the hue of the abdomen and breast distinguish a species.—They are all very small birds, and the sexes are totally unlike in the color of their plumage.—The *Key* given of the species will enable each one to be readily identified.

### Genus CXIX.—CHLOROSTILBON.

*Chlorostilbon*, GOULD, Mon. Troch., pt. v (1853); and Intr. Troch., octavo ed., p. 175 (1861).

*Chlorestes*, REICH., Aufz. der Colib. (1853), p. 10.

*Chlorolampis*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 47.

*Prasitis*, CAB. and HEIN., Mus. Hein. (1860) Th., iii, p. 49.

*Chloanges*, HEINE, Journ. für Ornith. (1863), p. 200.

*Merion*, MULS., Hist. Nat. Ois. Mouch., tom. ii (1875), p. 92.

*Chrysomirus*, MULS., Catal. Ois. Mouch. (1875), p. 13.

#### TYPE.

*T. pucherani*, Bourc.

*T. cyanogenys*, Wied.

*T. angustipennis*, Fras.

*O. prasina*, Less.

*T. auriceps*, Gould.

*C. habertini*, Reich.

*T. angustipennis*, Fras.

*Ch.* Bill about as long as the head, straight, rather broad and flat at base, and terminating in a sharp point. Wings long, reaching nearly to the end of the tail. Tail rather short, forked, or even. Feet small; tarsi clothed. Sexes unlike.

*Range.* Mexico, Central America, Venezuela, Trinidad, Guiana, Brazil, Argentine Republic, Ecuador, Peru, and Bolivia.

Eight species are here recognized as belonging to this genus.

*Key to the species.*

- |  |                             |
|--|-----------------------------|
| A. Bill flesh-color, point only brownish-black.      |                             |
| a. Rectrices tipped with gray.                       |                             |
| a'. Tail long, deeply forked, rectrices very narrow. | 1. <i>C. auriceps.</i>      |
| b'. Tail moderately forked, rectrices rather broad.  | 2. <i>C. caniveti.</i>      |
| b. Rectrices entirely bluish-black.                  |                             |
| a'. Lower part of breast and abdomen green.          | 3. <i>C. pucherani.</i>     |
| b'. Lower part of breast and abdomen golden-red.     | 4. <i>C. splendidus.</i>    |
| B. Bill black, basal half of mandible flesh-color.   | 5. <i>C. haberlini.</i>     |
| C. Bill entirely black.                              |                             |
| a. Tail moderately long, forked.                     | 6. <i>C. angustipennis.</i> |
| b. Tail short, scalloped.                            | 7. <i>C. atala.</i>         |
| c. Tail short, slightly rounded, almost even.        | 8. <i>C. prasinus.</i>      |

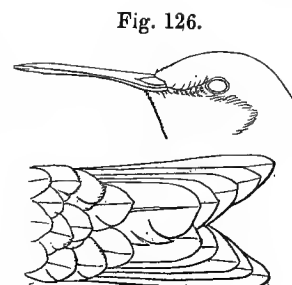


Fig. 126.  
*Chlorostilbon splendidus.*  
♂. 55816. Buenos Ayres.

## 1. *Chlorostilbon auriceps.*

*Trochilus auriceps*, GOULD, Jard. Contr. Orn. (1852), p. 137.

*Sporadinus auriceps*, BON., Rev. and Mag. Zool. (1854), p. 223.

*Chlorostilbon auriceps*, GOULD, Mon. Troch., vol. v, pl. 350.—ELLIOT, Ibis (1875), p. 168.

*Chlorolampis auriceps*, CAB. and HEIN., Mus. Hein. Th., iii, p. 48 (note 7) (1860).—GOULD, Intr. Troch., octavo ed., p. 174 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. iii, p. 79 (1876).

*Hab.* Northwest Mexico.

*Male.* Top of head metallic-golden; upper surface golden-green; throat metallic yellowish-green; under surface metallic golden-green. Vent white. Wings pale brown. Tail long, deeply forked, black, all but the outermost feather tipped with gray. Bill reddish at base, black at tip. Total length,  $3\frac{3}{4}$  in. Wing,  $1\frac{3}{4}$  in. Tail, 2 in. Culmen,  $\frac{1}{2}$  in.

*Female.* Upper surface bronzy-green, under surface dull gray. Median rectrices shining green, rest (except the external one) green at base, then black with gray tips; the outermost green at base, then gray, then black, and tips grayish-white.

## 2. *Chlorostilbon caniveti.*

*Ornismya caniveti*, LESS., Ois. Mouch., pp. 174, 177, pls. 37, 38 (1829).

*Hylocharis caniveti*, GRAY, Gen. Birds, vol. i, p. 114, sp. 19.

*Thaumatias caniveti*, BON., Consp. Gen. Av., vol. i, p. 78 (1850).

*Riccordia caniveti*, REICH., Aufz. der Colib., p. 8 (1853).

*Sporadinus caniveti*, BON., Rev. and Mag. Zool. (1854), p. 224.

- Chlorestes canivetii*, REICH., Troch. Enum., p. 4, t. 703, figs. 4581-83 (1855).  
*Chlorolampis canivetii*, CAB. and HEIN., Mus. Hein. Th., iii, p. 47 (note 4) (1860).—GOULD, Intr. Troch., octavo ed., p. 394 (1861).—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 81 (1875).  
*Chlorostilbon canivetii*, GOULD, Mon. Troch., vol. v, pl. 351.—ELLIOT, Ibis (1875), p. 168.  
*Chlorostilbon osberti*, GOULD, P. Z. S. (1860), p. 309.—ID., Mon. Troch., vol. v, pl. 352.  
*Chlorolampis salvini*, CAB. and HEIN., Mus. Hein. Th., iii, p. 48 (1860).—GOULD, Intr. Troch., octavo ed., p. 174.  
*Chlorolampis osberti*, GOULD, Intr. Troch., p. 174, sp. 395 (1861).

*Hab.* Mexico, Guatemala, Honduras, Costa Rica.

*Male.* Crown of the head metallic-golden; upper surface bright bronzy-green, under surface metallic grass-green, with a golden hue on the flanks. Wings purplish-brown. Tail black, all the central feathers with gray tips. Bill red at base, rest black. Total length,  $3\frac{3}{8}$  in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{5}{8}$  in. Culmen,  $\frac{7}{16}$  in.

*Female.* Upper surface and flanks bronzy-green, with a brownish shade on the crown; under surface gray. Middle pair of rectrices bronze-green, the next three are green at base, then steel-blue, tip edged with gray; the outermost one gray crossed by a broad steel-blue band. Ear coverts blackish-brown; behind the eye a narrow line of white. Total length, 3 in. Wing,  $1\frac{5}{8}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{1}{2}$  in.

### 3. *Chlorostilbon pucherani*.

- Trochilus pucherani*, BOURC. and MULS., Rev. Zool. (1848), p. 271, juv. ♂.  
*Trochilus nitidissimus*, LICHT., Mus. Berol.  
*Hylocharis similis*, BON., Consp. Gen. Av., vol. i, p. 74 (1850).  
*Chlorestes nitidissima*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, t. 755, figs. 4538-39 (1855).  
*Chlorestes pucherani*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, t. 755, fig. 4736 (1855).  
*Hylocharis pucherani*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Chlorostilbon prasinus*, GOULD (nec LESS.), Mon. Troch., vol. v, pl. 355.—ID., Intr. Troch., octavo ed., p. 176 (1861).  
*Chlorostilbon nitidissimus*, CAB. and HEIN., Mus. Hein. Th., iii, p. 47 (1860).  
*Chlorostilbon igneus*, GOULD, Intr. Troch., p. 176 (1861).  
*Hylocharis flavifrons*, VON PELZ., Ornith. Bras., p. 33 (1871).  
*Chlorostilbon insularis*, LAWRE., Ann. N. Y. Lyc. Nat. Hist., vol. vii, p. 457.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 100.  
*Chlorostilbon egregius*, HEINE, Journ. für Ornith. (1863), p. 197.  
*Chlorostilbon pucherani*, ELLIOT, Ibis (1875), p. 161.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 97.

*Hab.* Southeastern Brazil.

*Male.* Crown golden-green; upper parts dark green; throat metallic bluish-green; under parts metallic yellowish-green. Wings purplish-brown. Tail blue-black. Bill red at base, tip black. Total length,  $3\frac{1}{4}$  in. Wing, 2 in. Tail,  $1\frac{1}{2}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Upper surface bronzy-green; under parts gray. Tail steel-blue, the four middle feathers glossed with green, the two outer ones tipped with grayish-buff.

### 4. *Chlorostilbon splendidus*.

- Trochilus splendidus*, VIEILL., Nouv. Dict. Hist. Nat., tom. vii, p. 361 (1817).—ID., Ency. Méth., p. 563, vol. ii.  
*Ornismya aureiventris*, D'ORB. and LAPRES., Syn. Av., ii, p. 28 (1838).  
*Trochilus phæthon*, BOURC., Rev. Zool. (1848), p. 274.—GRAY, Gen. Birds. vol. iii, app., p. 300.  
*Chlorestes phæthon*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, pl. 755, figs. 4734-35 (1855).  
*Trochilus flavifrons*, GOULD, Voy. Beag. (Birds), p. 110.  
*Hylocharis phæton*, BON., Rev. and Mag. Zool. (1854), p. 255.

- Hylocharis aureiventris*, BON., Rev. and Mag. Zool. (1854), p. 255.  
*Chlorestes aureiventris*, REICH., Troch. Enum., p. 4, t. 754, figs. 4729-30 (1855).  
*Chlorostilbon phaethon*, GOULD, Mon. Troch., vol. v, pl. 354.—ID., Intr. Troch., octavo ed., p. 175 (1861)  
*Chlorostilbon bicolor* (nec GMEL., 1788), CAB. and HEIN., Mus. Hein. Th., iii, p. 46 (1860).  
*Chlorolampis phaethon*, CAB. and HEIN., Mus. Hein. Th., iii, p. 48 (note 5) (1860).  
*Chlorostilbon aureiventris*, GOULD, Intr. Troch., p. 176, sp. 400 (1861).  
*Chlorostilbon splendidus*, ELLIOT, Ibis (1875), p. 165.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 93.

*Hab.* Buenos Ayres to Mendoza, Bolivia.

*Male.* Upper surface golden-bronze, greenish on the upper tail coverts. Throat and breast metallic light green; abdomen golden-red; under tail coverts green. Tail black. Bill flesh-color, tip black. Wings purplish-brown. Total length,  $3-3\frac{1}{2}$  in. Wing, 2 in. Tail,  $1-1\frac{1}{4}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Above bronzy-green, beneath gray, flanks bronzy. Tail black, two lateral feathers tipped with grayish-white.

### 5. *Chlorostilbon haberlini*.

- Chlorestes haberlini*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, t. 703, figs. 4578-80 (1855).  
*Chlorostilbon haberlini*, CAB. and HEIN., Mus. Hein. Th., iii, p. 48 (note 6) (1860).—GOULD, Intr. Troch., octavo ed., p. 175 (1861).—ELLIOT, Ibis (1875), p. 160.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 100.  
*Chlorolampis haberlini*, CAB. and HEIN., Mus. Hein. Th., iii, p. 48 (note 6) (1860).  
*Chlorostilbon nitens*, LAWR., Ann. N. Y. Lyc. Nat. Hist. (1861), p. 305.—GOULD, Intr. Troch., octavo ed., p. 179 (1861).

*Hab.* Panama, Columbia, Venezuela.

*Male.* Upper parts golden-green, in some specimens very brilliant on the forehead. Under parts glittering yellowish-green, sometimes washed with bluish. Tail black. Maxilla black, mandible flesh-color at base, tip black. Total length, 3 in. Wing,  $1\frac{3}{4}$  in. Tail,  $1\frac{1}{4}$  in. Culmen,  $\frac{9}{16}$  in.

*Female* is like that of *C. pucherani*.

### 6. *Chlorostilbon angustipennis*.

- Trochilus angustipennis*, FRAS., P. Z. S. (1840), p. 18.  
*Trochilus chrysogaster*, BOURC., Rev. Zool. (1843), p. 101.  
*Trochilus phaeopygus*, TSCH., Fann. Pernan., p. 247, sp. 11 (1844).  
*Hylocharis angustipennis*, GRAY, Gen. Birds, vol. i, p. 114, sp. 21.  
*Hylocharis chrysogaster*, GRAY, Gen. Birds, vol. i, p. 115, sp. 43.—BON., Consp. Gen. Av., vol. i, p. 74 (1850).  
 —ID., Rev. and Mag. Zool. (1854), p. 255.  
*Chlorestes chrysogastra*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, t. 693, figs. 4540-41 (1855).  
*Chrysuroxia phaeopyga*, BON., Consp. Gen. Av. (1850), vol. i, p. 75.  
*Chlorolampis chrysogastra*, CAB. and HEIN., Mus. Hein. Th., iii, p. 47 (1860).  
*Prasites phaeopyga*, CAB. and HEIN., Mus. Hein. Th., iii, p. 49 (1860).  
*Chlorostilbon smaragdina*, CAB. and HEIN., Mus. Hein. Th., iii, p. 48 (1860).  
*Chlorostilbon angustipennis*, GOULD, Mon. Troch., vol. v, pl. 353.—ID., Intr. Troch., octavo ed., p. 175 (1860).  
 —ELLIOT, Ibis (1875), p. 153.  
*Chlorostilbon assimilis*, LAWR., Ann. N. Y. Lyc. Nat. Hist., p. 292 (1860).  
*Chlorostilbon melanorhynchus*, GOULD, P. Z. S. (1860), p. 398.  
*Chlorolampis angustipennis*, HEINE, Journ. für Ornith. (1863), p. 201.  
*Chlorostilbon pumilus*, GOULD, Ann. and Mag. Nat. Hist. (1872), vol. ix, p. 195.  
*Chrysomirus angustipennis*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 102 (1875).

*Hab.* Veragua, Panama, Venezuela, Columbia, Ecuador.

*Male.* Crown of the head golden; upper surface bronzy-green; throat metallic emerald-green, under surface metallic yellowish-green. Under tail coverts luminous grass-green. Wings purplish-brown. Tail forked, blue-black. Bill black. Total length,  $3\frac{1}{8}$  in. Wing, 2 in. Tail,  $1\frac{5}{16}$  in. Culmen,  $\frac{9}{16}$  in.

*Female.* Upper parts bronzy-green, brownish on the crown, and purer green on the rump and upper tail coverts. Under parts grayish-white. Central tail feathers green at base, rest blue-black; the lateral ones green at base, then blue-black and tipped with white; external one on each side gray at base, then crossed by a broad steel-blue band, and tipped with white. Bill black. The dimensions and coloring of this species vary greatly among individuals, so that these have no specific value, and the only reliable method of determining that a specimen belongs to it, is, that it possesses the *entirely black bill* together with a tail *rather deeply forked for its length*.

### 7. *Chlorostilbon atala*.

*Ornismya atala*, LESS., Hist. Nat. Troch., p. 118, pl. 42 (1831).

*Hylocharis atala*, GRAY, Gen. Birds, vol. i, p. 115, sp. 47 (1844-49).

*Chlorostilbon atala*, GOULD, Mon. Troch., vol. v, pl. 356.—ID., Intr. Troch., octavo ed., p. 177 (1861).—ELLIOT, Ibis (1875), p. 159.

*Saucerottia atala*, BON., Consp. Gen. Av., vol. i, p. 77 (1850).—REICH., Anfz. der Colib., p. 7 (1853).

*Chlorestes atala*, REICH., Troch. Enum., p. 4, pl. 700, fig. 4568 (1855).

*Chlorostilbon caribæus*, LAW., Ann. N. Y. Lyc. Nat. Hist., vol. x, p. 2.

*Chrysomirus atala*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 105 (1875).

*Hab.* Trinidad.

*Male.* Upper surface golden-green, very brilliant on the crown. Under surface metallic light green. Wings purplish-brown. Tail steel-black. Bill black. Total length, 3 in. Wing,  $1\frac{7}{8}$  in. Tail,  $1\frac{3}{16}$  in. Culmen,  $\frac{5}{8}$  in.

*Female.* Upper parts bronzy-green. Under surface grayish-white. Tail steel-black, lateral feathers tipped with grayish-white. Bill black. Dimensions the same as the male.

### 8. *Chlorostilbon prasinus*.

*The All-green Humming-bird*, EDWARDS, Gleanings (1764), p. 316, pl. A, 360, fig. 1.

*L'Orvert*, BUFF., Plan. Eulm., tom. vii, pl. 13 (text only).

*Ornismya prasina (L'orvert)*, LESS., Ois. Mouch., p. 188, pl. 65 (1829).

*Ornismya mellisuga*, D'ORB. and LAFRES., Syn. Av., ii, p. 30, sp. 20 (1838).

*Argyrtria phoebe*, LESS. and DELATT., Rev. Zool. (1839), p. 17, juv.

*Hylocharis prasinus*, BON., Consp. Gen. Av., vol. i, p. 74 (1850).

*Helianthea phoebe*, REICH., Anfz. der Colib., p. 9 (1853).—ID., Troch. Enum., p. 6 (1855).

*Hylocharis phoebe*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Trochilus daphne*, BOURC., M.S.

*Hylocharis prasinus*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Hylocharis daphne*, BON., Rev. and Mag. Zool. (1854), p. 255.

*Chlorestes prasina*, REICH., Anfz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, t. 691, figs. 4529-30 (1855).

*Prasitis prasina*, CAB. and HEIN., Mus. Hein. Th., iii, p. 49 (1860).

*Chlorostilbon peruanus*, GOULD, Intr. Troch. (1861), p. 177, sp. 405, octavo ed.

*Chlorostilbon napensis*, GOULD, Intr. Troch., octavo ed., p. 177 (1861).

*Chlorostilbon brevicaudatus*, GOULD, Intr. Troch., octavo ed., p. 178 (1861).

*Argyrtria media*, PELZ., Orn. Brazil, p. 29.

*Argyrtria meliphila*, PELZ., Orn. Braz., p. 29.

*Chlorostilbon prasinus*, ELLIOT, Ibis (1875), p. 163.

*Chrysomirus prasinus*, MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 108 (1875).

*Hab.* Venezuela, Cayenne, Amazonian region of Brazil, Peru.

*Male.* Upper parts bright green, rather brilliant on the crown. Under surface luminous green, washed more or less with blue upon the throat, sometimes even extending to the breast. Tail nearly even, blue-black. Bill black. Wings purplish-brown. Total length,  $3\frac{1}{8}$  in. Wing,  $1\frac{3}{4}$  in. Tail, 1 in. Culmen,  $\frac{5}{8}$  in.

