

A
MONOGRAPH
OF
THE TROGONIDÆ,
OR
FAMILY OF TROGONS.

BY
JOHN GOULD, F.L.S., &c.

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TO

THE REVEREND JOSEPH GOODALL, D.D.,

F.A.S., F.L.S., F.H.S., F.Z.S.

PROVOST OF ETON COLLEGE,

THIS

MONOGRAPH OF THE TROGONIDÆ

IS RESPECTFULLY DEDICATED.

REVEREND SIR,

IN dedicating to you this Monograph of one of the most beautiful and interesting tribes of birds, I wish to testify my feelings of respect and esteem for one, who, endowed with profound literary and scientific attainments, has long filled with so much ability the highest station in the most celebrated of our public Colleges, that College being the pride and ornament of a Town in which I resided for many years: and I am the more anxious to pay you this just tribute, as you have not only noticed and encouraged my own humble efforts to advance the study of that branch of natural history to which I have attached myself, but have ever most liberally contributed towards the promotion of science in general: permit me then to offer you this public testimonial of my respect and gratitude, and to remain,

Reverend Sir,

Your most obedient Servant,

JOHN GOULD.

P R E F A C E.

HAVING brought this my second Monograph to a close, I am led to hope that my labours in the elucidation of a tribe of birds hitherto involved in much confusion, will not be destitute of some degree of value, more especially in the eyes of ornithologists, introducing to their notice as it does many new species, and clearing up the difficulties with which many of those even common in our cabinets have been previously surrounded,—difficulties arising from several causes, among which may be enumerated the differences in plumage, which obtain so often between the males and females, as well as between the young males and the adults of the same sex, in some of the minor groups; to which may be added the circumstance of the subject not having been attempted by naturalists possessing command of those ample resources necessary for extricating the subject from the labyrinth of confusion in which it has long been involved.

It would be presumptuous in me to say that this monograph is fully completed, or that I have figured every existing species; on the contrary, I have reason to believe that many will yet be discovered, both in the Old and New World, particularly in those remote regions which civilized man has seldom, if ever, visited: but in order to render the work complete up to the present time, I have not only done my utmost to add every species to my own collection, but have visited all the principal Museums of Europe, both public and private, and, as in previous instances, have experienced the greatest kindness and cooperation from the various eminent naturalists, private individuals, and the officers of the natural history department of every public institution.

Indeed without the liberality I have experienced it would be impossible that a work of this nature could have been successfully completed; and I am proud to bear my testimony to the liberal spirit which has been manifested towards me by the scientific world in general. Among those to whom I am especially indebted I may mention the Earl of Derby, Prince Massena of Paris, M. Temminck, M. John Natterer of Vienna, Dr. Lichtenstein of Berlin, W. Swainson, Esq., Sir William Jardine, Bart., and T. C. Eyton, Esq. My thanks are also due to my friend Mr. Martin, of the Zoological Society of London, for the kind manner in which he has at all times rendered me his assistance in this and my other publications.

With two exceptions my drawings have been taken from actual specimens; my reasons for these exceptions are given in the letter-press accompanying the respective Plates.

INTRODUCTION.

IN selecting the Family of Trogons as the subject of my second Monograph, I was influenced by the full conviction, not only that it was one fraught with interest, but that much was left buried in obscurity, which when brought to light would materially tend to the advancement of Ornithology.

The Trogons, as their general structure and their habits sufficiently indicate, belong to the fissirostral tribe of the Insessores. Greatly insectivorous, they seize the flitting insect on the wing, which their wide gape enables them to do with facility; while their feeble tarsi and feet are such as to qualify them merely for resting on the branches, as a post of observation, whence to mark their prey as it passes, and to which, having given chase, to return. As in all other groups, however, we shall find modifications of the type, constituting the ground of generic or sub-generic divisions, to which we shall advert more fully when we come to speak of them in detail.

If not strictly elegant in form, the Trogons in the brilliancy of their plumage are surpassed only by the *Trochilidae*: their splendour amply compensates for every other defect. Denizens of the intertropical regions of the Old and New World, they shroud their glories in the deep and gloomy recesses of the forest, avoiding the light of day and the observation of man; dazzled by the brightness of the meridional sun, morning and evening twilight is the season of their activity. We can add, however, but little to the elegant description of their habits given in Mr. Griffith's edition of Cuvier's Animal Kingdom; I venture therefore to quote his words.