*Female* resembles that of *C. atala*.

I close the list of the Trochilidæ with the genus PANYCHLORA; not that it essentially should be placed here, and nowhere else, but because, in the arrangement of the groups that appears most natural to me after many years of study, and which I suggest in this Synopsis, the species of this genus seem to find here their appropriate position. The three forms given below are among the very smallest of Humming-birds, and are chiefly distinguished from the members of CHLOROSTILBON by their short, square, *green* tails, the feathers of which in one species are attenuated and pointed.—Different shades of green, very luminous, are the prevailing, indeed the only colors of the males; the females differing in their gray under surface, and variously colored rectrices.

Genus CXX.—PANYCHLORA.

*Panychlora*, CAB. and HEIN., Mus. Hein. Th., iii (1860), p. 49.

*Ch.* Bill as long as the head, straight; feathers of forehead projecting on culmen, nostrils hidden. Wings long, reaching nearly to the end of the tail. Tail short, even. Feet very small, tarsi partly clothed. Sexes unlike.

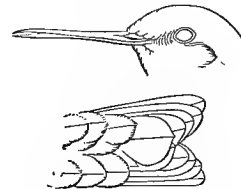
*Range.* Venezuela and Columbia.

Three species are known.

TYPE.

*T. aliciae*, Bourc.

Fig. 127.



*Panychlora aliciae*. ♂. 24780.  
New Granada.

*Key to the species.*

- A. Tail shining grass-green, bill long.
- B. Tail very dark green, bill moderately long.
- C. Tail bright green, outer rectrices extremely narrow and pointed.

- 1. *P. poortmani*.
- 2. *P. aliciae*.
- 3. *P. stenura*.

**1. *Panychlora poortmani*.**

*Ornismya poortmani*, BOURC., Rev. Zool. (1843), p. 2.—ID., Ann. Soc. Sci. Phys., Lyon (1843), p. 39.  
*Hylocharis poortmani*, GRAY, Gen. Birds, vol. i, p. 115, sp. 48.—BON., Consp. Gen. Av., vol. i, p. 74 (1850).  
*Chlorestes poortmani*, REICH., Aufz. der Colib., p. 7 (1853).—ID., Troch. Enum., p. 4, t. 691, figs. 4531-32 (1855).  
*Smaragditiis esmeralda*, REICH., Aufz. der Colib., p. 7 (1853).  
*Chlorostilbon esmeralda*, REICH., Troch. Enum., p. 4, t. 694, figs. 4542-43 (1855).  
*Chlorostilbon poortmani*, BON., Rev. and Mag. Zool. (1854), p. 238.—GOULD, Mon. Troch., vol. v, pl. 358.  
*Panychlora poortmani*, CAB. and HEIN., Mus. Hein. Th., iii, p. 50 (1860).—GOULD, Intr. Troch., octavo ed., p. 180 (1861).—ELLIOT, Ibis (1875), p. 170.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 112 (1875).

*Hab.* Columbia.

*Male.* Upper surface shining green, some specimens with the crown golden-orange. Under surface luminous grass-green; vent white. Tail bright grass-green. Wings purplish-brown. Bill black. Total length, 3 in. Wing,  $1\frac{7}{8}$  in. Tail, 1 in. Culmen,  $\frac{5}{8}$  in.

*Female.* Head golden-orange, upper surface grass-green; under surface gray. Median pair of rectrices green, rest green at base passing into black and tipped with white. Bill black. Total length, 3 in. Wing,  $1\frac{5}{8}$  in. Tail,  $\frac{7}{8}$  in. Culmen,  $\frac{9}{16}$  in.

## 2. *Panychlora aliciae*.

*Trochilus aliciae*, BOURC. and MULS., Rev. Zool. (1848), p. 274.

*Chlorostilbon aliciae*, BON., Rev. and Mag. Zool. (1854), p. 239.—GOULD, Mon. Troch., vol. v, pl. 357.

*Smaragdites alicae*, REICH., Aufz. der Colib., p. 7 (1853).

*Smaragdites euchloris*, REICH., Aufz. der Colib., pp. 7, 23 (1853).

*Smaragdites maculicollis*, REICH., Aufz. der Colib., p. 7 (1853).

*Chlorestes maculicollis*, REICH., Aufz. der Colib., p. 23 (1853).—ID., Troch. Enum., p. 4, pl. 694, figs 4545-46 (1855).

*Chlorestes alicae*, REICH., Troch. Enum., p. 4, t. 754, figs. 4732-33 (1855).

*Chlorestes mellisuga*, REICH., Troch. Enum., p. 4, t. 754, fig. 4731 (1855).

*Chlorestes euchloris*, REICH., Troch. Enum., p. 4, t. 694, fig. 4544 (1855).

*Panychlora aliciae*, CAB. and HEIN., Mus. Hein. Th., iii, p. 50 (note 6) (1860).—GOULD, Intr. Troch., octavo ed., p. 411 (1861).—ELLIOT, Ibis (1875), p. 171.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 115.

*Panychlora aurata*, CAB. and HEIN., Mus. Hein. Th., iii, p. 50? (1860).

*Panychlora maculicollis*, CAB. and HEIN., Mus. Hein. Th., iii, p. 49 (note 4) (1860).

*Hab.* Venezuela.

*Male.* Crown golden-green; upper surface bronzy-green; under surface luminous yellowish-green. Under tail coverts shining grass-green. Wings purplish-brown. Tail very dark green. Bill black. Total length,  $2\frac{3}{4}$  in. Wing,  $1\frac{1}{2}$  in. Tail, 1 in. Culmen,  $\frac{9}{16}$  in. (Type in my collection.)

*Female.* Above bronzy-green, beneath grayish-white. Central tail feathers green, lateral ones green at base, then black and tipped with gray, increasing in extent towards the external ones.

## 3. \**Panychlora stenura*.

*Panychlora stenura*, CAB. and HEIN., Mus. Hein. Th., iii, p. 50 (note 7) (1860).—GOULD, Intr. Troch., octavo ed., p. 180 (1861).—ELLIOT, Ibis (1875), p. 171.—MULS., Hist. Nat. Ois. Mouch., tom. ii, p. 117.

*Chlorostilbon acuticaudus*, GOULD, P. Z. S. (1860), p. 308.

*Panychlora aliciae*, WYATT., Ibis (1871), p. 379.

*Hab.* Merida, Venezuela, Ocaña, Columbia.

*Male.* Crown glittering-green; upper surface and tail golden-green. Under surface shining grass-green. Wings purplish-brown. Bill black. Total length, 3 in. Wing,  $1\frac{5}{8}$  in. Tail, 1 in. Bill,  $\frac{3}{4}$  in.

*Female* or *young male* has the rectrices golden-green, the lateral ones with ashy tips. Under parts gray. Upper parts golden-green.

This species is remarkable for its extremely narrow and pointed outer rectrices, which readily serve to distinguish it from its relatives.



## APPENDIX.

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ONE hundred and twenty genera have been recognized in this work, nearly all of which could, probably, readily be identified by any one tolerably conversant with this group of birds. Many of them are, however, very closely allied to others, and in order to facilitate the determination as much as possible of any particular genus, the following 'Key' has been prepared, which it is hoped, in connection with the drawings to be found at the head of every genus illustrating their salient characters, may prove useful in rendering this, perhaps at times, greatly needed service.

### KEY TO THE GENERA.

- |  |                        |
|--|------------------------|
| A. Bill decurved to the extent of one-third of a circle.   | 1. EUTOXEBES, p. 2.    |
| B. Bill twice as long as head, tip hooked, cutting edges serrated.   | 2. RHAMPHODON, 4.      |
| <i>a.</i> No metallic coloring. Tail long, rounded.  | 3. ANDRODON, 5.        |
| <i>b.</i> Coloring partly metallic. Tail short, broad.   | 4. GLAUCIS, 5.         |
| C. Bill long, rather stout, decurved, high at base. Tail rounded, feathers pointed in young. Sexes alike.  | 5. DOLEROMYA, 8.       |
| D. Bill straight, short, flat and fleshy at base. First primary pointed. Sexes alike. No brilliant hues.   | 6. PHÆOPTILA, 9.       |
| <i>a.</i> Tail even, external rectrices pointed.   | 7. PHÆTHORNIS, 10.     |
| <i>b.</i> Tail forked.   | 8. EUPETOMENA, 21.     |
| E. Median pair of rectrices elongated considerably beyond the rest, sometimes pointed, generally attenuated. Bill decurved or straight, nearly as long as body.              | 9. SPHENOPROCTUS, 22.  |
| F. Shafts of primaries broad and flattened.  | 10. CAMPYLOPTERUS, 23. |
| <i>a.</i> Tail very long, deeply forked.   | 11. APHANTOCHROA, 28.  |
| <i>b.</i> Tail long, cuneate, central pair of rectrices lengthened beyond the rest.  | 12. CÆLIGENA, 29.      |
| <i>c.</i> Tail moderately long, rounded, feathers broad.   | 13. LAMPROLÆMA, 32.    |
| G. Shafts of primaries thickened at base. Bill short, stout. Tail square, broad.   | 14. OREOPYRA, 33.      |
| H. Bill straight, rather stout, as long, or slightly longer than the head. Tail rounded, long, ample, the rectrices broad. Brilliant metallic hues restricted to the throat. |                        |
| I. Bill short, slender, straight. Tail long, forked, feathers broad. Metallic hues equally brilliant upon throat and breast. Sexes unlike.                                   |                        |
| J. Bill straight, rather stout, about as long as the head. Tail moderately long, forked. Plumage generally metallic. Sexes very dissimilar.                                  |                        |

- K. Bill longer than the head, decurved.
- a.* Metallic hues most brilliant on the throat. Sexes unlike.
- a'*. Tail long, feathers narrow and pointed, the external rectrices on either side longer than the rest. Tarsi clothed.
- b'*. Tail long, feathers moderately broad and rounded. Tarsi bare.
- c'*. Tail even, or slightly forked. Upper tail coverts highly metallic. Sexes alike.
- d'*. Inner web of first primary very narrow. Tail nearly even, feathers pointed; the under coverts two-thirds the length of the rectrices. Sexes unlike.
- L. Bill straight, long as head. Tail long, with the under coverts greatly developed, plume-like. Sexes unlike.
- M. Bill strong, straight, about as long as the head. Tail ample long, the under coverts reaching nearly to the tips of median rectrices.
- N. Bill rather stout, longer than head.
- a.* Frontal feathers projecting over and covering the nostrils. Size large.
- a'*. Sexes alike. Bill straight.
- a''*. Tail broad, ample, rounded. Ear coverts and breast metallic.
- b''*. Tail forked when closed, square when spread. General hues metallic.
- c''*. Tail short, slightly forked. Brilliant metallic hues confined to crown of the head.
- b'* Sexes dissimilar.
- a''*. Tail long, forked. Brilliant metallic hues chiefly on the throat and centre of crown and forehead. Bill straight.
- b''*. Tail long, deeply forked. Metallic hues brilliant on forehead, or lower part of throat, sometimes both. Bill straight.
- c''*. Tail large, forked when spread. Bill decurved. Throat and breast metallic.
- d''*. Tail moderate, slightly forked. Throat and crown metallic. Bill straight.
- e''*. Tail ample, nearly square. Throat and breast metallic. Bill slender, straight.
- f''*. Tail very long and deeply forked; the feathers narrow and slightly pointed. Feathers of forehead and under parts highly metallic. Bill straight.
- g''*. Tail as long as body, deeply forked; the feathers broad, and pointed. Plumage generally highly metallic. Bill straight.
- h''*. Tail long, forked, feathers rounded at tip. Plumage of centre of crown, throat, and breast highly metallic.
- i''*. Tail very long and ample, feathers broad. Wings very large, falcate. Plumage shining, not brilliantly metallic. Bill curved upward slightly at point.
15. OREOTROCHILUS, 34.
16. LAMPORNIS, 37.
17. EULAMPIS, 42.
18. LAFRESNAYA, 43.
19. CHALYBURA, 45.
20. FLORISUGA, 47.
21. PETASOPHORA, 49.
22. PANOPLITES, 53.
23. PHÆOLÆMA, 55.
24. CLYTOLÆMA, 56.
25. IOLÆMA, 57.
26. STERNOCLYTA, 59.
27. EUGENES, 60.
28. UROCHROA, 61.
29. EUGENIA, 62.
30. LAMPRASTER, 63.
31. HELIODOXA, 63.
32. PTEROPHANES, 66.

- b.* Feathers of forehead only partly covering the nostrils.  
*a'*. Tail long, broad, and forked. Wings very long, pointed. No metallic hues on plumage. Sexes alike.
- O. Bill longer than the body and head, inclining upwards at tip. Sexes unlike.
- P. Bill very long, straight, slender.  
*a.* Sexes dissimilar.  
*a'*. Tail long, deeply forked. Forehead and crown brilliantly metallic. Tarsi partially clothed.  
*b'*. Tail slightly forked. Plumage generally metallic. Tarsi feathered.
- b.* Sexes similar.  
*a'*. Tail long, broad, slightly forked. Metallic hues in the majority of the species, mainly on the head, throat, and rump. Tarsi bare.  
*b'*. Tail much rounded, rectrices broad. Metallic hues restricted to forehead.
- Q. Bill lengthened. Crown and throat metallic. Sexes dissimilar.  
*a.* Gorget not elongated.  
*a'*. Nostrils exposed, maxilla broad, denuded at base. Tail rounded. Bill straight.  
*b.* Gorget elongated.  
*a'*. Tail forked, feathers rounded at tip. Bill straight.  
*b'*. Tail deeply forked, rectrices narrow and pointed. Bill slightly curved.
- R. Bill short, about as long as the head, straight. Spot on forehead and throat metallic. Sexes unlike.  
*a.* Tail long and forked. No white on breast.  
*b.* Tail broad and rounded. White band on breast.
- S. Bill straight, slender, longer than the head. Tail slightly forked. Throat metallic. Sexes unlike.
- T. Bill shorter than head, nostrils covered. Tail rounded. Sexes very different, both with metallic hues, more on the female than male. Size large.
- U. Rectrices on either side of the median pair narrow and elongated far beyond the rest. Bill stout, decurved, longer than the head. Metallic hues common to both sexes, but their plumage dissimilar.
- V. Lateral rectrix, next the outermost one on either side, three times the length of the rest. Bill longer than the head, wide at base. Tail forked. Head crested. Sexes unlike. Tail of female moderately long, rounded, the lateral rectrices pointed.
- W. Bill longer than the head, stout, slightly decurved. Nostrils covered. Tail very long, deeply forked, the external rectrix twice the length of the one next to it, very broad, and narrowing to a point. Plumage generally metallic. Size large. Sexes — ?
- X. Bill moderate, slightly decurved. Tail slightly forked. Tarsi clothed, metallic hues on crown or throat, sometimes on both. Sexes unlike.
- Y. Size minute. Bill short, straight, delicate. Metallic hues wanting.  
*a.* Tail short, slightly forked. Sexes similar.  
*b.* Tail short, square, slightly rounded. Sexes unlike. Nostrils hidden. Crown white.
33. PATAGONA, 67.  
34. DOCIMASTES, 68.  
35. DIPHLOGÆNA, 69.  
36. HELIANTHEA, 70.  
37. BOURCIERIA, 74.  
38. HEMISTEPHANIA, 80.  
39. FLORICOLA, 82.  
40. LEPIDOLARYNX, 84.  
41. HELIOMASTER, 86.  
42. HELIOTRYPHA, 86.  
43. HELIANGELUS, 89.  
44. UROSTICTE, 91.  
45. EUSTEPHANUS, 92.  
46. TOPAZA, 94.  
47. AITHURUS, 96.  
48. HYLONYMPHA, 97.  
49. THALURANIA, 98.  
50. MELLISUGA, 103.  
51. MICROCHERA, 104.

- Z. Size small. Bill straight, slender. Metallic hues on head or throat, sometimes on both. Sexes unlike.
- a. Gorget not elongated, metallic.
- a'. Tail forked, rectrices pointed, outermost ones narrowest. Female has the tail short and rounded. 52. TROCHILUS, 105.
- b. Gorget elongated.
- a'. Head and throat metallic. Tail forked and short, the three outer feathers narrow and slightly incurved. Tarsi covered. Tail of female rounded. 53. CALYPTE, 106.
- b'. Metallic hues confined to the throat; in one species only, including both head and throat. Tail rounded, rectrices sharply pointed and generally narrow. 54. SELASPHORUS, 108.
- c'. Throat alone metallic.
- a''. Tail very short, square. 55. CATHARMA, 112.
- b''. Tail short, and much rounded. 56. ATTHIS, 113.
- d'. Throat partly metallic. Tail slightly forked in the male, feathers rounded at tip. Tail of female slightly rounded. 57. STELLULA, 114.
- AA. Size moderately large. Bill long, decurved, and wide at base. Nostrils hidden. Tail long, deeply forked, rectrices narrow and graduated to their tips. Tarsi clothed. Throat metallic. Sexes unlike. 58. RHODOPIS, 115.
- BB. Bill slender, straight. Tufts of metallic feathers on either side of the head. Four median rectrices longest, and nearly equal, broad at base, graduating to a point. Sexes unlike. 59. HELIACTIN, 116.
- CC. Median rectrices very short, almost hidden in the upper coverts. Throat metallic. Size small. Bill longer than the head, slender. Tail forked in the male, rounded in the female. Sexes dissimilar.
- a. Bill broad at base, decurved for its entire length; outermost rectrix sometimes nearly bare of webs, gorget elongated. 60. CALOTHORAX, 117.
- b. Bill slightly arched. Two outer rectrices filamentous, almost bare of webs. 61. ACESTRURA, 119.
- c. Bill straight. Outermost rectrix half the length of one next to it, filiform and graduating to a point. Two succeeding ones longest, equal and uniform in breadth. 62. CHÆTOCERCUS, 120.
- d. Rectrix on either side of middle pair greatly elongated; remainder short and decreasing in length to the outermost one. 63. THAUMASTURA, 122.
- e. Tail forked, long. Outermost rectrix on either side considerably longer than the one next to it. Bill slender, decurved. 64. DORICHA, 123.
- f. Four lateral rectrices on either side of middle pair elongated, and nearly equal in length. 65. MYRTIS, 126.
- g. Tail deeply forked. Outermost rectrix longest, tapering rapidly at the tip, and curved inwards. 66. TILMATURA, 128.
- DD. Tail rather long, deeply forked. Throat metallic.
- a. Bill longer than the head, straight, slender. Wings very short, about one-third the length of the body.
- a'. Rectrices uniform in width. 67. SMARAGDOCHRYSIS, 129.
- b'. Median rectrices very short, lateral ones narrow, and the outer ones curving slightly inwards. 68. PTOCHOPTERA, 129.