“The Trogons may dispute the palm of beauty with the humming-birds. Their plumage in certain parts shines with metallic brilliancy, and exhibits all the colours of the rainbow. On other parts, the tints, though opaque, are not less rich and splendid; but a very short neck, feet disproportioned to their figure and bulk, and a long and broad tail, injure the harmony of their form, and give them a heavy port and aspect. Their long attenuated feathers, with barbs disarranged and luxuriant, make them appear more bulky than they really are. These too are so feebly implanted, that they fall at the slightest agitation. Their skin is so delicate that it will tear at the slightest tension.

“These birds are solitary and extremely jealous of their freedom. They never frequent inhabited or open tracts. They delight in the silence of deserts, where they even fly the society of their consimilars. The interior of the thickest forests is their chosen abode for the entire year. They are sometimes seen on the summit of trees; but in general they prefer the centre, where they remain a portion of the day without descending to the ground, or even to the lower branches. Here they lie in ambush for the insects which pass within their reach, and seize them with address and dexterity. Their flight is lively, short, vertical and undulating. Though they thus conceal themselves in the thick foliage, it is not through distrust; for when they are in an open space, they may be approached so nearly as to be struck with a stick. They are rarely heard to utter any cries, except during the season of reproduction, and then their voice is strong, sonorous, monotonous, and melancholy. They have many cries, from the sound of one of which their name is derived.

“All those whose habits are known nestle in the holes of worm-eaten trees, which they enlarge with their bills, so as to form a comfortable and roomy residence. The number of eggs is from two to four, and the young are born totally naked; but their feathers begin to start two or three days after their birth.

“The occupation of the male during incubation consists in watching for the safety of his companion, bringing her food, and amusing her with a song, which, though we should call it insipid, is to her, without doubt, the expression of sensibility. Some of

the Couroucous express the syllable *pio*, repeated many times in succession with a powerful, yet plaintive tone. Their accent almost reminds one of the wailings of a child who has lost its way, and it is thus that they cry to each other amidst the silence of the forests. As soon as the young are able to provide for themselves, they separate from their parents to enjoy that solitude and isolation which appear to constitute the supreme happiness of the species. Their aliments are composed of larvæ, small worms, caterpillars, coleoptera, and berries, which they swallow entire.

“The male, at various ages, the female, and the young, differ in their plumage, which has given rise to the institution of more species than are really in existence.”

This account of their habits I am not only in a great measure enabled to confirm from the information I have obtained respecting them while engaged upon the present Monograph, but also to add a few facts, which although trifling, and in some degree contradictory to the preceding account, will not be uninteresting. My friend Mr. John Natterer, who has had many opportunities of observing these birds in a state of nature, informs me that he has seen them, though very rarely, congregating together, and more than one species in company; a circumstance which he considers may be accounted for on the principle that instinct leads them by some migratory movement to abandon one district at a certain season of the year in search of another, where food is more abundant. These migrations, however, cannot be extensive, inasmuch as their wings are not adapted for a lengthened flight; besides which, every new district of any great extent presents us with its peculiar species; for example, none of the species inhabiting Mexico have been found in the Brazils, and *vice versâ*.

The members of this family appear on general survey to be divided between America, including its islands, and the islands of the Indian Archipelago; two or three species only having yet been discovered on the continent of India, and those principally inhabiting the countries bordering the Indian Seas. The great nurseries for these birds in the Old World are the islands of Ceylon, Sumatra, Java, Borneo, &c., while over the whole continent of Africa

only a single species has yet been discovered. It is in South America, however, that we find the greatest number of species, and those of the most exquisite plumage: nor is this all; for it will be further observed that, in accordance with the great geographical distribution thus pointed out, there exist certain characters common to the species inhabiting each region, which, although not very apparent to the unpractised eye, constitute the basis of generic subdivisions, and doubtless have an influence upon their habits and manners. Between the American species, and those inhabiting India and Africa, we not only find this broad line of distinction, but discover moreover that the birds of each country are themselves naturally resolvable into certain minor groups, each possessing its peculiar characters, and each as different in habits as in form.