- b.* Bill shorter than the head, slightly decurved at extreme tip, rectrices narrow, longest curving slightly outwards, median pair very short. 69. CALLIPHLOX, 130.
- EE. Feathers of the neck lengthened, forming ruffs, and projecting outwards and upwards. Bill straight, short, weak. Sexes dissimilar. 70. LOPHORNIS, 131.
- FF. Tail deeply forked, median rectrices very short, outermost one bare of web near the tip. Bill about as long as the head, straight.
- a.* No spatula at tip of external rectrix. All tail feathers terminating in sharp points. 71. GOULDIA, 137.
- b.* Outermost rectrix longest, and terminating in a moderate spatula.
- a'.* Second and third outer rectrices nearly equal, and about three-fourths the length of external one, pointed at tips. 72. DISCURA, 140.
- b'.* Second outer rectrix about one-third the length of external one, and one-third longer than the next inner one. Tips rounded. 73. STEGANURA, 141.
- c'.* Outer tail feathers entirely bare of webs, spatules very large. Wings diminutive. 74. LODDIGESIA, 144.
- GG. Tail very long, deeply forked.
- a.* Bill about as long as the head, straight.
- a'.* Rectrices narrow, outermost one greatly exceeding the others in length; the tips alone slightly metallic. Throat metallic. 75. LESBIA, 145.
- b'.* Rectrices broad, external one nearly square at tip, remainder slightly pointed, all metallic at the tip, each one from the median pair one-third shorter than the next outer one. Throat metallic. 76. ZODALIA, 149.
- c'.* Rectrices moderately broad, even; external one two-thirds longer than the one next to it; the exposed surface of all highly metallic. Top of head and throat luminous. 77. CYNANTHUS, 150.
- d'.* Bill longer than the head, arched. Rectrices broad, rounded at tip, external one, a third longer than the next one; exposed portions of all extremely luminous. Throat metallic. 78. SAPPHO, 153.
- HH. Feathers of throat elongated into a pendent tuft. Tail forked.
- a.* Head crested.
- a'.* Bill short, straight, feeble. Tarsi naked. 79. OXYPOGON, 155.
- b.* Head not crested. Elongated throat feathers metallic at tips.
- a'.* Bill longer than the head, stout, slightly decurved. Tarsi clothed. 80. OREONYMPHA, 157.
- c.* Bill shorter than the head, straight, rather stout. 81. RHAMPHOMICRON, 158.
- II. Bill turned upwards at the tip.
- a.* Bill shorter than the head. Tail slightly forked. Rectrices not luminous. 82. AVOCETTINUS, 161.
- b.* Bill longer than the head. Tail rounded. Rectrices exceedingly luminous. 83. AVOCETTULA, 162.
- JJ. Rectrices broad, highly metallic. Sexes unlike.
- a.* Bill straight, shorter than the head. Tarsi bare. 84. METALLURA, 163.

- b.* Bill longer than the head, slightly decurved, broad at base and flat. Tarsi clothed.
- a'.* Tail rounded. Head and throat metallic. 85. CHRYSURONIA, 167.
- b'.* Tail square. Forehead and throat metallic. 86. AUGASTES, 170.
- KK. Bill straight, about as long as the head. Tarsi bare. 87. PHLOGOPHILUS, 171.
- LL. Bill longer than the head, wedge-shaped at tip.
- a.* Tail rounded, feathers broad. Tarsi partly clothed. 88. SCHISTES, 172.
- b.* Tail rounded, feathers rather narrow; outer rectrix but two-thirds the length of median pair; upper tail coverts reaching two-thirds the length of the tail. Tarsi clothed to the toe. 89. HELIOTHRIX, 174.
- MM. Feathers of forehead projecting on to the culmen. Nostrils hidden. Bill about as long as the head. Tail round. Tarsi bare. Sexes unlike.
- a.* Head not crested. Top of head and throat metallic. 90. CHRYSOLAMPIS, 176.
- b.* Head crested.
- a'.* Crest broad at base, pointed at tip, metallic. 91. BELLONA, 178.
- b'.* Crest terminating in one or more narrow feathers, extending far beyond the rest. Partly metallic. 92. CEPHALOLEPIS, 179.
- NN. Bill as long as the head, straight. Nostrils exposed.
- a.* Tail rounded, tarsi bare. Metallic hues confined to small spots on the throat. Sexes alike. 93. ADELOMYIA, 181.
- b.* Tail almost square; no metallic hues. Wings long and pointed. Tarsi feathered. 94. ANTHOCEPHALA, 183.
- OO. Bill shorter than the head, straight, weak. Wings reaching nearly to the end of the tail, which is forked. Sexes dissimilar. Size small. Metallic hues confined to the throat. 95. ABEILLIA, 183.
- PP. Bill longer than the head, straight, wide at base. Tarsi clothed. Tail rounded. 96. KLAIS, 184.
- QQ. Rump metallic; luminous. Bill straight.
- a.* Primaries falcate. Tail forked, feathers pointed. Tarsi partly clothed. 97. AGLÆACTIS, 185.
- b.* Tail forked, feathers rounded. Tarsi hidden in tufts of downy feathers. 98. ERIOCNEMIS, 188.
- RR. Bill short and straight, slender. First primary slightly falcate. Tail forked, feathers pointed. Tarsi bare. Plumage generally metallic. Sexes alike. 99. PANTERPE, 195.
- SS. Tail rounded. Tarsi clothed. Sexes alike. Bill longer than head, straight.
- a.* Bill broad, flat at base. Nostrils exposed. 100. URANOMITRA, 195.
- b.* Bill narrow and slender at base, nostrils exposed. 101. LEUCIPPUS, 198.
- c.* Bill wide at base, nostrils hidden. 102. LEUCOCHLORTS, 200.
- d.* First primary slightly falcate; nostrils exposed. 103. AGYRTRIA, 201.
- TT. Tail slightly forked. Sexes unlike. Bill subcylindrical, point swollen. 104. ARINIA, 209.
- UU. Tarsi clothed. Nostrils exposed.
- a.* Sexes unlike.
- a'.* Tail rounded.
- a''.* Bill shorter than the head, decurved. 105. ELVIRA, 210.
- b''.* Bill long as the head, straight, wide at base. Under tail coverts half as long as rectrices. 106. CALLIPHARUS, 211.
- c''.* Bill longer than the head, straight. 107. EUPHERUSA, 212.

- b.* Sexes alike.
- a'*. Tail rounded. Bill much longer than the head, decurved, wide at base. Rectrices narrow. 108. POLYTMUS, 213.
- b'*. Tail even. Bill as long as head, straight. 109. AMAZILIA, 216.
- VV. Sexes unlike. Bill as long as, or slightly longer than the head.
- a.* Tarsi clothed.
- a'*. Bill straight, nostrils exposed.
- a''*. Tail square, feathers broad. 110. BASILINNA, 226.
- b''*. Tail rounded or slightly forked. 111. EUCEPHALA, 227.
- b'*. Bill decurved, nostrils hidden. 112. TIMOLIA, 231.
- b.* Tarsi bare.
- a'*. Bill straight, nostrils hidden. 113. JULIAMYIA, 232.
- WW. Bill longer than the head, rather broad and flat at base, and terminating in a sharp point. Wings long, over two-thirds the length of the tail. Tarsi clothed. Sexes dissimilar.
- a.* Nostrils exposed.
- a'*. Bill straight, tail even, slightly forked when spread; rectrices rather broad. Luminous metallic hues confined to the top of the head. 114. DAMOPHILA, 233.
- b'*. Bill slightly decurved. Tail short, slightly forked, feathers broad. 115. IACHE, 234.
- c'*. Bill straight and broad on top. Wings reaching to nearly the end of the tail, which is even. 116. HYLOCHARIS, 236.
- d'*. Bill slightly decurved. Tail forked, feathers narrow and pointed. 117. CYANOPHAIA, 237.
- e'*. Bill straight. Tail long, deeply forked. 118. SPORADINUS, 240.
- f'*. Size small. Bill straight. Tail short forked or even. Plumage generally metallic. 119. CHLOROSTILBON, 242.
- b.* Nostrils hidden.
- a'*. Bill straight, frontal feathers projecting on to the culmen. Tail very short, even. Plumage luminous. 120. PANYCHLORA, 247.





## INDEX OF GENERIC NAMES ADOPTED IN THIS WORK.

- |  |  |   |
|--|--|---|
| <p>1. ABEILLIA, 183.<br/>                 2. ACESTRURA, 119.<br/>                 3. ADELOMYIA, 181.<br/>                 4. ÆGLÆACTIS, 185.<br/>                 5. AGYRTRIA, 200, <b>201</b>.<br/>                 6. AITHURUS, 96.<br/>                 7. AMAZILIA, 216.<br/>                 8. ANDRODON, 5.<br/>                 9. ANTHOCEPHALA, 183.<br/>                 10. APHANTOCHROA, 28.<br/>                 11. ARINIA, 209.<br/>                 12. ATTHIS, 113.<br/>                 13. AUGASTES, 132, <b>170</b>.<br/>                 14. AVOCETTINUS, <b>161</b>, 162.<br/>                 15. AVOCETTULA, 162.</p> <p>16. BASILINNA, 184, <b>226</b>.<br/>                 17. BELLONA, 132, <b>178</b>.<br/>                 18. BOURCIERIA, 74.</p> <p>19. CÆLIGENA, <b>29</b>, 49, 74.<br/>                 20. CALLIPHARUS, 211.<br/>                 21. CALLIPHLOX, 130.<br/>                 22. CALOTHORAX, 43, <b>117</b>.<br/>                 23. CALYPTE, 106.<br/>                 24. CAMPYLOPTERUS, 23.<br/>                 25. CATHARMA, 112.<br/>                 26. CEPHALOLEPIS, 132, <b>179</b>.<br/>                 27. CHÆTOCERCUS, 120.<br/>                 28. CHALYBURA, 45.<br/>                 29. CHLOROSTILBON, 242.<br/>                 30. CHRYSOLAMPIS, 176.<br/>                 31. CHRYSURONIA, 167.<br/>                 32. CLYTOLEMA, 56.<br/>                 33. CYANOPHAIA, 237.<br/>                 34. CYNANTHUS, 67, 105, 145,<br/>                     <b>150</b>, 153.</p> <p>35. DAMOPHILA, 232, <b>233</b>.<br/>                 36. DIPHLOGÆNA, 69.<br/>                 37. DISCURA, 132, <b>140</b>.</p> | <p>38. DOCIMASTES, 68.<br/>                 39. DOLEROMYIA, <b>8</b>, 198.<br/>                 40. DORICHA, 123.</p> <p>41. ELVIRA, 209, <b>210</b>.<br/>                 42. ERIOCNEMIS, 188.<br/>                 43. EUCEPHALA, <b>227</b>, 238.<br/>                 44. EUGENES, 60.<br/>                 45. EUGENIA, 62.<br/>                 46. EULAMPIS, 42.<br/>                 47. EUPETOMENA, 21.<br/>                 48. EUPHERUSA, 209, <b>212</b>.<br/>                 49. EUSTEPHANUS, 92.<br/>                 50. EUTOXERES, 2.</p> <p>51. FLORICOLA, 82.<br/>                 52. FLORISUGA, 38, <b>47</b>, 50.</p> <p>53. GLAUCIS, 5.<br/>                 54. GOULDIA, 132, <b>137</b>.</p> <p>55. HELIACTIN, 116.<br/>                 56. HELIANGELUS, 89.<br/>                 57. HELIANTHEA, 70.<br/>                 58. HELIOMASTER, 85, <b>86</b>.<br/>                 59. HELIODOXA, 56, <b>63</b>.<br/>                 60. HELIOTHRIX, 174.<br/>                 61. HELIOTRYPHA, 86.<br/>                 62. HEMISTEPHANIA, 80.<br/>                 63. HYLOCHARIS, 67, <b>236</b>, 237,<br/>                     238.<br/>                 64. HYLONYMPHA, 97.</p> <p>65. IACHE, 234.<br/>                 66. IOLÆMA, 57.</p> <p>67. JULIAMYIA, 232.<br/>                 68. KLAIS, 184.<br/>                 69. LAFRESNAYA, 43.<br/>                 70. LAMPORNIS, <b>37</b>, 47, 94.</p> | <p>71. LAMPRASTER, 63.<br/>                 72. LAMPROLÆMA, 32.<br/>                 73. LEPIDOLARYNX, 84.<br/>                 74. LEUCIPPUS, 198.<br/>                 75. LEUCOCHLORIS, 200.<br/>                 76. LESBIA, <b>145</b>, 150, 153.<br/>                 77. LODDIGESIA, 132, <b>144</b>.<br/>                 78. LOPHORNIS, 49, <b>131</b>.</p> <p>79. MELLISUGA, 68, 98, <b>103</b>.<br/>                 80. METALLURA, 163.<br/>                 81. MICROCHERA, 104.<br/>                 82. MYRTIS, 126.</p> <p>83. OREONYMPHA, 157.<br/>                 84. OREOPYRA, 33.<br/>                 85. OREOTROCHILUS, 34.<br/>                 86. OXYPOGON, 155.</p> <p>87. PANOPLITES, 53.<br/>                 88. PANTERPE, 195.<br/>                 89. PANYCHLORA, 247.<br/>                 90. PATAGONA, 67.<br/>                 91. PETASOPHORA, <b>49</b>, 132.<br/>                 92. PHÆOLEMA, 55.<br/>                 93. PHÆOPTILA, 9.<br/>                 94. PHÆTHORNIS, <b>10</b>, 96.<br/>                 95. PHLOGOPHILUS, 171.<br/>                 96. POLYTMUS, 23, 94, 96, <b>213</b>.<br/>                 97. PTEROPHANES, 66.<br/>                 98. PTOCHOPTERA, 129.</p> <p>99. RAMPHODON, 4.<br/>                 100. RHAMPHOMICRON, 158.<br/>                 101. RHODOPIS, 115.</p> <p>102. SAPPHO, 153.<br/>                 103. SCHISTES, 172.<br/>                 104. SELASPHORUS, <b>108</b>.<br/>                 105. SMARAGDOCHRYSIS, 129<br/>                 106. SPHENOPROCTUS, 22.</p> |
|--|--|---|

- |                                   |                                      |                       |
|-----------------------------------|--------------------------------------|-----------------------|
| 107. SPORADINUS, 240.             | 112. THAUMASTURA, 122.               | 117. URANOMITRA, 195. |
| 108. STEGANURA, 132, <b>141</b> . | 113. TILMATURA, 128.                 | 118. UROCHROA, 61.    |
| 109. STELLULA, 114.               | 114. TIMOLIA, 231.                   | 119. UROSTICTE, 91.   |
| 110. STERNOCLYTA, 59.             | 115. TOPAZA, 38, 94.                 | 120. ZODALIA, 149.    |
| 111. THALURANIA, 98.              | 116. TROCHILUS, 82, 96, <b>105</b> . |                       |

## INDEX OF GENERIC NAMES MENTIONED IN THIS WORK.

- |                           |                             |   |
|---------------------------|-----------------------------|---|
| 1. ABEILLIA, 183.         | 39. BOISSONNEAUA, 53.       | 77. CYANOCHLORIS, 45.                     |
| 2. ACESTRURA, 119.        | 40. BOURCIERIA, 74.         | 78. CYANOMYIA, 195.                       |
| 3. ADELISCA, 181.         | 41. CÆLIGENA, 29, 49, 74.   | 79. CYANOPHAIA, 237, 238.                 |
| 4. ADELOMYIA, 181.        | 42. CALLIDICE, 53.          | 80. CYANOPOGON, 117.                      |
| 5. AGACLYTA, 145.         | 43. CALLIGENIA, 70.         | 81. CYNANTHUS, 67, 105, 145,<br>150, 153. |
| 6. AGAPETA, 28.           | 44. CALLIPERIDIA, 86.       | 82. DAMOPHILA, 232, 233.                  |
| 7. AGLÆACTIS, 185.        | 45. CALLIPHARUS, 211.       | 83. DELATTRIA, 29.                        |
| 8. AGYTRIA, 200, 201.     | 46. CALLIPHLOX, 130.        | 84. DELPHINELLA, 49.                      |
| 9. AITHURUS, 96.          | 47. CALLOPISTRIA, 86.       | 85. DERBOMYIA, 188.                       |
| 10. ALINE, 188.           | 48. CALOTHORAX, 43, 117.    | 86. DIALIA, 131.                          |
| 11. ALOSIA, 53.           | 49. CALYPTE, 106.           | 87. DIOTIMIA, 89.                         |
| 12. AMALASIA, 123.        | 50. CAMPYLOPTERUS, 23.      | 88. DIPHLOGÆNA, 69.                       |
| 13. AMALUSIA, 123.        | 51. CATHARMA, 112.          | 89. DISCOSURA, 140.                       |
| 14. AMATHUSIA, 123.       | 52. CEPHALLEPIS, 132, 179.  | 90. DISCURA, 132, 140.                    |
| 15. AMAZILIA, 216.        | 53. CEPHALOLEPIS, 132, 179. | 91. DNOPHERA, 5.                          |
| 16. AMAZILICUS, 219.      | 54. CHÆTOCERCUS, 120.       | 92. DOCIMASTER, 68.                       |
| 17. AMAZILIS, 216.        | 55. CHALCOSTIGMA, 158.      | 93. DOCIMASTES, 68.                       |
| 18. AMAZILIUS, 216.       | 56. CHALYBURA, 45.          | 94. DOLERISCA, 8.                         |
| 19. AMETROBNIS, 10.       | 57. CHARIESSA, 29.          | 95. DOLEROMYIA, 8, 198.                   |
| 20. ANACTORIA, 89.        | 58. CHLOANGES, 242.         | 96. DOLICHA, 123.                         |
| 21. ANDRODON, 5.          | 59. CHLORESTES, 227, 242.   | 97. DORICHA, 123.                         |
| 22. ANISOTERUS, 10.       | 60. CHLOROLAMPIS, 242.      | 98. DORYFERA, 80.                         |
| 23. ANTHOCEPHALA, 183.    | 61. CHLOROSTILBON, 242.     | 99. DORYPHORA, 80.                        |
| 24. ANTHRACOTHORAX, 37.   | 62. CHRYSOBRONCHUS, 213.    | 100. DYBINIA, 103.                        |
| 25. APHANTOCHROA, 28.     | 63. CHRYSOLAMPIS, 176.      | 101. EGOLIA, 123.                         |
| 26. ARCHILOCHUS, 105.     | 64. CHRYSOMIRUS, 242.       | 102. ELISA, 123.                          |
| 27. ARIANA, 216.          | 65. CHRYSURISCA, 167.       | 103. ELVIRA, 209, 210.                    |
| 28. ARINIA, 209.          | 66. CHRYSURONIA, 167.       | 104. ENDOXA, 37.                          |
| 29. ASPASTA, 63.          | 67. CHRYSURUS, 167.         | 105. ENGYETE, 188.                        |
| 30. ATTHIS, 113.          | 68. CIRCE, 234.             | 106. ENTIMA, 43.                          |
| 31. AUGASTES, 132, 170.   | 69. CLOTHO, 211.            | 107. EMILIA, 237, 238.                    |
| 32. AURINIA, 131.         | 70. CLYTOLÆMA, 56.          | 108. ERANNA, 216.                         |
| 33. AVOCETINUS, 161, 162. | 71. COLIBRI, 49.            | 109. ERASMIA, 240.                        |
| 34. AVOCETTULA, 162.      | 72. COLUBRIS, 105.          | 110. ERASURIA, 216.                       |
| 35. BASILINNA, 184, 226.  | 73. COMETES, 153.           | 111. ERATIA, 216.                         |
| 36. BAUCIS, 183.          | 74. CONRADINIA, 74.         | 112. ERATOPIS, 216.                       |
| 37. BELLATRIX, 131.       | 75. CORA, 122.              |   |
| 38. BELLONA, 132, 178.    | 76. CULAMPIS, 42.           |   |

113. EREBENNA, 188.  
 114. EREMITA, 10.  
 115. ERIOCNEMIS, 188.  
 116. ERIONA, 188.  
 117. ERIOPUS, 188.  
 118. ERYTHRONOTA, 216.  
 119. EUCEPHALA, 227, 238.  
 120. EUCLOSIA, 43.  
 121. EUDOSIA, 74, 126.  
 122. EUGENES, 60.  
 123. EUGENIA, 62.  
 124. EULAMPIS, 42.  
 125. EULIDIA, 126.  
 126. EUPETOMENA, 21.  
 127. EUPOGONUS, 158.  
 128. EUPHERUSA, 209, 212.  
 129. EUSTEPHANUS, 92.  
 130. EUTOXERES, 2.  
  