The beautiful species of the group to which the sub-generic title of *Calurus* has been applied, distinguished by a redundancy of flowing plumage, are not, as may be expected, so well fitted for flight, or for taking their prey on the wing, as are the more closely-plumed species to which the generic name of *Trogon* is now restricted; accordingly Mr. Natterer informs me that the gorgeous birds of the former group tenant the topmost branches of the loftiest forest trees, clinging beneath them like Parrots, and feeding more exclusively on fruits and berries; while on the other hand, Mr. W. S. Mac Leay states that the singular Trogon inhabiting Cuba, (the only example of the sub-genus *Temnurus*) which approximates to the Woodpeckers in the more lengthened form of the bill, in the rigid character of the outer tail-feathers, and in the spotting of the wings, approaches these birds also in its habits, giving a preference to the holes of trees rather than to the branches, from the bark of which it procures the larvæ and various insects which constitute its food.

The habits of the Old World species are unfortunately much less known than those of their American relatives. From the more robust form of their bill and their wide gape, I am inclined to suspect that they feed even still more exclusively on insects than on fruits; independently, however, of the greater strength of the bill, the non-serration of the edges of the mandibles, and the half-denuded face, they may at all times be distinguished by the rich brown colouring of the backs of the males, and by the entire absence of bars across the outer tail-

feathers. With respect to the brown colouring of the plumage, there are, it is true, one or two exceptions to the rule, but none to the absence of the barring of the tail-feathers, when accompanied by the former character.

In conclusion, I may observe, that the sub-genera into which the Trogons are now subdivided, are, as it appears to me, perfectly natural; and I consequently subjoin a synoptical table, with the species arranged under the sub-genera which have been proposed by Mr. Swainson, while at the same time in the body of my work I retain the generic name of *Trogon*, universally applied to the whole family.

Previous to the commencement of this Monograph, the number of described species amounted only to *twenty-two*; to these I have added and characterised *twelve* others new to science; among which are three additional species of the sub-genus *Calurus*, of which only two were previously known, and those confounded under one name. The total number, therefore, of species now known is *thirty-four*, *twenty-three* of which are inhabitants of America and its islands, *ten* of the Indian Islands and India, and *one* of Africa.

SYNOPSIS SPECIERUM.

Fam. TROGONIDÆ.—Genus TROGON. *Mehring et Linné.*

CHAR.: *Rostrum* triangulare, validum, tomis mandibulæ utriusque serratis. *Nares* setis tectæ. *Alæ* perbreves. *Tarsi* plumosi. *Digit*i antici duo usque ad articulum primum connexi; *digit*i externi brevissimi.

Caudâ nigrâ, ad apicem albâ, apice quadrato	1. <i>Mexicanus.</i>
Facie, capite anticè, auribus, guttureque nigris	2. <i>elegans.</i>
Caudæ rectricibus tribus externis ad basin nigris, ad apicem albis, in medio albis maculis parvis numerosis sparsis nigris	3. <i>ambiguus.</i>
Rectricibus caudæ tribus externis nigro distinctè fasciatis	4. <i>collaris.</i>
Capite suprâ pectoreque purpureis; corpore subtùs saturatè coccineo	5. <i>variegatus.</i>
Capite, collo, pectoreque intensè violaceis; abdomine medio crissoque aurantiacis; rectricibus caudæ tribus externis nigro fasciatis	6. <i>caligatus.</i>
Primariis ad basin albis	7. <i>atricollis.</i>
Hæc species genere minima rectricibus caudæ externis nigro latè fasciatis	8. <i>meridionalis.</i>
Capite suprâ guttureque violaceo-purpureis; abdomine aurantiaco; rectricibus caudæ externis haud fasciatis	9. <i>melanopterus.</i>
Capite, gutture, pectoreque nigris, rectricibus caudæ tribus externis notâ quadratâ albâ ad apicem ornatis	10. <i>melanocephala.</i>
Abdomine citrino	11. <i>citreolus.</i>
Abdomine aurantiaco; rectricibus caudæ tribus externis albis haud fasciatis	12. <i>aurantius.</i>
Abdomine coccineo; rectricibus caudæ tribus externis albis haud fasciatis	13. <i>Surucura.</i>
Rectricibus caudæ tribus externis nigris, pectore fasciâ albâ carente	14. <i>Massena.</i>
Caudâ permagnâ, rectricibus tribus externis nigris	15. <i>macroura.</i>
Caudâ mediocri, rectricibus tribus externis nigris	16. <i>melanura.</i>