 131. FLORESIA, 37.  
 132. FLORICOLA, 82.  
 133. FLORISUGA, 38, 47, 50.  
  
 134. GALENIA, 53.  
 135. GLAUCIS, 5.  
 136. GLAUCOPIS, 98.  
 137. GOULDIA, 132, 137.  
 138. GOULDOMYIA, 137.  
 139. GRYPUS, 4.  
 140. GUIMETIA, 184.  
 141. GUYORNIS, 10.  
  
 142. HALIA, 228.  
 143. HELIACTIN, 116.  
 144. HELIACTINIA, 116.  
 145. HELIACTINUS, 116.  
 146. HELIANGELUS, 89.  
 147. HELIANTHEA, 70.  
 148. HELIOMASTER, 85, 86.  
 149. HELIODOXA, 56, 63.  
 150. HELIOMASTES, 82, 85.  
 151. HELIOPÆDICA, 226.  
 152. HELIOTHRIX, 174.  
 153. HELIOTHIRYS, 174.  
 154. HELIOTRYPHA, 86.  
 155. HELIOTRYPHON, 86.  
 156. HELYMUS, 86.  
 157. HEMISTILBON, 216.  
 158. HEMISTEPHANIA, 80.  
 159. HEMITHYLACA, 216.  
 160. HIMELIA, 29.  
 161. HOMOPHANIA, 74.  
 162. HYLOCHARIS, 67, 236, 237,  
     238.  
 163. HYLONYMPHA, 97.  
  
 164. HYPERMETRA, 67.  
 165. HYPOCHRYSLA, 70.  
 166. HYPOLIA, 63.  
 167. HYPUROPTILA, 45.  
 168. HYPOPHANIA, 37.  
  
 169. IACHE, 234.  
 170. IDAS, 131.  
 171. IOLÆMA, 57.  
 172. IONOLÆMA, 57.  
 173. IONOLAIMA, 57.  
  
 174. JULIAMYIA, 232.  
  
 175. KLAIS, 184.  
  
 176. LAFRESNAYA, 43.  
 177. LAMPORNIS, 37, 47, 94.  
 178. LAMPRASTER, 63.  
 179. LAMPROLÆMA, 32.  
 180. LAMPROPOGON, 158.  
 181. LAMPROPYDIA, 74.  
 182. LAMPURUS, 170.  
 183. LAVANIA, 163.  
 184. LAVINIA, 163.  
 185. LEADBEATERA, 63.  
 186. LEOBIA, 153.  
 187. LEPIDOLARYNX, 84.  
 188. LEPIDORIA, 66.  
 189. LEPIDOPYGA, 237.  
 190. LEUCARIA, 106.  
 191. LEUCIPPUS, 198.  
 192. LEUCOCHLORIS, 200.  
 193. LEUCODORA, 201.  
 194. LEUCOLIA, 195.  
 195. LESBIA, 145, 150, 153.  
 196. LISORIA, 216.  
 197. LODDIGESIA, 132, 144.  
 198. LODDIGIORNIS, 144.  
 199. LOPHORINUS, 131.  
 200. LOPHORNIS, 49, 131.  
 201. LOXOPTERUS, 23.  
 202. LUCIANI, 188.  
 203. LUCIFER, 117.  
  
 204. MANILIA, 117.  
 205. MARGAROCHRYSIS, 37.  
 206. MARSYAS, 240.  
 207. MELLISUGA, 68, 98, 103.  
 208. MERION, 242  
 209. MESOPHILA, 10.  
 210. METALLURA, 163.  
 211. METHON, 45.  
 212. MICROCHERA, 104.  
 213. MILORNIS, 10.  
  
 214. MOMUS, 10.  
 215. MOSQUERIA, 188.  
 216. MULSANTIA, 144.  
 217. MYIABEILLIA, 183.  
 218. MYLETINA, 2.  
 219. MYLETES, 216.  
 220. MYRMIA, 119.  
 221. MYRTIS, 123, 126.  
 222. MYTHINIA, 136.  
 223. MYTINIA, 136.  
  
 224. NANIA, 188.  
 225. NICHE, 188.  
 226. NODALIA, 86.  
  
 227. OCREATUS, 140, 141.  
 228. OREONYMPHA, 157.  
 229. OREOPYRA, 33.  
 230. OREOTROCHILUS, 34.  
 231. ORNITHOMYIA, 84.  
 232. ORNISMYIA, 105.  
 233. OPISTHOPRORA, 161.  
 234. OROTRIOCHILUS, 34.  
 235. ORTHORHYNCHUS, 47, 179.  
 236. ORTHORNIS, 10.  
 237. OSALIA, 120.  
 238. OXYPOGON, 155.  
  
 239. PAMPA, 22.  
 240. PANOPLITES, 53.  
 241. PANTERPE, 195.  
 242. PANYCHLORA, 247.  
 243. PAPHOSIA, 131.  
 244. PARZUDAKIA, 86.  
 245. PATAGONA, 67.  
 246. PERATUS, 89.  
 247. PETASOPHORA, 49.  
 248. PHAIOLAIMA, 53.  
 249. PHÆOCHROA, 23.  
 250. PHÆOLÆMA, 55.  
 251. PHÆOPTILA, 9.  
 252. PHÆTHORNIS, 10, 96.  
 253. PHÆTORNIS, 10, 122.  
 254. PHEMONE, 70.  
 255. PHEMONOE, 188.  
 256. PHILODICE, 130.  
 257. PHLOGOPHILUS, 171.  
 258. PHOLOE, 188.  
 259. PHRETHORNIS, 10.  
 260. PILONIA, 74.  
 261. PLACOPHORUS, 28.  
 262. PLATURUS, 140.  
 263. PLATYSTYLOPTERUS, 23.  
 264. POLEMISTRIA, 131.

265. POLYÆNA, 74.  
 266. POLYERATA, 233.  
 267. POLYMNIA, 119.  
 268. POLYONYMUS, 153.  
 269. POLYPLANCTA, 56.  
 270. POLYTHMUS, 96.  
 271. POLYTMUS, 23, 94, 96, 213.  
 272. POLYXEMUS, 120.  
 273. POPELAIRIA, 137.  
 274. PRASITIS, 242.  
 275. PRAXILLA, 49.  
 276. PROGORNIS, 21.  
 277. PYRRHOPHÆNA, 216.  
 278. PRYMNACANTHA, 137.  
 279. PSALIDOPRYMNA, 145.  
 280. PTEROPHANES, 66.  
 281. PTOCHOPTERA, 129.  
 282. PTYONORNIS, 10.  
 283. PYGMORNIS, 10.  
 284. PYGORNIS, 10.  
  
 285. RICCORDIA, 240.  
 286. RHAMPHODON, 4.  
 287. RHAMPHOMICRON, 158.  
 288. RODOPIS, 115.  
  
 289. SÆPIOPTERUS, 23.
290. SAPPHIRONIA, 236, 238.  
 291. SAPPHO, 153.  
 292. SATURIA, 70.  
 293. SAUCEROTIA, 216.  
 294. SCHISTES, 172.  
 295. SELASOPHERUS, 82.  
 296. SELASPHORUS, 108.  
 297. SEPHANOIDES, 92.  
 298. SERICOTES, 42.  
 299. SMARAGDITES, 37, 38, 179.  
 300. SMARAGDOCHRYSIS, 129.  
 301. SPARGANURA, 153.  
 302. SPATHURA, 141.  
 303. SPHENOPROCTUS, 22.  
 304. SPORADINUS, 240.  
 305. SPORADICUS, 240.  
 306. STEGANURA, 132, 141.  
 307. STEGANURUS, 141.  
 308. STELLULA, 114.  
 309. STELLURA, 114.  
 310. STERNOCLYTA, 59.  
 311. STOKOSIELLA, 92.  
 312. STREBLORHAMPHUS, 162.  
  
 313. TALASPHORUS, 198.  
 314. TELAMON, 131.  
 315. TELESIELLA, 49.
316. TELESILLA, 49.  
 317. THALURANIA, 98.  
 318. THAUMANTIAS, 201.  
 319. THAUMASTE, 92.  
 320. THAUMASTURA, 122.  
 321. THAUMATIAS, 200, 201,  
     209, 213.  
 322. THAUMATOESSA, 144.  
 323. THRENETES, 5.  
 324. THREPTRIA, 188.  
 325. TILMATURA, 128.  
 326. TIMOLIA, 231.  
 327. TOPAZA, 38, 94.  
 328. TOXATEUCHES, 10.  
 329. TRICOLOPHA, 136.  
 330. TROCHILUS, 82, 96, 105.  
 331. TRYPHGENA, 128.  
  
 332. URALIA, 141.  
 333. URANOMITRA, 195.  
 334. UROCHROA, 61.  
 335. UROLAMPRA, 163.  
 336. UROSTICTE, 91.  
 337. ULYSSES, 228.  
  
 338. ZEPHYRETES, 125.  
 339. ZODALIA, 149.



## INDEX TO SPECIFIC NAMES ADOPTED IN THIS WORK.

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- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. addæ (Steganura), 143.</li> <li>2. adelæ (Oreotrochilus), 35, <b>37</b>.</li> <li>3. adolphi (Phæthornis), 11, <b>18</b>.</li> <li>4. adorabilis (Lophornis), 132, <b>135</b>.</li> <li>5. æneicauda (Metallura), 163, <b>165</b>.</li> <li>6. ænone (Chrysuronia), 168.</li> <li>7. æquatorialis (Androdon), 5.</li> <li>8. æquatorialis (Phæolaima), 55.</li> <li>9. albicollis (Leucochloris), 200.</li> <li>10. albicrissa (Floricola), 83.</li> <li>11. albocoronata (Microchera), 104.</li> <li>12. alexandri (Trochilus), 105, <b>106</b>.</li> <li>13. aliciae (Panychlora), 247, <b>248</b>.</li> <li>14. alinæ (Eriocnemis), 189, <b>191</b>.</li> <li>15. alticola (Amazilia), 217, <b>218</b>.</li> <li>16. amabilis (Damophila), 232, <b>234</b>.</li> <li>17. amaryllis (Lesbia), 146, <b>148</b>.</li> <li>18. amethysticollis (Heliangelus), 89, <b>90</b>.</li> <li>19. amethystina (Calliphlox), 130.</li> <li>20. anais (Petasophora), 50.</li> <li>21. annæ (Calypte), 107.</li> <li>22. angustipennis (Chlorostilbon), 243, <b>245</b>.</li> <li>23. anthophilus (Phæthornis), 11, <b>16</b>.</li> <li>24. antoniæ (Glaucis), 6, <b>7</b>.</li> <li>25. apicalis (Agyrtria), 202, <b>207</b>.</li> <li>26. aquila (Eutoxeres), 2, <b>3</b>.</li> <li>27. ardens (Selasphorus), 108, <b>110</b>.</li> <li>28. assimilis (Bourcieria), 75, <b>78</b>.</li> <li>29. assimilis (Eriocnemis), 189.</li> <li>30. atacemensis (Rhodopis), 115, <b>116</b>.</li> <li>31. atala (Chlorostilbon), 243, <b>246</b>.</li> <li>32. augusti (Phæthornis), 11, <b>14</b>.</li> <li>33. aureliæ (Eriocnemis), 188, 189, <b>190</b>.</li> <li>34. aurescens (Clytolæma), 56, <b>57</b>.</li> <li>35. auriceps (Chlorostilbon), 243.</li> <li>36. auriculatus (Heliotrix), 174, <b>175</b>.</li> <li>37. auritus (Heliotrix), 174.</li> </ol> | <ol style="list-style-type: none"> <li>41. benjamini (Urosticte), 91, <b>92</b>.</li> <li>42. beryllina (Amazilia), 217, <b>221</b>.</li> <li>43. bicolor (Thalurania), 98, <b>102</b>.</li> <li>44. boliviana (Bourcieria), 75, <b>79</b>.</li> <li>45. bombus (Chætocercus), 120, <b>122</b>.</li> <li>46. bonaparti (Helianthea), 71, <b>72</b>.</li> <li>47. boucardi (Arinia), 209.</li> <li>48. bongueri (Urochroa), 61, <b>62</b>.</li> <li>49. bourcieri (Phæthornis), 11, <b>12</b>.</li> <li>50. bracei (Sporadinus), 240.</li> <li>51. branicki (Lampraster), 63.</li> <li>52. brevirostris (Agyrtria), 201, <b>204</b>.</li> <li>53. bryantæ (Doricha), 124, <b>125</b>.</li> <li>54. buffoni (Chalybura), 45.</li> </ol><br><ol style="list-style-type: none"> <li>55. cæligena (Bourcieria), 75, <b>79</b>.</li> <li>56. cærulea (Eucephala), 228, <b>230</b>.</li> <li>57. cæruleiceps (Agyrtria), 201, <b>206</b>.</li> <li>58. cæruleigularis (Cyanopbaia), 238.</li> <li>59. cæruleiventris (Chalybura), 45, <b>47</b>.</li> <li>60. cæruleo-lavata (Eucephala), 228, <b>229</b>.</li> <li>61. calliope (Stellula), 114, <b>115</b>.</li> <li>62. calolæma (Oreopyra), 33.</li> <li>63. calosoma (Lampornis), 38, <b>41</b>.</li> <li>64. candida (Agyrtria), 201, <b>203</b>.</li> <li>65. caniveti (Chlorostilbon), 243.</li> <li>66. castelnandi (Aglæactis), 186, <b>187</b>.</li> <li>67. caroli (Sappho), 153, <b>155</b>.</li> <li>68. caumatonota (Aglæactis), 186.</li> <li>69. cervina (Adelomyia), 181.</li> <li>70. cervinicauda (Glaucis), 6, <b>8</b>.</li> <li>71. chalybea (Lophornis), 133, <b>136</b>.</li> <li>72. chimborazo (Oreotrochilus), 35.</li> <li>73. chionogaster (Leucippus), 199.</li> <li>74. chionura (Elvira), 210.</li> <li>75. chlorocephala (Eucephala), 228, <b>231</b>.</li> <li>76. chlorocercus (Leucippus), 199.</li> <li>77. chloropogon (Metallura), 163, <b>164</b>.</li> <li>78. chlorospila (Adelomyia), 181, <b>182</b>.</li> <li>79. chysorama (Eriocnemis), 189, <b>193</b>.</li> <li>80. chysura (Chrysuronia), 168, <b>169</b>.</li> </ol> |
|--|---|