HARPACTES, *Swainson.*

CHAR.: *Rostrum* fortius quam in genere *Trogon* dicto; mandibulis utrisque ad apicem profundè indentatis; tomis lævibus. *Nares* ex parte denudatæ. *Tarsi* semi-plumosi. *Digit*i antici minùs connexi.

Vertice, gutture, pectoreque nigris; nuchâ coccineâ	1. <i>Temminckii.</i>
Rectricibus caudæ tribus externis ad basin nigris, apicem versus nigris albisque marmoratis	2. <i>Diardii.</i>
Capite, nuchâ, gutture pectoreque fuliginoso-nigris	3. <i>Malabaricus.</i>
Uropygio, caudæque tectricibus superioribus coccineis	4. <i>Duvaucelii.</i>
Capite guttureque sordidè sanguineis	5. <i>erythrocephalus.</i>
Speciei <i>Erythrocephalus</i> dictæ assimilis; differt autem staturâ majore caudâque longiore	6. <i>Hodgsonii.</i>
Pectore rosaceo	7. <i>ardens.</i>
Capite, gutture, pectoreque lutescentibus	8. <i>Oreskios.</i>

APALODERMA, *Swainson.*

CHAR.: *Rostrum* ut in genere *Trogon* dicto; denticulis ferè obsoletis. *Pedes* fortiores; *digit*is usque ad basin fissis.

Guttore pectoreque viridibus; abdomine coccineo	1. <i>Narina.</i>
Guttore flavo	2. <i>Reinwardtii.</i>
Pectore, corpore subtùs albo	3. <i>Gigas?</i>

TEMNURUS, *Swainson.*

CHAR.: *Rostrum* ut in genere *Trogon* dicto. *Caudæ rectrices* ad apicem furcatæ, apicibus divergentibus.

Guttore pectoreque cineraceo-albis	1. <i>albicollis.</i>
Primariis albo fasciatis; ventre rosaceo	2. <i>roseigaster?</i>

CALURUS, *Swainson.*

CHAR.: *Rostrum* haud serratum. *Caput* cristâ compressâ ornatâ. *Caudæ tectrices* elongatæ caudamque celantes.

Cristatus; tectricibus superioribus perlongis	1. <i>resplendens.</i>
Cristatus; cristâ frontali nares tegente	2. <i>pulchellus.</i>
Haud cristatus; caudâ totâ nigrâ; rostro ad basin rubro	3. <i>Pavoninus.</i>
Rectricibus caudæ tribus externis albo terminatis; rostro olivaceo-corneo	4. <i>fulgidus.</i>
Caudâ metallicè cœruleâ; rectricibus utrisque tribus externis ad apicem largè albis	5. <i>noxeus.</i>

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24. Trogon (Calurus) fulgidus, Gould.
25. Trogon (Calurus) neoxenus, Gould.
26. Trogon (Apaloderma) Narina.
27. Trogon (Apaloderma) Reinwardtii.
28. Trogon (Apaloderma) Gigas.
29. Trogon (Harpactes) Temminckii, Gould.
30. Trogon (Harpactes) Diardii.
31. Trogon (Harpactes) Malabaricus, Gould.
32. Trogon (Harpactes) Duvaucelii.
33. Trogon (Harpactes) erythrocephalus, Gould.
34. Trogon (Harpactes) Hodgsonii, Gould.
35. Trogon (Harpactes) ardens.
36. Trogon (Harpactes) Oreskios.

* Named on the Plate by mistake Trogon nigricaudata, Swains.



TROGON MEXICANUS; (Swains.)
Mexican Trogon.
Adult Male

From the collection of the Hon. Secy. of State.

Painted by G. H. Edwards.

TROGON MEXICANUS.

Mexican Trogon.

(Adult male.)

SPECIFIC CHARACTER.