81. cinereicauda (*Oreopyra*), 33, **34**.  
 82. cinnamomea (*Amazilia*), 217, **219**.  
 83. cirrochloris (*Aphantochroa*), 28, **29**.  
 84. cissura (*Steganura*), 141, **144**.  
 85. clarissæ (*Heliangelus*), 89.  
 86. clemenciæ (*Cæligena*), 30.  
 87. colubris (*Trochilus*), 105.  
 88. columbiana (*Bourcieria*), 75, **79**.  
 89. columbica (*Thalurania*), 98, **99**.  
 90. compsa (*Agyrtria*), 201, **204**.  
 91. condamini (*Eutoxeres*), 2, **3**.  
 92. conradi (*Bourcieria*), 75, **76**.  
 93. constanti (*Floricola*), 83, **84**.  
 94. conversi (*Gouldia*), 138, **139**.  
 95. cora (*Thaumastura*), 122.  
 96. cornuta (*Heliactin*), 116.  
 97. cornescans (*Petasophora*), 50, **51**.  
 98. costæ (*Calypte*), 106, **107**.  
 99. cristata (*Bellona*), 178.  
 100. cupreiceps (*Elvira*), 210.  
 101. cupreiventris (*Eriocnemis*), 189, **192**.  
 102. cupripennis (*Aglæactis*), 186.  
 103. curvipennis (*Sphenoproctus*), 23.  
 104. envieri (*Campylopterus*), 24, **27**.  
 105. cyanea (*Hylocharis*), 236, **237**.  
 106. cyanepectus (*Sternoclyta*), 59, **60**.  
 107. cyanicollis (*Uranomitra*), 196, **198**.  
 108. cyanifrons (*Amazilia*), 217, **225**.  
 109. cyanocephala (*Uranomitra*), 196, **197**.  
 110. cyanogenys (*Eucephala*), 228, **231**.  
 111. cyanotis (*Petasophora*), 50, **51**.  
 112. cyanura (*Amazilia*), 217, **223**.
113. decorata (*Acestrura*), 119.  
 114. delalandi (*Cephalolepis*), 132, **180**.  
 115. delatirii (*Lophornis*), 132, **133**.  
 116. delphinæ (*Petasophora*), 50, **52**.  
 117. derbiana (*Eriocnemis*), 189.  
 118. dichroura (*Helianthea*), 71, **74**.  
 119. dominicus (*Lampornis*), 38, **41**.  
 120. dorhnii (*Glaucis*), 6, **7**.  
 121. doubledayi (*Iache*), 234, **235**.  
 122. dumerili (*Amazilia*), 217, **218**.  
 123. duponti (*Tilmatura*), 128.  
 124. dyselius (*Eriocnemis*), 189, **194**.
125. edwardi (*Amazilia*), 217, **221**.  
 126. egregia (*Eupherusa*), 212, **213**.  
 127. elegans (*Amazilia*), 217, **226**.  
 128. elegans (*Sporadinus*), 241.  
 129. eliciæ (*Chrysuronia*), 168, **169**.  
 130. elizæ (*Doricha*), 124, **125**.  
 131. ellioti (*Atthis*), 113, **114**.  
 132. emiliæ (*Phæthornis*), 11, **13**.
133. enicura (*Doricha*), 124.  
 134. ensiferus (*Docimastes*), 68.  
 135. ensipennis (*Campylopterus*), 24, **26**.  
 136. eos (*Helianthea*), 71, **72**.  
 137. episcopus (*Phæthornis*), 12, **20**.  
 138. eriphile (*Thalurania*), 98, **101**.  
 139. erythronota (*Amazilia*), 217, **224**.  
 140. estellæ (*Oreotrochilus*), 35, **36**.  
 141. eucharis (*Lesbia*), 146, **147**.  
 142. euphrosinæ (*Hemistephania*), 80, **81**.  
 143. enpogon (*Metallura*), 163, **164**.  
 144. eurynome (*Phæthornis*), 11, **17**.  
 145. eurypterus (*A vocettinus*), 161.  
 146. evelynæ (*Doricha*), 124, **125**.  
 147. exilis (*Bellona*), 178, **179**.  
 148. eximia (*Eupherusa*), 212.  
 149. exortis (*Heliotrypha*), 87.
150. fallax (*Doleromyia*), 9.  
 151. fanny (*Myrtis*), 126, **127**.  
 152. feliciæ (*Amazilia*), 217, **224**.  
 153. felicianana (*Juliamyia*), 232, **233**.  
 154. fernandensis (*Eustephanus*), 93.  
 155. flammula (*Selasphorus*), 108, **110**.  
 156. flavescens (*Panoplites*), 53, **54**.  
 157. flavicaudata (*Lafresnaya*), 43, **44**.  
 158. floresi (*Selasphorus*), 108, **109**.  
 159. floriceps (*Anthocephala*), 183.  
 160. fluviatilis (*Agyrtria*), 202, **207**.  
 161. forficatus (*Cynanthus*), 151.  
 162. franciæ (*Uranomitra*), 196, **197**.  
 163. frontalis (*Iolæma*), 58, **59**.  
 164. fulgens (*Eugenes*), 60.  
 165. fulgidigula (*Bourcieria*), 75, **76**.  
 166. furcata (*Thalurania*), 98, **99**.  
 167. furcatoides (*Thalurania*), 98, **100**.  
 168. fureifer (*Heliomaster*), 86.  
 169. fusca (*Florisuga*), 48.  
 170. fuscicaudata (*Amazilia*), 217, **220**.
171. galeritus (*Eustephanus*), 93.  
 172. gayi (*Lafresnaya*), 43, **44**.  
 173. geoffroyi (*Schistes*), 172, **173**.  
 174. gigas (*Patagona*), 67.  
 175. glaucopis (*Thalurania*), 98, **99**.  
 176. glaucopoides (*Eriocnemis*), 189, **191**.  
 177. glyceria (*Zodalia*), 149, **150**.  
 178. godini (*Eriocnemis*), 189, **193**.  
 179. goudoti (*Cyanophaia*), 238, **239**.  
 180. gouldi (*Lesbia*), 146.  
 181. gouldi (*Lophornis*), 132, **134**.  
 182. gramineus (*Lampornis*), 38, **40**.  
 183. grayi (*Eucephala*), 228.  
 184. graysoni (*Amazilia*), 217, **219**.



185. *griseignularis* (Phæthornis), 12, **18**.  
 186. *guerini* (Oxypogon), 156.  
 187. *guimeti* (Klais), 184.  
 188. *gularis* (Aphantochroa), 28.  
 189. *guyi* (Phæthornis), 11, **13**.  
  
 190. *haberlini* (Chlorostilbon), 243, **245**.  
 191. *helenæ* (Calypse), 107, **108**.  
 192. *helenæ* (Lophornis), 132, **135**.  
 193. *heliodori* (Acestrura), 119, **120**.  
 194. *heloisæ* (Atthis), 113.  
 195. *hemileuca* (Cæligena), 30, **31**.  
 196. *hemileucurus* (Campylopterus), 24, **26**.  
 197. *hemileucurus* (Phlogophilus), 172.  
 198. *henrici* (Cæligena), 30.  
 199. *henshawi* (Selasphorus), 108, **111**.  
 200. *herrani* (Rhamphomicron), 158, **159**.  
 201. *hesperus* (Diphlogæna), 69, **70**.  
 202. *heteropogon* (Rhamphomicron), 158.  
 203. *heterura* (Eutoxeres), 2, **3**.  
 204. *hirsuta* (Glaucis), 6.  
 205. *hirundo* (Eupetomena), 21, **22**.  
 206. *hispidus* (Phæthornis), 11, **16**.  
 207. *holosericeus* (Eulampis), 42.  
 208. *humboldti* (Chrysuronia), 168.  
 209. *hyperythrus* (Campylopterus), 24, **25**.  
 210. *hypochlora* (Thalurania), 98, **102**.  
 211. *hypocyanea* (Eucephala), 228, **230**.  
 212. *hyposticte* (Aphantochroa), 28, **29**.  
  
 213. *idalisæ* (Phæthornis), 12, **19**.  
 214. *imperatrix* (Eugenia), 62.  
 215. *inca* (Bourcieria), 75.  
 216. *inornata* (Adelomyia), 181.  
 217. *insectivora* (Bourcieria), 75, **76**.  
 218. *insignis* (Panterpe), 195.  
 219. *iodura* (Amazilia), 217, **223**.  
 220. *iolæma* (Ptochoptera), 129, **130**.  
 221. *iridescens* (Smaragdochrysis), 129.  
 222. *iris* (Diphlogæna), 69.  
 223. *isaacsoni* (Helianthea), 71.  
 224. *isauræ* (Chalybura), 45, **46**.  
  
 225. *jacula* (Heliodoxa), 64.  
 226. *jamesoni* (Heliodoxa), 64, **65**.  
 227. *jardini* (Panoplites), 53.  
 228. *jelski* (Metallura), 163, **164**.  
 229. *jelski* (Thalurania), 98, **101**.  
 230. *johanuæ* (Hemistephania), 80.  
 231. *josephinæ* (Chrysuronia), 168, **169**.  
 232. *jourdani* (Chætocercus), 121.  
 233. *jugularis* (Eulampis), 42, **43**.  
  
 234. *lactea* (Hylocharis), 236.  
 235. *lætitiæ* (Gouldia), 136, **139**.  
  
 236. *langsdorffi* (Gouldia), 138.  
 237. *largipennis* (Campylopterus), 24.  
 238. *latirostris* (Iache), 234, **235**.  
 239. *lazulus* (Campylopterus), 24, **26**.  
 240. *leadbeateri* (Heliodoxa), 64, **65**.  
 241. *leocadiæ* (Floricola), 83, **84**.  
 242. *lerchi* (Timolia), 231, **232**.  
 243. *leucaspis* (Oreopyra), 33.  
 244. *leucogaster* (Agyrtia), 201, **202**.  
 245. *leucophæa* (Amazilia), 217, **218**.  
 246. *leucopleurus* (Oreotrochilus), 35, **36**.  
 247. *leucorrhous* (Polytmus), 214, **215**.  
 248. *leucotis* (Basilinna), 226, **227**.  
 249. *leucurus* (Glaucis), 6, **7**.  
 250. *leyholdi* (Eustephanus), 93, **94**.  
 251. *lindeni* (Oxypogon), 156.  
 252. *loddigesi* (Cephalolepis), 180.  
 253. *longicauda* (Discura), 140.  
 254. *longirostris* (Floricola), 83.  
 255. *longirostris* (Phæthornis), 11, **15**.  
 256. *longuemareus* (Phæthornis), 11, **18**.  
 257. *luciæ* (Agyrtia), 202, **208**.  
 258. *luciani* (Eriocnemis), 189, **192**.  
 259. *lucida* (Amazilia), 217, **223**.  
 260. *lucifer* (Calothorax), 117, **118**.  
 261. *ludovicisæ* (Hemistephania), 80, **81**.  
 262. *lugens* (Eriocnemis), 189, **191**.  
 263. *lumachellus* (Augastes), 170.  
 264. *luminosa* (Cyanophaia), 238, **239**.  
 265. *luminosa* (Iolæma), 58.  
 266. *lutitiæ* (Helianthea), 71, **73**.  
 267. *lyrura* (Doricha), 124, **125**.  
  
 268. *macrocerca* (Hylonympha), 97.  
 269. *macroura* (Eupetomena), 21.  
 270. *maculicauda* (Agyrtia), 202, **207**.  
 271. *magica* (Iache), 234, **235**.  
 272. *magnificus* (Lophornis), 132, **135**.  
 273. *mango* (Lampornis), 38, **39**.  
 274. *marisæ* (Amazilia), 217, **222**.  
 275. *matthewsi* (Panoplites), 53, **54**.  
 276. *maugæi* (Sporadinus), 241, **242**.  
 277. *mavors* (Heliangelus), 89, **91**.  
 278. *melanathera* (Steganura), 141, **142**.  
 279. *melanogaster* (Oreotrochilus), 35, **36**.  
 280. *melanogenys* (Adelomyia), 181, **182**.  
 281. *melanorrhœa* (Chalybura), 45, **47**.  
 282. *mellivora* (Florisuga), 48.  
 283. *mesoleucus* (Lepidolarynx), 85.  
 284. *micrastur* (Heliotrypha), 87, **88**.  
 285. *microrhyncha* (Uranomitra), 196, **197**.  
 286. *microrhynchum* (Rhamphomicron), 158, **160**.  
 287. *micrura* (Acestrura), 119, **120**.

288. *milleri* (*Agyrtia*), 201, **203**.  
 289. *minima* (*Mellisuga*), 103.  
 290. *mirabilis* (*Loddigesia*), 144, **145**.  
 291. *mitchelli* (*Calliphlox*), 129, **131**.  
 292. *mocoa* (*Cynanthus*), 151, **152**.  
 293. *moschitus* (*Chrysolampis*), 176.  
 294. *mosquera* (*Eriocnemis*), 189, **191**.  
 295. *mulsanti* (*Acestrura*), 119.
296. *nævius* (*Rhamphodon*), 4.  
 297. *neglecta* (*Agyrtia*), 201, **205**.  
 298. *nigricauda* (*Agyrtia*), 202, **208**.  
 299. *nigricinctus* (*Phæthornis*), 12, **20**.  
 300. *nigriventris* (*Callipharus*), 211.  
 301. *nigrivestis* (*Eriocnemis*), 189, **194**.  
 302. *nigrofasciata* (*Thalurania*), 98, **100**.  
 303. *nitidicanda* (*Agyrtia*), 202, **208**.  
 304. *nitidifrons* (*Agyrtia*), 201, **205**.  
 305. *niveipectus* (*Agyrtia*), 201, **202**.  
 306. *niveiventris* (*Amazilia*), 217, **222**.  
 307. *nobilis* (*Oreonympha*), 157.  
 308. *norrisii* (*Agyrtia*), 201, **204**, 216.  
 309. *nuna* (*Lesbia*), 146, **147**.
310. *obscurus* (*Campylopterus*), 24, **25**.  
 311. *ocai* (*Amazilia*), 217, **221**.  
 312. *olivaceus* (*Rhamphomicron*), 158.  
 313. *opaca* (*Metallura*), 163.  
 314. *ornatus* (*Lophornis*), 132, **134**.  
 315. *orthura* (*Catharma*), 112.  
 316. *ortoni* (*Zodalia*), 149.  
 317. *osculans* (*Helianthea*), 71, **73**.
318. *pamela* (*Aglæactis*), 186, **187**.  
 319. *pampa* (*Sphenoproctus*), 23.  
 320. *parvirostris* (*Microchera*), 104.  
 321. *pella* (*Topaza*), 95.  
 322. *personatus* (*Schistes*), 172, **173**.  
 323. *peruana* (*Steganura*), 141, **143**.  
 324. *phaon* (*Sappho*), 153, **154**.  
 325. *philippi* (*Phæthornis*), 11, **12**.  
 326. *pichincha* (*Oreotrochilus*), 35.  
 327. *platycercus* (*Selasphorus*), 108, **109**.  
 328. *poliocerca* (*Eupherusa*), 212.  
 329. *polytmus* (*Aithurus*), 96.  
 330. *poortmani* (*Panychlora*), 247.  
 331. *popelairii* (*Gouldia*), 138.  
 332. *prasinus* (*Chlorostilbon*), 243, **246**.  
 333. *pretrei* (*Phæthornis*), 11, **14**.  
 334. *prevosti* (*Lampornis*), 38, **39**.  
 335. *primolina* (*Metallura*), 163, **165**.  
 336. *pristina* (*Amazilia*), 217.  
 337. *prunelli* (*Bourcieria*), 75, **78**.  
 338. *pucherani* (*Chlorostilbon*), 243, **244**.
339. *pulchra* (*Calothorax*), 117, **118**.  
 340. *purpurea* (*Bourcieria*), 75, **78**.  
 341. *pygmæus* (*Phæthornis*), 12, **20**.  
 342. *pyra* (*Topaza*), 95.
343. *quadricolor* (*Uranomitra*), 196.
344. *rectirostris* (*Hemistephania*), 81.  
 345. *recurvirostris* (*Avocettula*), 162.  
 346. *refulgens* (*Thalurania*), 98, **101**.  
 347. *regulus* (*Lophornis*), 132, **133**.  
 348. *rhami* (*Lamprolæma*), 32.  
 349. *riccordi* (*Sporadinus*), 241.  
 350. *roberti* (*Campylopterus*), 24, **28**.  
 351. *rosæ* (*Chætocercus*), 121.  
 352. *rubinea* (*Clytolæma*), 56.  
 353. *rubinoides* (*Phæolæma*), 55.  
 354. *rubrigularis* (*Pctasophora*), 51.  
 355. *ruckeri* (*Glaucis*), 6, **8**.  
 356. *ruficeps* (*Rhamphomicron*), 158, **160**.  
 357. *ruficrissa* (*Urosticte*), 91.  
 358. *rufus* (*Campylopterus*), 24, **25**.  
 359. *rufus* (*Selasphorus*), 108, **110**.
360. *sapphirina* (*Hylocharis*), 236.  
 361. *sapphiropygia* (*Eriocnemis*), 189, **193**.  
 362. *saucerotti* (*Amazilia*), 217, **225**.  
 363. *scapulata* (*Eucephala*), 228, **229**.  
 364. *schreibersi* (*Iolæma*), 58.  
 365. *scintilla* (*Selasphorus*), 108, **111**.  
 366. *serrirostris* (*Petasophora*), 50, **52**, 132.  
 367. *smaragdiniacollis* (*Metallura*), 163, **166**.  
 368. *smaragdinipectus* (*Eriocnemis*), 189, **194**.  
 369. *smaragdo-cærulea* (*Eucephala*), 228, **229**.  
 370. *solstitialis* (*Steganura*), 141, **142**.  
 371. *sophiæ* (*Amazilia*), 217, **224**.  
 372. *sordida* (*Phæoptila*), 10.  
 373. *sparganura* (*Sappho*), 153, **154**.  
 374. *spectabilis* (*Eugenes*), 60, **61**.  
 375. *spencei* (*Heliangelus*), 89, **90**.  
 376. *splendidus* (*Chlorostilbon*), 242, **244**.  
 377. *squalidus* (*Phæthornis*), 11, **17**.  
 378. *squamata* (*Eriocnemis*), 189, **190**.  
 379. *stanleyi* (*Rhamphomicron*), 158, **159**.  
 380. *stenura* (*Panychlora*), 247, **248**.  
 381. *stictolophus* (*Lophornis*), 132, **133**.  
 382. *striigularis* (*Phæthornis*), 12, **19**.  
 383. *strophianus* (*Heliangelus*), 89, **90**.  
 384. *subcærulea* (*Eucephala*), 228, **230**.  
 385. *superbus* (*Augastes*), 170, **171**.  
 386. *superciliosus* (*Phæthornis*), 11, **14**.  
 387. *syrmatophorus* (*Phæthornis*), 11, **16**.
388. *temminckii* (*Pterophanes*), 66.  
 389. *tephrocephala* (*Agyrtia*), 202, **206**.

399. *thalassina* (*Petasophora*), 50, **51**.  
 391. *thaumantias* (*Polytmus*), 213, **214**.  
 392. *tobaci* (*Agyrtria*), 202, **206**.  
 393. *torquata* (*Bourcieria*), 75, **77**.  
 394. *torridus* (*Selasphorus*), 108, **112**.  
 395. *traviesi* (*Bourcieria*), 75, **77**.  
 396. *typica* (*Abeillia*), 184.  
 397. *typica* (*Helianthea*), 71.  
 398. *typica* (*Juliomyia*), 232, **233**.  
 399. *tyrianthina* (*Metallura*), 163, **166**.  
  
 400. *underwoodi* (*Steganura*) 141, **142**.  
 401. *urochrysea* (*Chalybura*), 45, **46**.  
  
 402. *veraguensis* (*Hemistephania*), 80, **82**.  
 403. *veraguensis* (*Lampornis*), 38, **40**.  
 404. *verreauxi* (*Lophornis*), 133, **136**.  
 405. *vesper* (*Rhodopis*), 115.  
 406. *vestita* (*Eriocnemis*), 189, **193**.  
 407. *villavicencio* (*Campylopterus*), 24, **27**.  
 408. *viola* (*Heliotrypha*), 87.  
  