Trog. supra et ad pectus viridi; gutture auribus, alisque nigris, his cinereo punctatis; torque pectorali albâ; ventre crissoque coccineis; rectricibus duabus intermediis viridibus nigro apiculatis, duabus proximis utrinque nigris, reliquis ad basin nigris ad apicem albis.

Rostrum flavum: tarsi brunnei.

Beak bright yellow; throat and ear-coverts black, gradually blending with the green which covers the chest and the whole of the upper surface; two middle tail-feathers green with black tips; the two next on each side wholly black; the three outer on each side black with white tips; wings black, the whole of which, with the exception of the primaries, is finely dotted with grey; a crescent of white encircles the chest; breast, belly, and under tail-coverts fine scarlet; feet brown.

Total length, 11 to 12 inches; *wing*, $5\frac{3}{4}$; *tail*, $7\frac{3}{4}$.

It is only by the careful examination of a great number of specimens of different ages that the ornithologist is enabled to understand the changes of plumage which birds of this tribe undergo while passing from youth to maturity, and which render them in specific distinction so extremely perplexing. The preceding remark applies more particularly to the Trogons of the New World, which exhibit in their barred tails a feature that will at all times readily distinguish them from those of the Old; but though we find that the barred tail is characteristic of most of the species at a certain period of their existence, yet in some it is only the sign of immaturity, while in others it is a striking feature in the adult.

The bird here represented was evidently considered by Mr. Swainson as a different species from *Tr. Mexicanus*, as on looking over the collection of birds in the possession of John Taylor, Esq., I observed a specimen in the plumage of the present Plate, with a label attached to it bearing the name of *Trogon Morgani* in Mr. Swainson's handwriting; under which name I should have figured it, had I not discovered in another collection recently received by Mr. Taylor from Real del Monte, specimens directly intermediate between the Barred-tail Trogon as figured by Mr. Swainson in his Zoological Illustrations and the bird here represented; and as this difference is not effected by a change in the colouring of the feather, but by the accession of a new one, the evidence is the more conclusive. One of these birds possessed the strongly-barred tail on one side, while on the other it had a new feather, bearing all the characteristics of mature age in being more square at the end and in being wholly black with a white tip.

I cannot close this account without offering my sincere thanks to Mr. John Taylor for the assistance which he has rendered me in the investigation of this tribe of birds, by the loan of specimens in the most interesting stages of plumage.

Habitat Northern Mexico.



TROGON MEXICANUS; (Swains.)
Mexican Trogon.

Drawn from Nature & on Stone by J. E. Aud. & G. B. S. G. G. G.

Printed by O. Hillman.

TROGON MEXICANUS, Swains.

Mexican Trogon.

(Young male, and female.)

In Mare Juniore *rectrices nigro alboque fasciatæ, præsertim ad pogonia externa; alarum maculae subbrunnescens; remiges externè albo fimbriatæ.*

Fœm. *Vertice, dorso, gutture, pectoreque brunneis in olivaceum supernè in rufum infernè vergentibus; torque pectorali obsoletâ, cinereâ; ventris parte anticâ brunnescenti-cinereâ, posticâ crissoque coccineis; alis nigris brunneo parçè maculatis; remigibus externè albo fimbriatis; rectricibus duabus intermediis castaneis nigro apiculatis, duabus proximis utrinque nigris, reliquis albo nigroque fasciatis.*

Rostrum in fœminâ flavum brunneo nebulosum.

In the *Male*, the middle age may be distinguished from the adult by the grey freckles on the wings being rather stronger and more inclined to brown on the secondaries; by the extreme outer edge of the primaries being white; and by the tail being regularly barred with black and white, which character is most conspicuous on the outer edges.

Female. The top of the head, throat, chest, and back dark brown, inclining to olive on the upper surface and to rufous on the chest; across the chest an obscure band of light grey; the upper part of the belly brownish grey, the lower part and vent scarlet; wings black, slightly freckled with brown on the outer edges of the secondaries and shoulders; the outer edges of the primaries fringed with white; two middle tail-feathers chestnut brown tipped with black, the two next on each side wholly black; the remainder strongly barred with black and white for nearly their whole length; bill yellow clouded with brown.

Trogon Mexicanus. Swains., Phil. Mag. June 1827, and Zool. Ill., 2nd Ser., pl. 82. young male, pl. 107. female.