 409. *violicauda* (*Lampornis*), 38.  
 410. *violiceps* (*Uranomitra*), 196.  
 411. *violifera* (*Helianthea*), 71, **73**.  
 412. *viridiceps* (*Agyrtria*), 201, **203**.  
 413. *viridifrons* (*Uranomitra*), 196, **197**.  
 414. *viridipallens* (*Cæligena*), 30, **31**.  
 415. *viridis* (*Lampornis*), 38, **40**.  
 416. *viridissimus* (*Polytmus*), 214.  
 417. *viridiventris* (*Amazilia*), 217, **220**.  
 418. *warszewiczi* (*Amazilia*), 217, **225**.  
 419. *watertoni* (*Thalurania*), 98, **101**.  
 420. *whitelyana* (*Iolæma*), 58, **59**.  
 421. *williami* (*Metallura*), 163, **165**.  
 422. *wilsoni* (*Bourcieria*), 75, **77**.  
  
 423. *xanthusi* (*Basilinna*), 226, **227**.  
  
 424. *yarrelli* (*Myrtis*), 126, **127**.  
 425. *yaruqui* (*Phæthornis*), 11, **13**.  
 426. *yucatanensis* (*Amazilia*), 217, **219**.



## INDEX OF SPECIFIC NAMES MENTIONED IN THIS WORK.

1. abeillei = *Abeillia typica*, 184.
2. abnormis = *Phæthornis bourcierii*, 12.
3. acuticaudus = *Panychlora stenura*, 248.
4. addæ (STEGANURA), 143.
5. adelæ (ORBOTROCHILUS), 35, 37.
6. adolphi (PHÆTHORNIS), 11, 18.
7. adorabilis (LOPHORNIS), 132, 135.
8. ænea = *Glaucis hirsuta*, 6.
9. æneicauda = *Chalybura buffoni*, 45.
10. æneicauda (METALLURA), 165.
11. ænone (CHRYSURONIA), 168.
12. æquatorialis = *Aglæactis cupripennis*, 186.
13. æquatorialis (ANDRODON), 5.
14. æquatorialis = *Campylopterus obscurus*, 25.
15. æquatorialis (PHÆOLÆMA), 55.
16. affinis = *Agyrtia brevirostris*, 204.
17. aglaiæ = *Amazilia fuscicaudata*, 220.
18. albicollis (LEUCOCHLORIS), 200.
19. albicoronata (MICROCHERA), 104.
20. albicrissa (FLORICOLA), 83.
21. albirostris = *Agyrtia leucogaster*, 202.
22. albiventris = *Agyrtia tephrocephala*, 206.
23. albogularis = *Leucochloris albicollis*, 200.
24. albogularis = *Schistes personatus*, 173.
25. albus = *Lampornis violicauda*, 38.
26. alexandri (TROCHILUS), 105, 106.
27. alicix (PANYCHLORA), 248.
28. alinæ (ERIOCNEMIS), 189, 191.
29. allardi = *Metallura tyrianthina*, 166.
30. alleni = *Selasphorus rufus*, 110.
31. alticola (AMAZILIA), 217, 218.
32. amabilis (DAMOPHILA), 232, 234.
33. amaryllis (LESBIA), 148.
34. amaura = *Phæthornis striigularis*, 19.
35. amazicula = *Amazilia leucophæa*, 218.
36. amazili = *Amazilia pristina*, 217.
37. amethysticollis (HELIANGELUS), 89, 90.
38. amethystina (CALLIPHLOX), 130.
39. amethystoides = *Calliphlox amethystina*, 130.
40. anais (PETASOPHORA), 50.
41. anais = *Petasophora thalassina*, 51.
42. angelæ = *Heliomaster furcifer*, 86.
43. angustipennis (CHLOROSTILBON), 243, 245.
44. annæ (CALYPTE), 107.
45. anthophilus (PHÆTHORNIS), 11, 16.
46. antiqua = *Amazilia erythronota*, 224.
47. antoniæ (GLAUCIS), 6, 7.
48. apicalis (AGYRTIA), 202, 207.
49. apicalis = *Phæthornis emiliæ*, 13.
50. aquila (EUTOXERES), 2, 3.
51. ardens (SELASPHORUS), 108, 109.
52. arsenii = *Basilinna leucotis*, 227.
53. arsinoë = *Amazilia beryllina*, 221.
54. aspasix = *Phæthornis griseigularis*, 18.
55. aspasix = *Phæthornis idaliæ*, 19.
56. assimilis (BOURCIERIA), 75, 78.
57. assimilis = *Chlorostilbon angustipennis*, 245.
58. assimilis (ERIOCNEMIS), 189.
59. atacamensis (RHODOPIS), 115, 116.
60. atala (CHLOROSTILBON), 242, 246.
61. ater = *Florisuga fusca*, 48.
62. atra = *Florisuga fusca*, 48.
63. atratus = *Florisuga fusca*, 48.
64. atricapillus = *Lampornis violicauda*, 38.
65. atrimentalis = *Phæthornis striigularis*, 19.
66. audeberti = *Eucephala cærulea*, 230.
67. audenetii = *Lophornis chalybea*, 136.
68. augusti (PHÆTHORNIS), 11, 14.
69. aurata = *Panychlora alicix*, 248.
70. auratus = *Eulampis jugularis*, 43.
71. auratus = *Lophornis ornatus*, 134.
72. aureiventris = *Chlorostilbon splendidus*, 244.
73. aureliæ (ERIOCNEMIS), 188, 189, 190.
74. aurescens (CLYTOLEMA), 56, 57.
75. auriceps (CHLOROSTILBON), 243.
76. auriculatus (HELIOTHRIX), 175.
77. aurita = *Heliothrix auriculatus*, 175.
78. auritus (HELIOTHRIX), 174.
79. aurogaster = *Helianthea bonapartei*, 72.
80. aurora = *Diphlogæna iris*, 69.
81. aurulentus = *Lampornis dominicus*, 38.

82. avocetta = *Avocettula recurvirostris*, 162.  
 83. bahamensis = *Doricha evelynæ*, 125.  
 84. bancrofti = *Eulampis jugularis*, 43.  
 85. barrali (HELIOTRYPHA), 87, 88.  
 86. barroti (HELIOTHRIX), 175.  
 87. bartletti (AGYRTRIA), 205.  
 88. benjamini (UROSTICTE), 92.  
 89. beryllina (AMAZILIA), 221.  
 90. beskii = *Cephalolepis delalandi*, 180.  
 91. bicolor = *Agyrtia neglecta*, 205.  
 92. bicolor = *Chlorostilbon splendidus*, 244.  
 93. bicolor = *Hylocharis cyanea*, 237.  
 94. bicolor (THALURANIA), 98, 102.  
 95. bifurcatus = *Lesbia nuna*, 147.  
 96. bilophus = *Discura longicauda*, 140.  
 97. bilophus = *Heliactin cornuta*, 116.  
 98. boliviana (BOURCIERIA), 75, 79.  
 99. boliviana = *Phæthornis longirostris*, 15.  
 100. bombus (CILETOCERCUS), 120, 122.  
 101. bonapartii (HELIANTHÆA), 71, 72.  
 102. boothi = *Calypte helenæ*, 108.  
 103. boucardi (ARINIA), 209.  
 104. bougueri (UROCHROA), 61, 62.  
 105. bourcierii (PHÆTHORNIS), 11, 12.  
 106. braceata = *Amazilia sophiæ*, 224.  
 107. brucei (SPORADINUS), 240.  
 108. brachyrhynchus = *Rhamphomicron micro-rhynchum*, 160.  
 109. branicki (LAMPRASTER), 63.  
 110. brasiliensis = *Glaucis hirsuta*, 6.  
 111. brasiliensis = *Phæthornis pygmæus*, 20.  
 112. brasiliensis = *Phæthornis squalidus*, 17.  
 113. brevicauda = *Calliphlox amethystina*, 130.  
 114. brevicaudatus = *Chlorostilbon prasinus*, 246.  
 115. brevirostris (AGYRTRIA), 201, 204.  
 116. bryantæ (DORICHA), 124, 125.  
 117. buffoni (CHALYBURA), 45.  
 118. cabanidis = *Petasophora cyanotis*, 51.  
 119. cælestis = *Tilmatura duponti*, 128.  
 120. cæligena (BOURCIERIA), 75, 79.  
 121. cælina = *Cyanophaia cæruleigularis*, 238.  
 122. cærulca (EUCEPHALA), 228, 230.  
 123. cæruleicapilla = *Chrysuronia josephina*, 169.  
 124. cæruleiceps (AGYRTRIA), 201, 206.  
 125. cæruleigularis (CYANOPHAIA), 238.  
 126. cæruleiventris (CHALYBURA), 45, 47.  
 127. cærucogaster = *Chalybura cæruleiventris*, 47.  
 128. cæruleo-lavata (EUCEPHALA), 228, 229.  
 129. cærulescens = *Cyanophaia cæruleigularis*, 238.  
 130. caligata = *Amazilia sophiæ*, 224.  
 131. caligatus = *Amazilia sophiæ*, 224.  
 132. calliope (STELLULA), 114.  
 133. calolæma (OREOPYRA), 33.  
 134. calosoma (LAMPORNIS), 38, 41.  
 135. campestris = *Calliphlox amethystina*, 130.  
 136. campyloptera = *Sphenoproctus pampa*, 23.  
 137. campylopterus = *Campylopterus largipennis*, 24.  
 138. campylostylus = *Aphantochroa cirrochloris*, 29.  
 139. candida (AGYRTRIA), 201, 203.  
 140. caniveti (CHLOROSTILBON), 243.  
 141. carbunculus = *Chrysolampis moschitus*, 176.  
 142. caribæus = *Chlorostilbon atala*, 246.  
 143. carmioli = *Chalybura melanorrhœa*, 47.  
 144. caroli (SAPPHO), 153, 154.  
 145. cassini = *Phæthornis longirostris*, 15.  
 146. castaneiventris = *Amazilia beryllina*, 221.  
 147. castaneiventris = *Oreopyra leucaspis*, 33.  
 148. castaneo-cauda = *Basilinna xanthusi*, 227.  
 149. castelnaudi (AGLÆACTIS), 186, 187.  
 150. catharinæ = *Mellisuga minima*, 103.  
 151. caudacutus = *Helimaster furcifer*, 86.  
 152. caumatonota (AGLÆACTIS), 186.  
 153. cephalatra = *Aithurus polytmus*, 96.  
 154. cephalus = *Phæthornis longirostris*, 15.  
 155. cervina (ADELOMYIA), 181.  
 156. cervina = *Doleromyia fallax*, 9.  
 157. cervinicauda (GLAUCIS), 6, 8.  
 158. cerviniventris = *Amazilia yucatanensis*, 219.  
 159. chalcotis = *Petasophora serrirostris*, 52.  
 160. chalybea (LOPHORNIS), 133, 136.  
 161. chimborazo (OREOTROCHILLUS), 35.  
 162. chionogaster (LEUCIPPUS), 199.  
 163. chionopectus = *Agyrtia niveipectus*, 202.  
 164. chionura (ELVIRA), 210.  
 165. chlorocephala (EUCEPHALA), 228, 231.  
 166. chlorocercus (LEUCIPPUS), 199.  
 167. chlorolæmus = *Lampornis calosoma*, 41.  
 168. chlorolæmus = *Eulampis holosericeus*, 42.  
 169. chloropogon (METALLURA), 163, 164.  
 170. chlorospila (ADELOMYIA), 182.  
 171. chlorura = *Lesbia gouldi*, 146.  
 172. chrysobronchus = *Polytmus thaumantias*, 214.  
 173. chrysogaster = *Chlorostilbon angustipennis*, 245.  
 174. chrysogastra = *Chlorostilbon angustipennis*, 245.  
 175. chrysolopha = *Heliactin cornuta*, 116.  
 176. chrysorama (ERIOCNEMIS), 189, 193.  
 177. chrysura (CHRYSURONIA), 169.  
 178. chrysurus = *Polytmus viridissimus*, 214.

179. *ciciliæ* = *Oreotrochilus estellæ*, 36.  
 180. *ciureicauda* (OREOPYRA), 33, 34.  
 181. *cinereus* = *Campylopterus largipennis*, 24.  
 182. *cinnamomea* (AMAZILIA), 217, 219.  
 183. *cinnamomea* = *Eustephanus fernandensis*, 93.  
 184. *circe* = *Iache doubledayi*, 235.  
 185. *cirrochloris* (APHANTOCHROA), 28, 29.  
 186. *cissiura* (STEGANURA), 141, 144.  
 187. *clarissæ* (HELIANGELUS), 89.  
 188. *clemenciæ* (CÆLIGENA), 30.  
 189. *cœlestis* = *Cynanthus forficatus*, 151.  
 190. *collaris* = *Selasphorus rufus*, 110.  
 191. *colubris* (TROCHILUS), 105.  
 192. *columbiana* (BOURCIERIA), 75, 79.  
 193. *columbiana* = *Thalurania columbica*, 99.  
 194. *columbica* (THALURANIA), 98, 99.  
 195. *compsa* (AGYRTIA), 201, 204.  
 196. *condamini* (EUTOXERES), 2, 3.  
 197. *conradi* (BOURCIERIA), 75, 76.  
 198. *consobrinus* = *Phæthornis superciliosus*, 15.  
 199. *constanti* (FLORICOLA), 84.  
 200. *conversi* (GOULDIA), 139.  
 201. *cora* (THAUMASTURA), 122.  
 202. *corallirostris* = *Amazilia cinnamomea*, 219.  
 203. *cornuta* (HELIACTIN), 116.  
 204. *coruscans* (PETASOPHORA), 50, 51.  
 205. *coruscus* = *Rhamphomicron heteropogon*, 158.  
 206. *costæ* (CALYPTE), 106, 107.  
 207. *crispa* = *Petasophora serrirostris*, 52.  
 208. *crispus* = *Petasophora serrirostris*, 52.  
 209. *cristatellus* = *Bellona exilis*, 179.  
 210. *cristata* (BELLONA), 178.  
 211. *cupreicauda* = *Metallura opaca*, 163.  
 212. *cupreicauda* = *Metallura jelski*, 164.  
 213. *cupreiceps* (ELVIRA), 210.  
 214. *cupreiventris* (ERIOCNEMIS), 189, 192.  
 215. *cupripennis* (AGLÆACTIS), 186.  
 216. *curvipennis* (SPHENOPROCTUS), 23.  
 217. *cuvieri* (CAMPYLOPTERUS), 24, 27.  
 218. *cyana* = *Hylocharis cyanea*, 237.  
 219. *cyanea* (HYLOCHARIS), 236, 237.  
 220. *cyaneipectus* (STERNOCLYTA), 59, 60.  
 221. *cyaneus* = *Hylocharis cyanea*, 237.  
 222. *cyaneus* = *Eulampis jugularis*, 43.  
 223. *cyanicollis* (URANOMITRA), 196, 198.  
 224. *cyanifrons* (AMAZILIA), 217, 225.  
 225. *cianocephala* (URANOMITRA), 196, 197.  
 226. *cyanogenys* (EUCEPHALA), 228, 230.  
 227. *cyanomelas* = *Eulampis jugularis*, 43.  
 228. *cyanopogon* = *Acestrura mulsanti*, 119.  
 229. *cyanopogon* = *Calothorax lucifer*, 118.  
 230. *cyanopterus* = *Pterophanus temminckii*, 66.  
 231. *cyanotis* (PETASOPHORA), 50, 51.  
 232. *cyanotus* = *Petasophora cyanotis*, 51.  
 233. *cyanura* (AMAZILIA), 217, 223.  
 234. *cyanurus* = *Cynanthus forficatus*, 151.  
 235. *daphne* = *Chlorostilbon prasinus*, 246.  
 236.  *davidianus* = *Phæthornis pygmæus*, 20.  
 237. *decorata* (ACESTRURA), 119.  
 238. *decorus* = *Lophornis magnificus*, 135.  
 239. *defilippi* = *Phæthornis philippi*, 12.  
 240. *delalandi* (CEPHALOLEPTIS), 132, 180.  
 241. *delattrei* = *Campylopterus hemileucurus*, 26.  
 242. *delattrii* (LOPHORNIS), 132, 133.  
 243. *delphinae* (PETASOPHORA), 50, 52.  
 244. *derbiana* (ERIOCNEMIS), 189.  
 245. *derbyanus* = *Docimastes ensiferus*, 68.  
 246. *derbyi* = *Eriocnemis derbianus*, 189.  
 247. *devillii* = *Amazilia marixæ*, 222.  
 248. *dichroura* (HELIANTHEA), 71, 74.  
 249. *dilopus* = *Heliactin cornutus*, 116.  
 250. *dispar* = *Heliotrypha exortis*, 87.  
 251. *dominicus* = *Glaucis hirsuta*, 6.  
 252. *dominicus* (LAMPORNIS), 38, 41.  
 253. *dominicus* = *Lampornis gramineus*, 40.  
 254. *d'orbigny* = *Eriocnemis glaucopoides*, 191.  
 255. *dorhnii* (GLAUCIS), 6, 7.  
 256. *doubledayi* (LACHE), 234, 235.  
 257. *doubledayi* = *Iache latirostris*, 235.  
 258. *dubusi* = *Amazilia fuscicaudata*, 220.  
 259. *duchassingii* = *Cyanophaia cæruleigularis*, 238.  
 260. *dumerili* (AMAZILIA), 217, 218.  
 261. *dumerili* = *Amazilia marixæ*, 222.  
 262. *duponti* (TILMATURA), 128.  
 263. *dyselius* (ERIOCNEMIS), 189, 194.  
 264. *edwardi* (AMAZILIA), 217, 221.  
 265. *egregia* (EUPHERUSA), 212, 213.  
 266. *egregius* = *Chlorostilbon pucherani*, 244.  
 267. *elatus* = *Chrysolampis moschitus*, 176.  
 268. *elegans* (AMAZILIA), 217, 226.  
 269. *elegans* (SPORADINUS), 241.  
 270. *eliciae* (CHRYSURONIA), 168, 169.  
 271. *elizæ* (DORICHA), 124, 125.  
 272. *elliotti* (ATTHIS), 113, 114.  
 273. *emigrans* = *Bellona cristata*, 178.  
 274. *emiliae* (PHÆTHORNIS), 11, 13.  
 275. *enicura* (DORICHA), 123.

<sup>1</sup> *Orthorhynchus emigrans*, Lawr., N. Y. Acad. Sc., vol. i, p. 50.

276. ensiferus (DOCIMASTES), 68.  
 277. ensipennis (CAMPYLOPTERUS), 24, 26.  
 278. eos (HELIANTHEA), 71, 72.  
 279. episcopus (PHÆTHORNIS), 12, 20.  
 280. erimita = *Phæthornis pygmæus*, 20.  
 281. eriphile (THALURANIA), 98, 101.  
 282. erythronota (AMAZILIA), 217, 224.  
 283. erythrorhynchus = *Amazilia cinnamomea*, 219.  
 284. esmeralda = *Panychlora poortmani*, 247.  
 285. estellæ (OREOTROCHILUS), 35, 36.  
 286. eucharis (LESBIA), 146, 147.  
 287. euchloris = *Panychlora alicia*, 248.  
 288. euphrosinæ (HEMISTEPHANIA), 80, 81.  
 289. eupogon (METALLURA), 163, 164.  
 290. eurynome (PHÆTHORNIS), 11, 17.  
 291. eurypterus (AVOCETTINUS), 161.  
 292. evelinæ = *Doricha evelynæ*, 124.  
 293. evelynæ (DORICHA), 124, 125.  
 294. evillinæ = *Doricha evelynæ*, 124.  
 295. exilis (BELLONA), 178, 179.  
 296. eximia (EUPHERUSA), 212.  
 297. exortis (HELIOTRYPHA), 87.  
 298. falcatus = *Campylopterus lazulus*, 26.  
 299. fallax (DOLEROMYA), 9.  
 300. fanniæ = *Thalurania eriphile*, 102.  
 301. fanny (MYRTIS), 126, 127.  
 302. fannyi = *Thalurania eriphile*, 101.  
 303. fasciatus = *Lampornis violicauda*, 38.  
 304. faustina = *Uranomitra cyanocephala*, 197.  
 305. felicix (AMAZILIA), 217, 224.  
 306. feliciana = *Amazilia felicix*, 224.  
 307. feliciana (JULIAMYIA), 232, 233.  
 308. fernandensis (EUSTEPHANUS), 93.  
 309. ferrugineus = *Glaucis hirsuta*, 6.  
 310. festivus = *Lophornis chalybea*, 136.  
 311. filippi = *Phæthornis philippi*, 12.  
 312. fimbriatus = *Florisuga mellivora*, 48.  
 313. flabellifera = *Florisuga mellivora*, 48.  
 314. flammula (SELASPHORUS), 108, 110.  
 315. flavescens (PANOPLITES), 53, 54.  
 316. flavicaudata (LAFRESNAYA), 43, 44.  
 317. flavifrons = *Chlorostilbon pucherani*, 244.  
 318. flavifrons = *Chlorostilbon splendidus*, 244.  
 319. floresi = *Lampornis mango*, 39.  
 320. floresi (SELASPHORUS), 108, 109.  
 321. floriceps (ANTHOCEPHALA), 183.  
 322. fluviatilis (AGYRTRIA), 202, 207.  
 323. forcipatus = *Eupetomena macroura*, 21.  
 324. forficata = *Thalurania furcatoides*, 100.  
 325. forficatus (CYNANTHUS), 151.  
 326. forficatus = *Eustephanus galeritus*, 93.  
 327. francix (URANOMITRA), 196, 197.  
 328. fraseri = *Glaucis ruckeri*, 8.  
 329. fraterculus = *Phæthornis superciliosus*, 15.  
 330. frontalis (IOLÆMA), 58, 59.  
 331. frontalis = *Thalurania glaucopsis*, 99.  
 332. fulgens (EUGENES), 60.  
 333. fulgidigula (BOURCIERIA), 75, 76.  
 334. fulvifrons = *Hylocharis sapphirina*, 236.  
 335. fulviventris = *Doleromyia fallax*, 9.  
 336. furcata (THALURANIA), 98, 99.  
 337. furcata = *Thalurania nigrofasciata*, 100.  
 338. furcatoides (THALURANIA), 98, 100.  
 339. furcifer (HELIOMASTER), 86.  
 340. fusca (FLORISUGA), 48.  
 341. fuscicaudata (AMAZILIA), 217, 220.  
 342. galeritus (EUSTEPHANUS), 93.  
 343. gayi (LAFRESNAYA), 43, 44.  
 344. geoffroyi (SCHISTES), 172, 173.  
 345. geoffroyi = *Schistes personatus*, 173.  
 346. georginæ = *Avocettinus eurypterus*, 161.  
 347. gertrudis = *Sporadinus maugæi*, 242.  
 348. gigantea = *Patagona gigas*, 67.  
 349. gigas (PATAGONA), 67.  
 350. glaucopsis (THALURANIA), 98, 99.  
 351. glaucopoides (ERIOCNEMIS), 189, 191.  
 352. glomata = *Eriocnemis vestita*, 193.  
 353. glyceria (ZODALIA), 149, 150.  
 354. godini (ERIOCNEMIS), 189, 193.  
 355. gorgo = *Cynanthus forficatus*, 151.  
 356. goudoti (CYANOPHALA), 238, 239.  
 357. gouldi (LESBIA), 146.  
 358. gouldi = *Lesbia nuna*, 147.  
 359. gouldi (LOPHORNIS), 132, 134.  
 360. gouldi = *Petasophora serrirostris*, 52.  
 361. gracilis = *Lesbia gouldi*, 146.  
 362. gramineus (LAMPORNIS), 38, 40.  
 363. granadensis = *Phæolæma rubinoides*, 55.  
 364. granatinus = *Eulampis jugularis*, 43.  
 365. grata = *Heliodoxa leadbeateri*, 65.  
 366. grayi (EUCEPHALA), 228.  
 367. graysoni (AMAZILIA), 217, 219.  
 368. griseigularis (PHÆTHORNIS), 12, 18.  
 369. guatemalensis = *Uranomitra cyanocephala*, 197.  
 370. guerini (OXYPOGON), 156.  
 371. guianensis = *Chrysolampis moschitus*, 176.  
 372. guimeti (KLAIS), 184.  
 373. gularis (APHANTOCHROA), 28.  
 374. gularis = *Lampornis gramineus*, 40.  
 375. guyi (PHÆTHORNIS), 11, 13.  
 376. gyrinno = *Thalurania columbica*, 100.  
 377. haberlini (CHLOROSTILBON), 243, 245.  
 378. hæmatorhynchus = *Amazilia cinnamomea*, 219.



379. *hedvigæ* = *Metallura eupogon*, 164.  
 380. *helcnæ* (CALYPTE), 107, 108.  
 381. *helenæ* (LOPHORNIS), 132, 135.  
 382. *helianthea* = *Helianthea typica*, 71.  
 383. *heliodori* (ACESTRURA), 119, 120.  
 384. *helios* = *Lophornis magnificus*, 135.  
 385. *heloisæ* (ATTHIS), 113.  
 386. *hemileuca* (CÆLIGENA), 30, 31.  
 387. *hemileucurus* (CAMPYLOPTERUS), 24, 26.  
 388. *hemilencurus* (PHLOGOPHILUS), 172.  
 389. *henicura* = *Doricha enicura*, 124.  
 390. *henrica* (CÆLIGENA), 30.  
 391. *henshawi* (SELASPHORUS), 108, 111.  
 392. *herrani* (RHAMPHOMICRON), 159.  
 393. *hesperus* (DIPHLOGÆNA), 69, 70.  
 394. *heteropogon* (RHAMPHOMICRON), 158.  
 395. *heteropygia* = *Doricha enicura*, 124.  
 396. *heterura* (EUTOXERES), 2, 3.  
 397. *hirsuta* (GLAUCIS), 6.  
 398. *hirsutus* = *Glaucis hirsuta*, 6.  
 399. *hirundinacea* = *Eupetomena macroura*, 21.  
 400. *hirundinaceus* = *Gouldia langsdorffi*, 139.  
 401. *hirundo* (EUPETOMENA), 21, 22.  
 402. *hispidus* (PHÆTHORNIS), 11, 16.  
 403. *hoffmanni* = *Amazilia sophiæ*, 224.  
 404. *holosericeus* (EULAMPIS), 42.  
 405. *humboldti* (CHRYSURONIA), 168.  
 406. *humilis* = *Mellisuga minima*, 103.  
 407. *hyperythrus* (CAMPYLOPTERUS), 24, 25.  
 408. *hypochlora* (THALURANIA), 98, 102.  
 409. *hypocyanea* (EUCEPHALA), 228, 230.  
 410. *hypoleucus* = *Leucippus chionogaster*, 199.  
 411. *hypolencus* = *Uranomitra franciæ*, 198.  
 412. *hypophæus* = *Chrysolampis moschitus*, 176.  
 413. *hyposticta* (APHANTOCHROA), 29.
414. *icterocephalus* = *Calypte annæ*, 107.  
 415. *idalis* (PHÆTHORNIS), 12, 19.  
 416. *igneus* = *Chlorostilbon pucherani*, 244.  
 417. *imperatrix* (EUGENIA), 62.  
 418. *inca* (BOURCIERIA), 75.  
 419. *incertus* = *Amazilia elegans*, 226.  
 420. *inornata* (ADELOMYIA), 181.  
 421. *inornatus* = *Heliomaster furcifer*, 86.  
 422. *insectivora* (BOURCIERIA); 75, 76.  
 423. *insignis* (PANTERPE), 195.  
 424. *insularis* = *Chlorostilbon pucherani*, 244.  
 425. *intermedius* = *Phæthornis longuemareus*, 18.  
 426. *intermedius* = *Phæthornis squalidus*, 17.  
 427. *iodura* (AMAZILIA), 217, 223.  
 428. *iolæma* (PTOCHOPTERA), 129, 130.  
 429. *iolata* = *Petasophora anais*, 50.  
 430. *iridescens* = *Lampornis violicauda*, 38.  
 431. *iridescens* (SMARAGDOCHRYISIS), 129.
432. *iris* (DIPHLOGÆNA), 69.  
 433. *isaacsoni* (HELIANTHEA), 71.  
 434. *isauræ* (CHALYBURA), 45, 46.
435. *jacula* (HELIODOXA), 64.  
 436. *jacunda* = *Amazilia fuscicaudata*, 220.  
 437. *jamesoni* (HELIODOXA), 64, 65.  
 438. *jamesoni* = *Oreotrochilus pichincha*, 35.  
 439. *jardini* (PANOPLITES), 53.  
 440. *jelski* (THALURANIA), 98, 101.  
 441. *jelski* (METALLURA), 164.  
 442. *johannæ* (HEMISTEPHANIA), 80.  
 443. *josephinæ* (CHRYSURONIA), 169.  
 444. *jourdani* (CHÆTOCERCUS), 121.  
 445. *jugularis* (EULAMPIS), 42, 43.  
 446. *julie* = *Juliamyia typica*, 232, 233.
447. *kieneri* = *Steganura underwoodi*, 142.  
 448. *kingii* = *Cynanthus forficatus*, 151.  
 449. *kingii* = *Eustephanus galeritus*, 93.
450. *labrador* = *Myrtis fanny*, 127.  
 451. *lactea* = *Agrytria tobaci*, 207.  
 452. *lactea* (HYLOCHARIS), 236.  
 453. *lætitiæ* (GOULDIA), 136, 139.  
 454. *lafresnayi* = *Lafresnaya flavicaudata*, 44.  
 455. *lalandi* = *Cephalolepis delalandi*, 180.  
 456. *lanceolata* = *Glaucis hirsuta*, 6.  
 457. *langsdorffi* (GOULDIA), 138.  
 458. *largipennis* (CAMPYLOPTERUS), 24.  
 459. *latipennis* = *Campylopterus largipennis*, 24.  
 460. *latirostris* = *Amazilia pristina*, 217.  
 461. *latirostris* = *Hylocharis sapphirina*, 236.  
 462. *latirostris* (IACHE), 234, 235.  
 463. *lazula* = *Iache latirostris*, 235.  
 464. *lazulus* (CAMPYLOPTERUS), 24, 26.  
 465. *lazulus* = *Lampornis violicauda*, 38.  
 466. *leadbeateri* (HELIODOXA), 64, 65.  
 467. *leocadiæ* (FLORICOLA), 84.  
 468. *lepida* = *Tilmatura duponti*, 128.  
 469. *lerchi* (TIMOLIA), 231, 232.  
 470. *lerdi* = *Agrytria norrisii*, 204.  
 471. *lessoni* = *Amazilia pristina*, 217.  
 472. *lessoni* = *Avocettula recurvirostris*, 162.  
 473. *lessoni* = *Iache latirostris*, 235.  
 474. *lessoni* = *Uranomitra cyanocephala*, 197.  
 475. *leucaspis* (OREOPYRA), 33.  
 476. *leucocrotophus* = *Heliothrix auritus*, 174.  
 477. *leucogaster* (AGRYTRIA), 201, 202.  
 478. *leucogaster* = *Leucippus chionogaster*, 199.  
 479. *leucophæa* (AMAZILIA), 217, 218.  
 480. *leucophrys* = *Phæthornis squalidus*, 17.  
 481. *leucopleurus* (OREOTROCHILUS), 35, 36.  
 482. *leucoproctus* = *Polytmus leucorrhous*, 215.

483. leucopygius = *Florisuga fusca*, 49.  
 484. leucorrhous (POLYTMUS), 215.  
 485. leucotis (BASILINNA), 226, 227.  
 486. leuceura = *Urochroa bougueri*, 62.  
 487. leucurus (GLAUCIS), 6, 7.  
 488. leyboldi (EUSTEPHANUS), 93, 94.  
 489. libussa = *Heliangelus clarisæ*, 89.  
 490. ligonicauda = *Discura longicauda*, 140.  
 491. lindeni (OXYPOGON), 156.  
 492. linnæi = *Agyrtria tobaci*, 206.  
 493. linnæi = *Polytmus thaumantias*, 214.  
 494. loddigesi (CEPHALOLEPIS), 180.  
 495. longicauda (DISCURA), 136, 140.  
 496. longirostris (FLORICOLA), 83.  
 497. longirostris = *Floricola leocadiæ*, 84.  
 498. longirostris = *Heliothrix auritus*, 175.  
 499. longirostris = *Eulampis holosericeus*, 42.  
 500. longirostris (PHÆTHORNIS), 11, 15.  
 501. longuemareus (PHÆTHORNIS), 11, 18.  
 502. lophotos = *Lophornis regulus*, 132, 133.  
 503. lucia (AGYRTRIA), 202, 208.  
 504. lucia = *Thalurania glaucopis*, 99.  
 505. luciani (ERIOCNEMIS), 186, 192.  
 506. lucida (AMAZILA), 217, 223.  
 507. lucida = *Basilinna leucotis*, 227.  
 508. lucifer (CALOTHORAX), 118.  
 509. ludovicæ (HEMISTEPHANIA), 81.  
 510. lugens (ERIOCNEMIS), 189, 191.  
 511. lugubris = *Florisuga fusca*, 48.  
 512. lumachellus (AUGASTES), 170.  
 513. luminosa (CYANOPHAIJA), 238, 239.  
 514. luminosa (IOLÆMA), 58.  
 515. lutitiæ (HELIANTHEA), 71, 73.  
 516. lydia = *Thalurania eriphile*, 102.  
 517. lyrura (DORICHA), 125.  
 518. macrocerca (HYLONYMPHA), 97.  
 519. macroura (EUPETOMENA), 21.  
 520. maculicauda (AGYRTRIA), 202, 207.  
 521. maculicollis = *Panychlora alicia*, 248.  
 522. maculata = *Adelomyia melanogenys*, 182.  
 523. maculatum = *Rhamphodon nævius*, 4.  
 524. maculatus = *Agyrtria tobaci*, 206.  
 525. maculatus = *Lampornis gramineus*, 40.  
 526. magica (IACHE), 234, 235.  
 527. magnificus (LOPHORNIS), 132, 135.  
 528. malaris = *Phæthornis superciliosus*, 15.  
 529. malvinæ = *Agyrtria tobaci*, 206.  
 530. mango (LAMPORNIS), 38, 39.  
 531. mango = *Lampornis violicauda*, 38.  
 532. margarethæ = *Cynanthus forficatus*, 151.  
 533. margaritaceus = *Agyrtria candida*, 203.  
 534. margaritaceus = *Lampornis dominicus*, 41.  
 535. maria = *Aithurus polytmus*, 96.  
 536. mariæ (AMAZILIA), 217, 222.  
 537. marmoratus = *Lampornis gramineus*, 40.  
 538. matthewsi (PANOPLITES), 53, 54.  
 539. maugæi = *Agyrtria tobaci*, 207.  
 540. maugæi (SPORADINUS), 241, 242.  
 541. mavors (HELIANGELUS), 89, 91.  
 542. mazeppa = *Glaucis hirsuta*, 6.  
 543. media = *Chlorostilbon prasinus*, 246.  
 544. melananthera (STEGANURA), 142.  
 545. melanogaster (OREOTROCHILUS), 35, 36.  
 546. melanogenys (ADELOMYIA), 182.  
 547. melanoleuca = *Lepidolarynx mesoleucus*, 85.  
 548. melanorhynchus = *Chlorostilbon angustipennis*, 245.  
 549. melanorrhœa (CHALYBURA), 45, 47.  
 550. melanosternum = *Gouldia langsdorffi*, 139.  
 551. melanotis = *Basilinna leucotis*, 227.  
 552. melanotis = *Phæthornis eurynome*, 17.  
 553. melanura = *Glaucis hirsuta*, 6.  
 554. meliphila = *Chlorostilbon prasinus*, 246.  
 555. mellisuga = *Agyrtria compsa*, 204.  
 556. mellisuga = *Agyrtria leucogaster*, 202.  
 557. mellisuga = *Panychlora alicia*, 248.  
 558. mellivora (FLORISUGA), 48.  
 559. mentalis = *Eucephala cærulea*, 230.  
 560. merrittii = *Klais gimeti*, 184.  
 561. mesoleucus (LEPIDOLARYNX), 85.  
 562. micrastur (HELIOTRYPHA), 87, 88.  
 563. microrhynecha (URANOMITRA), 196, 197.  
 564. microrhynechum (RHAMPHOMICRON), 160.  
 565. micrura (ACESTRURA), 119, 120.  
 566. milleri (AGYRTRIA), 201, 203.  
 567. minima (MELLISUGA), 103.  
 568. minutulus = *Mellisuga minima*, 103.  
 569. mirabilis (LODDIGESIA), 145.  
 570. mitchelli (CALLIPHLOX), 129, 131.  
 571. mocca (CYNANTHUS), 152.  
 572. montana = *Selasphorus platycercus*, 109.  
 573. moorei = *Phæthornis superciliosus*, 15.  
 574. moschitus (CHRYSOLAMPIS), 176.  
 575. mosquera (ERIOCNEMIS), 189, 191.  
 576. mossai = *Zodalia glyceria*, 150.  
 577. mulsanti (ACESTRURA), 119.  
 578. mystacinus = *Lepidolarynx mesoleucus*, 85.  
 579. mystax = *Lophornis chalybea*, 136.  
 580. nævius (RHAMPHODON), 4.  
 581. napensis = *Chlorostilbon prasinus*, 246.  
 582. naterreri = *Augustes superbus*, 171.  
 583. neera = *Chrysuronion josephina*, 169.  
 584. neglecta (AGYRTRIA), 201, 205.  
 585. nigra = *Mellisuga minima*, 103.  
 586. niger = *Florisuga fusca*, 48.