IN the description which accompanies the preceding Plate I have stated my reasons for considering that and the present bird as constituting one and the same species. In the Plate accompanying this description I have given in illustration of this opinion a figure of a male bird killed in a youthful state; when, as may be readily perceived, it had nearly accomplished the change in the plumage of the body, while one single feather alone has appeared in the tail: this new feather possesses all the marks of maturity, and may be easily distinguished from the rest by its being entirely free from the bars of black and white. The specimen from which this drawing has been taken is in the possession of John Taylor, Esq., who received it with several others from Mexico.

The *Trogon Mexicanus* was, I believe, first described by Mr. Swainson in the Philosophical Transactions for June 1827; since that period he has figured the young male and the female in the Second Series of his Zoological Illustrations (pls. 82 and 107). While travelling on the Continent I collected several specimens of this bird, and ascertained, by means of the labels attached, that it is identical with the *Trogon glaucitans* of Professor Lichtenstein. I believe that the name of *Mexicanus* claims priority; and if so, *glaucitans* must of course give place to it: but on this point I cannot speak with certainty.



TROGON ELEGANS.
Graceful Trogon.

Drawn from Nature & on Stone by J. C. Gould.

Printed by C. Bellinardi.

TROGON ELEGANS.

Graceful Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. facie, capite anticè, auribus, guttureque nigris; pectore, cervice, dorso, tectricibusque caudæ superioribus viridibus; torque pectorali albâ; ventre tectricibusque caudæ inferioribus coccineis; alis brunnescenti-nigris, in medio cinereis albo transversim flexuosè lineatis; remigum pogoniis externis albo fimbriatis; rectricibus duabus intermediis proximarumque duarum utrinque pogoniis externis cupreo-viridibus, harum pogoniis internis nigris, omnibus ad apicem latè nigris; reliquis ad basin nigris, ad apicem albis, in medio præsertim pogonii externis albo nigroque fasciatis.*

Fœm. *Auribus in medio lineâque oculum albis; torque pectorali subobsoletâ; suprâ et ad pectus cinereo-brunneus olivaceo tinctus; alis in medio cinereis maculis saturatoribus notatis; remigibus brunneis; ventre anticè brunnescenti-griseo in coccineum posticè transeunte; rectricibus duabus intermediis sordidè castaneis, apicibus nigris, duabus proximis utrinque nigris, reliquis ad basin nigris, ad apicem albis, in medio albis nigro sparsim maculatis.*

Rostrum flavum: tarsi brunnei.

Male. Face, fore part of the head, ear-coverts, and throat black; chest, back of the neck, back, and upper tail-coverts green; a white crescent separates the green of the chest from the breast, which together with the belly and under tail-coverts is scarlet; wings brownish black, the primaries having their outer edges fringed with white; secondaries and centre of the wings grey, strongly marked with zigzag transverse lines of black; two middle tail-feathers green with bronzy reflections on their outer webs, only the inner webs black; all six are largely tipped with black; the remaining six black at the base and white at the tip, the middle portions of these latter feathers barred with black and white, which is most strongly depicted on their outer edges; feet brown; bill fine gamboge yellow.

Female. Bill yellow; centre of the ear-coverts and a small rim round the eye white; the whole of the upper surface and chest greyish brown with a tinge of olive; primaries brown, their outer edges fringed with white; centre of the wings and secondaries grey, faintly speckled with spots of a darker colour; a faint pectoral band of white separates the feathers of the chest from those of the breast, which is light brownish; grey on the upper part, gradually passing into the scarlet of the hinder part and under tail-coverts; two centre tail-feathers dull chestnut brown tipped with black, two next on each side black, the remainder are black at the base and white at the tip, the middle portion being white, irregularly blotted with black.

Total length about 12 inches; *wing*, 5½ to 5¾; *tail*, 7¼.

Trogon elegans. Gould, Proceedings of Zool. Soc., Part II: p. 26.

THE beautiful bird here figured under the specific title of *elegans* is a native of Guatemala, a country rich beyond measure in zoological stores, and of the numberless productions of which a large proportion are yet to be characterized by the scientific.

The Graceful Trogon was received from Paris, to which city it was sent from Guatemala in company with several other species, as the *Trog. resplendens*, &c.

In point of affinity it is most nearly allied to the bird we have called *ambiguus*, the chief point of difference being in the decided barring of the outer tail-feathers, and in the stronger marking on the wings.

The lengthened tails of many of the Mexican Trogons seems a feature which distinguishes them from all the other Trogons of the new continent; but in this particular the *Trog. elegans* is especially conspicuous, possessing as it does a more lengthened tail than any other of the smaller species of this genus.

The female is readily distinguished from the male by her more obscure and less gaudy colouring, a description of which is given above.

The Plate represents a male and female.



TROGON AMBIGUUS.
Doubtful Trogon.

Drawn from Nature & on Stone by J. & E. Gould.

Printed by G. S. Tallman and Co.

TROGON AMBIGUUS.

Doubtful Trogon.

SPECIFIC CHARACTER.

Trog. facie, capite, guttureque nigris; pectore, cervice, dorso, tectricibusque caudæ superioribus viridibus; alis brunnescenti-nigris, in medio cinereis lineis gracilibus flexuosis nigris transversim notatis; remigibus externè albo fimbriatis; rectricibus duabus intermediis proximarumque duarum pogoniis externis cupreo-viridibus, harum pogoniis internis omniumque apicibus nigris, reliquis ad basin nigris, ad apicem albis, in medio albis maculis parvis numerosis sparsis nigris.

Rostrum flavum: tarsi brunnei.

Bill bright yellow; face, top of the head, and throat black; chest, back of the neck, back, and upper tail-coverts green; wings brownish black, the primaries having their outer edges fringed with white; secondaries and centres grey, finely marked with zigzag transverse lines of black; two middle tail-feathers green with bronzy reflections; the two next green with bronzy reflections on their outer edges only; the inner webs black; the three outer ones on each side black at their base and white at the tip, the middle portion being minutely dotted with black on a white ground; feet brown.

Total length about 12 inches; wing, 5½ to 5¾; tail, 7¼.

Trogon ambiguus. Gould, Proceedings of Zool. Soc., Part III.

THOSE who have had opportunities for studying nature are well aware how slight occasionally are the shades of difference between closely-allied species: it might be objected that these differences may be merely casual, or those of variety only; but when we find that they constantly obtain in two birds brought from two very distinct countries, and that by attending to their markings we should be able to assign to each its peculiar locality, the objection falls to the ground: it is true that the same species may differ in the intensity of its colouring, from the influence of temperature, air, and food, but it will seldom be found to vary in the character of its permanent markings.

It is upon these views that I have ventured to separate this bird from the *Trogon elegans*, to which it so closely assimilates that it requires an experienced eye to note the points of difference; these points consist in the obscure and pale, but finely-dotted appearance of the outer tail-feathers of *Trog. ambiguus*, in opposition to the strong and well-defined black bars on the same part in *Trog. elegans*; while at the same time the centre of the wing is much more finely and minutely barred in the former than in the latter. Had I seen only a single individual of each of these birds, I might have been in doubt on the subject; but my comparisons having been made upon individuals of all ages, I feel but little hesitation in assigning to the present bird, at least provisionally, the rank of a distinct species.

The localities in which these two birds appear to be indigenous are distinctly separated from each other; all the examples I have seen of *Trogon ambiguus* having been exclusively received from the northern states of Mexico, while the *Trogon elegans* is strictly limited to the southern.

The Plate represents an adult male.



TROGON COLLARIS, (Vieill.)
Collared Trogon.

Drawn from Nature & on Stone by J. E. Gould.

Engraved by C. B. Smith.

TROGON COLLARIS, Vieill.

Collared Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. suprâ aureo-viridis; reatricibus intermediis sex aureo-viridibus nigro apiculatis, pogoniis internis (nisi intermediarum duarum) nigris, cæteris nigro alboque fasciatis; remigibus nigris pogoniis externis albis, secundariis alæque mediæ plumis transversè flexuosim nigro alboque lineatis; auribus gulâque nigris; gutture aureo-viridi; pectore torque lunatâ albâ cincto; ventre caudæque tectricibus inferioribus coccineis.*

Irides saturatè brunneæ; rostrum flavo-aurantiacum; pedes saturatè cinerei.