587. nigricauda (AGYRTRIA), 202, 208.  
 588. nigricinctus (PHÆTHORNIS), 12, 20.  
 589. nigricollis = *Lampornis violicauda*, 38.  
 590. nigrirostris = *Leucippus chionogaster*, 199.  
 591. nigriventris (CALLIPHARUS), 211.  
 592. nigrivestis (ERIOCNEMIS), 189, 194.  
 593. nigrofasciata (THALURANIA), 98, 100.  
 594. nigrotis = *Heliothrix auritus*, 174.  
 595. nitens = *Chlorostilbon haberlini*, 244.  
 596. nitidicauda (AGYRTRIA), 202, 208.  
 597. nitidifrons (AGYRTRIA), 201, 205.  
 598. nitidissimus = *Chlorostilbon pucherani*, 244.  
 599. nitidus = *Lampornis violicauda*, 38.  
 600. nivepectus (AGYRTRIA), 201, 202.  
 601. niveiventris (AMAZILIA), 217, 222.  
 602. nobilis (OREONYMPHA), 157.  
 603. norrisii (AGYRTRIA), 201, 204, 216.  
 604. nuna (LESBIA), 147.  
 605. nuna-kaoli = *Lesbia nuna*, 147.  
  
 606. obscura = *Phæthornis idaliæ*, 19.  
 607. obscurus (CAMPYLOPTERUS), 24, 25.  
 608. obscurus = *Clytolæma rubinea*, 56.  
 609. ocai (AMAZILIA), 217, 221.  
 610. olivaceo-cauda = *Aglæactis caumatonota*, 186.  
 611. olivaceus (RHAMPHOMICRON), 158.  
 612. opaca (METALLURA), 163.  
 613. opisthocomus = *Cephalolepis loddigesi*, 180.  
 614. ornatus = *Bellona cristata*, 178.  
 615. ornatus (LOPHORNIS), 132, 134.  
 616. orthura (CATHARMA), 112.  
 617. ortonii (ZODALIA), 149.  
 618. osberti = *Chlorostilbon caniveti*, 243.  
 619. osculans (HELIANTHEA), 71, 73.  
 620. oseryi = *Phæthornis hispidus*, 16.  
 621. otero = *Heliodoxa leadbeateri*, 65.  
 622. ourissia = *Sporadinus maugæi*, 242.  
  
 623. pallidiceps = *Floricola longirostris*, 83.  
 624. pallidus = *Leucippus chionogaster*, 199.  
 625. pamela (AGLÆACTIS), 186, 187.  
 626. pampa (SPHENOPROCTUS), 23.  
 627. paradisea = *Panoplites flavescens*, 54.  
 628. paradiseus = *Topaza pella*, 95.  
 629. parvirostris (MICROCHERA), 104.  
 630. parvirostris = *Oxyopogon guerini*, 156.  
 631. parvula = *Aglæactis cupripennis*, 186.  
 632. parzudaki = *Heliothrypha exortis*, 87.  
 633. parzudaki = *Sporadinus riccordi*, 241.  
 634. paulinæ = *Metallura tyrianthina*, 166.  
 635. pectoralis = *Lampornis gramineus*, 40.  
 636. pella (TOPAZA), 95.  
 637. pegasus = *Chrysolampis moschitus*, 176.  
  
 638. personatus (SCHISTES), 173.  
 639. peruana (STEGANURA), 143.  
 640. peruanus = *Chlorostilbon splendidus*, 246.  
 641. petasophorus = *Petasophora serrirostris*, 52.  
 642. phæopygus = *Chlorostilbon angustipennis*, 245.  
 643. phæthon = *Chlorostilbon splendidus*, 244.  
 644. phaon (SAPPHO), 153, 154.  
 645. phainolæma = *Heliothrix auriculatus*, 175.  
 646. phainoleuca = *Heliothrix auriculatus*, 175.  
 647. phœbe = *Chlorostilbon prasinus*, 246.  
 648. philippi (PHÆTHORNIS), 11, 12.  
 649. pichincha (OREOTROCHILUS), 35.  
 650. pileatus = *Bellona cristata*, 178.  
 651. pinicola = *Floricola leocadiæ*, 84.  
 652. platurus = *Discura longicauda*, 140.  
 653. platycercus (SELASPHORUS), 108, 109.  
 654. poliocerca (EUPHERUSA), 212.  
 655. polytmus (AITHURUS), 96.  
 656. poortmani (PANYCHLORA), 247.  
 657. popelairii (GOULDIA), 138.  
 658. porphyrogaster = *Helianthea typica*, 71.  
 659. porphyurus = *Lampornis mango*, 39.  
 660. pouchetii = *Heliothrix auriculatus*, 175.  
 661. prasinoptera = *Eulampis jugularis*, 43.  
 662. prasinus (CHLOROSTILBON), 243, 246.  
 663. prasinus = *Chlorostilbon pucherani*, 244.  
 664. pretrei (PHÆTHORNIS), 11, 14.  
 665. prevosti (LAMPORNIS), 38, 39.  
 666. primolii = *Metallura primolina*, 165.  
 667. primolina (METALLURA), 165.  
 668. pristina (AMAZILIA), 217.  
 669. prunelli (BOURCIERIA), 75, 78.  
 670. pucherani (CHLOROSTILBON), 243, 244.  
 671. puella = *Thalurania columbica*, 99.  
 672. pulchra (CALOTHORAX), 118.  
 673. pumilus = *Chlorostilbon angustipennis*, 245.  
 674. punctatus = *Lampornis violicauda*, 38.  
 675. punctulatus = *Lampornis violicauda*, 38.  
 676. puniceus = *Bellona cristata*, 178.  
 677. purpurea (BOURCIERIA), 75, 78.  
 678. purpureiceps = *Heliothrix barroti*, 175.  
 679. pygmæus (PHÆTHORNIS), 12, 20.  
 680. pyra (TOPAZA), 95.  
  
 681. quadricolor = *Lampornis violicauda*, 38.  
 682. quadricolor (URANOMITRA), 196.  
 683. quitensis = *Metallura tyrianthina*, 166.  
  
 684. raimondi = *Sporadinus riccordi*, 241.  
 685. retrirostris (HEMISTEPHANIA), 81.  
 686. recurvirostris (AVOCETTULA), 162.  
 687. refulgens (THALURANIA), 98, 101.

688. reginæ = *Lophornis gouldi*, 134.  
689. reginæ = *Lophornis stictolophus*, 132, 133.  
690. regis = *Heliomaster furcifer*, 86.  
691. regulus (LOPHORNIS), 132, 133.  
692. reichenbachi = *Chrysolampis moschitus*, 176.  
693. remigera = *Steganura underwoodi*, 142.  
694. rhami (LAMPROLÆMA), 32.  
695. rhodotis = *Petasophora anais*, 50.  
696. riccordi (SPORADINUS), 241.  
697. ridolfi = *Eriocnemis vestita*, 193.  
698. riefferi = *Amazilia fuscicaudata*, 220.  
699. rivoli = *Eugenes fulgens*, 60.  
700. roberti (CAMPYLOPTERUS), 24, 28.  
701. robinson = *Eustephanus fernandensis*, 93.  
702. rosæ (CHÆTOCERCUS), 121.  
703. ruber = *Selasphorus rufus*, 110.  
704. rubinea (CLYTOLEMA), 56.  
705. rubineus = *Clytolæma rubinea*, 56.  
706. rubinoides (PHÆOLEMA), 55.  
707. rubra = *Selasphorus rufus*, 110.  
708. rubrigularis (PETASOPHORA), 51.  
709. ruckeri (GLAUCIS), 6, 8.  
710. ruficaudatus = *Clytolæma rubinea*, 56.  
711. ruficeps (RHAMPOMICRON), 160.  
712. ruficollis = *Chrysuronia chrysuria*, 169.  
713. ruficollis = *Rhamphodon nævius*, 4.  
714. ruficrissa (UROSTICTE), 91.  
715. rufigaster = *Phæthornis pygmæus*, 20.  
716. rufiventris = *Phæthornis pygmæus*, 20.  
717. rufocaligatus = *Steganura addæ*, 143.  
718. rufus (CAMPYLOPTERUS), 24, 25.  
719. rufus (SELASPHORUS), 108, 110.  
720. russata = *Eriocnemis aurelia*, 190.  
721. rutila = *Amazilia cinnamomea*, 219.  
722. sabinæ = *Adelomyia melanogenys*, 182.  
723. sagitta = *Heliodoxa leadbeateri*, 65.  
724. saisin = *Selasphorus rufus*, 110.  
725. salvadori = *Cynanthus forficatus*, 151.  
726. salvini = *Chlorostilbon caniveti*, 243.  
727. salvini = *Eutoxeres aquila*, 3.  
728. sapphirina (HYLOCHARIS), 236.  
729. sapphirina = *Hylocharis lactea*, 236.  
730. sapphiropygia (ERIOCNEMIS), 189, 193.  
731. sappho = *Sappho sparganura*, 154.  
732. saucerottii (AMAZILIA), 217, 225.  
733. saulæ = *Lafresnayi gayi*, 44.  
734. scapulata (EUCEPHALA), 228, 229.  
735. schliephaekei = *Docimaster ensiferus*, 68.  
736. schreibersi (IOLÆMA), 58.  
737. scintilla (SELASPHORUS), 108, 111.  
738. sclateri = *Floricola longirostris*, 83.  
739. scutatus = *Augastes superbus*, 171.  
740. senex = *Agyrtia candida*, 203.  
741. sephanoides = *Eustephanus galeritus*, 93.  
742. serrirostris (PETASOPHORA), 50, 52, 132.  
743. similis = *Chlorostilbon pucherani*, 244.  
744. simplex = *Aphantochroa cirrochloris*, 29.  
745. simplex = *Calothorax lucifer*, 118.  
746. simplex = *Eriocnemis cupreiventris*, 192.  
747. smaragdicaudus = *Cynanthus mocoa*, 152.  
748. smaragdina = *Chlorostilbon angustipennis*, 245.  
749. smaragdineum = *Eucephala smaragdo-cærulea*, 229.  
750. smaragdinicollis (METALLURA), 166.  
751. smaragdinipectus (ERIOCNEMIS), 189, 194.  
752. smaragdinus = *Cynanthus mocoa*, 152.  
753. smaragdo-cærulea (EUCEPHALA), 228, 229.  
754. solstitialis (STEGANURA), 142.  
755. sophiæ (AMAZILIA), 217, 224.  
756. sordida (PHÆOPTILA), 10.  
757. sparganura (SAPPHO), 153, 154.  
758. spatuligera = *Steganura underwoodi*, 142.  
759. spectabilis (EUGENES), 60, 61.  
760. spencei (HELIANGELUS), 89, 90.  
761. spixi = *Glaucis dorhni*, 7.  
762. splendens = *Campylopterus villavicencio*, 27.  
763. splendens = *Heliodoxa leadbeateri*, 65.  
764. splendidus (CHLOROSTILBON), 242, 244.  
765. squalidus (PHÆTHORNIS), 11, 17.  
766. squamata (ERIOCNEMIS), 189, 190.  
767. squamigularis = *Heliotrypha barrali*, 88.  
768. squamosus = *Lepidolarynx mesoleucus*, 85.  
769. stanleyi (RHAMPOMICRON), 159.  
770. stenura (PANYCHLORA), 247, 248.  
771. stictolophus (LOPHORNIS), 132, 133.  
772. stokesii = *Eustephanus fernandensis*, 93.  
773. striigularis (PHÆTHORNIS), 12, 19.  
774. strophianus (HELIANGELUS), 89, 90.  
775. strumaria = *Lophornis magnifica*, 132, 135.  
776. stuartæ = *Floricola longirostris*, 83.  
777. suavis = *Amazilia fuscicaudata*, 220.  
778. subcærulea (EUCEPHALA), 228, 230.  
779. subfurcata = *Thalurania furcata*, 100.  
780. superbus (AUGASTES), 171.  
781. superbus = *Floricola longirostris*, 83.  
782. superciliosus = *Glaucis hirsuta*, 6.  
783. superciliosus (PHÆTHORNIS), 11, 14.  
784. superciliosus = *Phæthornis pretrii*, 14.  
785. surinamensis = *Florisuga mellivora*, 48.  
786. swainsoni = *Doricha enicura*, 124.  
787. swainsoni = *Sporadinus elegans*, 241.  
788. sylphia = *Lesbia gouldi*, 146.  
789. syrmatophorus (PHÆTHORNIS), 11, 16.

790. taczanowski = *Heliangelus clarissæ*, 89.  
 791. temminckii = *Lepidolarynx mesoleucus*, 85.  
 792. temminckii (PTEROPHANES), 66.  
 793. tephrocephala (AGYRTIA), 202, 206.  
 794. terpua = *Agyrtia apicalis*, 207.  
 795. thalassina (PETASOPHORA), 50, 51.  
 796. thalassinus = *Petasophora anais*, 50.  
 797. thalassinus = *Petasophora thalassina*, 51.  
 798. thaumantias (POLYTMUS), 213, 214.  
 799. thaumatias = *Agyrtia tephrocephala*, 206.  
 800. theresæ = *Polytmus viridissimus*, 214.  
 801. tobaci (AGYRTIA), 202, 206.  
 802. tobagensis = *Agyrtia tobaci*, 206.  
 803. tobago = *Agyrtia tobaci*, 206.  
 804. torquata (BOURCIERIA), 75, 77.  
 805. torridus (SELASPHORUS), 108, 111.  
 806. traviesi (BOURCIERIA), 75, 77.  
 807. tricolopha = *Gouldia popelarii*, 138.  
 808. tricolor = *Selasphorus platycercus*, 109.  
 809. tristris = *Patagona gigas*, 67.  
 810. tschudi = *Thalurania nigrofasciata*, 100.  
 811. turneri = *Leucippus chionogaster*, 199.  
 812. typica (ABEILLIA), 184.  
 813. typica = *Amazilia saucerotti*, 225.  
 814. typica = *Bourcieria cæligena*, 79.  
 815. typica (HELIANTHEA), 71.  
 816. typica (JULIAMYIA), 232, 233.  
 817. typus = *Phæthornis guyi*, 13.  
 818. tyrianthina (METALLURA), 166.
819. underwoodi (STEGANURA), 141, 142.  
 820. urochrysea (CHALYBURA), 45, 46.  
 821. uropygialis = *Eriocnemis vestita*, 193.
822. venusta = *Thalurania columbica*, 99.  
 823. venustissimus = *Eulampis jugularis*, 43.  
 824. veraguensis (HEMISTEPHANIA), 80, 82.  
 825. veraguensis (LAMPORNIS), 38, 40.  
 826. verreauxi (LOPHORNIS), 133, 136.  
 827. versicolor = *Agyrtia brevirostris*, 204.  
 828. versicolor = *Cephalolepis delalandi*, 180.  
 829. verticalis = *Uranomitra cyanocephala*, 197.  
 830. verticeps = *Thalurania eriphile*, 101.  
 831. vesper (RHODOPIS), 115.  
 832. vespera = *Rhodopis vesper*, 115.  
 833. vestita (ERIOCNEMIS), 189, 193.  
 834. victoriæ = *Lesbia amaryllis*, 148.  
 835. vieilloti = *Mellisuga minima*, 103.  
 836. vieilloti = *Petasophorus serrirostris*, 52.
837. vieilloti = *Lophornis chalybea*, 132, 136.  
 838. villavicencio (CAMPYLOPTERUS), 24, 27.  
 839. villosus = *Phæthornis hispidus*, 16.  
 840. viola (HELIOTRYPHA), 87.  
 841. violaceus = *Eulampis jugularis*, 43.  
 842. violicauda (LAMPORNIS), 38.  
 843. violiceps (URANOMITRA), 196.  
 844. violifera (HELIANTHEA), 71, 73.  
 845. violifrons = *Heliothrix barroti*, 175.  
 846. violifrons = *Hemistephania johannæ*, 80.  
 847. virescens = *Polytmus thaumantias*, 214.  
 848. virginalis = *Lampornis dominicus*, 41.  
 849. viridicaudata = *Phæthornis idaliæ*, 19.  
 850. viridicaudus = *Chrysuronia humboldti*, 168.  
 851. viridicaudus = *Polytmus viridissimus*, 214.  
 852. viridiceps (AGYRTIA), 201, 203.  
 853. viridifrons (URANOMITRA), 196, 197.  
 854. viridigaster = *Amazilia viridiventris*, 220.  
 855. viridigaster = *Amazilia viridiventris*, 220.  
 856. viridipallens (CÆLIGENA), 31.  
 857. viridipectus = *Agyrtia tobaci*, 206.  
 858. viridipectus = *Thalurania nigrofasciata*, 100.  
 859. viridis (LAMPORNIS), 38, 40.  
 860. viridis = *Polytmus thaumantias*, 214.  
 861. viridis = *Polytmus viridissimus*, 214.  
 862. viridissimus = *Agyrtia tobaci*, 206.  
 863. viridissimus (POLYTMUS), 214.  
 864. viridiventris (AMAZILIA), 217, 220.  
 865. vulcani = *Rhamphomicron stanleyi*, 159.
866. wagleri = *Thalurania bicolor*, 102.  
 867. warszewiczi (AMAZILIA), 217, 225.  
 868. warszewiczi = *Diphlogæna iris*, 69.  
 869. watertoni (THALURANIA), 98, 101.  
 870. whitelyana (IOLÆMA), 59.  
 871. wiedi = *Eucephala cyanogenys*, 231.  
 872. williami (METALLURA), 165.  
 873. wilsoni (BOURCIERIA), 75, 77.
874. xanthusi (BASILINNA), 226, 227.
875. yarrelli (MYRTIS), 127.  
 876. yaruqui (PHÆTHORNIS), 11, 13.  
 877. yucatanensis (AMAZILIA), 217, 219.
878. zemès = *Tilmatura duponti*, 128.  
 879. zonura = *Phæoptila sordida*, 10.  
 880. zonura = *Phæthornis griseigularis*, 18.