Fœm. *brunnea est ubi mas aureo-viridis; reatricibus tribus extimis utrinque nigro lineolatis punctatisque alboque apiculatis.*

Rostrum brunnescenti-aurantiacum.

Male. Crown of the head and whole of the upper surface rich golden green; throat and ear-coverts black; two middle tail-feathers golden green; the two next on each side golden green on their outer edge, the inner webs being black, and the whole six tipped with black; the three outer feathers on each side strongly barred with black and white; primaries black with their outer edges white; secondaries and middle of the wing transversely rayed with zigzag markings of white and black; a semilunar collar of white separates the golden green of the chest, from the abdomen, which, with the under tail-coverts, is scarlet; bill rich yellowish orange; irides dark brown; feet dark grey.

Female. Head, chest, and upper surface brown; two middle tail-feathers rich chestnut brown, the two next on each side chestnut brown on their outer webs and black on the inner; the three lateral feathers on each side freckled with black and tipped with white; a band of white separates the brown of the chest from the abdomen, which is scarlet as in the male; bill brownish orange.

Total length, $9\frac{3}{4}$ inches; *bill*, $\frac{1}{2}$; *wing*, $4\frac{1}{4}$; *tail*, $5\frac{1}{4}$; *tarsi*, $\frac{1}{2}$.

Le Couroucou Rosalba. Le Vaill. Hist. Nat. de Couroucous, pl. 6.

Trogon collaris. Vieill. l'Encyclopédie Méthodique, vol. 3. p. 1362.

Spix, Av. Sp. Nov. vol. 1. p. 50.

THE rich golden green of its plumage, together with the brilliant scarlet of the breast, the strong and decided markings of the tail, and the perfect pectoral band of white, are the principal features by which this elegant species may be distinguished from its congeners; for although the *Trogon elegans* possesses almost the same style of markings, the transverse bars of black that vary its much more elongated tail are considerably finer and more numerous.

The *Trogon collaris* is found in Brazil and Cayenne, from any localities to the north of which countries I have never seen specimens. Although different members of these birds rarely associate, yet M. Natterer informs me that he once observed this species in company with the *Trogon variegatus*, on the banks of the Rio Negro; and he considers that in all probability they were effecting a partial migration, from one part of the country to another: the stomachs of several of this species which he examined contained the remains of fruits and caterpillars.

The plumage of the sexes differs considerably; those parts which in the male are rich golden green, being of a deep brown in the female: the tail of the latter is also extremely different, being entirely destitute of the strong bars of black and white which characterize that of the male.



TROGON VARIEGATUS; (Spix).
Purple-breasted Trogon.

Drawn from Nature & engraved by J. & E. Gould.

Printed by C. Hullmandel.

TROGON VARIEGATUS, Spix.

Purple-breasted Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. viridis*; capite suprâ pectoreque purpureis, illo frontem versus nigrescens; alis in medio minutè lineolis flexuosis nigris albisque notatis, remigibus saturatè brunneis pogoniis externis albis; rectricibus duabus intermediis chalybeo-viridibus nigro apiculatis, proximis utrinque duabus nigris ad marginem exteriorem viridibus, reliquis ad basin nigris apicem versus nigro alboque fasciatis apicis maculâ quadratâ albâ; corpore subtùs, præter pectus, saturatè coccineo; femoribus nigris.

Irides saturatè brunneæ; rostrum flavescenti-albidum; pedes cœrulescenti-cinerei.

Fœm. *Fuliginoso-cinereus*, caudâ brunneo tinctâ; alis in medio albo fasciatis; pectore albo; rectricibus extimis utrinque tribus pogoniis externis nigro fasciatis.

Male. Bill yellowish white; head and chest metallic purple merging into black on the forehead; ears, throat, back, and upper tail-coverts green; centre of the wings covered with very minute zigzag markings of black and white; primaries dark brown with their outer edges white; two middle tail-feathers steel green tipped with black, two next on each side black with their outer edges green; the three outer feathers on each side black at the base, and barred with white and black, ending in a square mark of white; whole of the under surface deep scarlet; thighs black; tarsi bluish grey; irides very dark brown.

Female. Head, chest, and upper surface dark sooty grey; centre of the wing distinctly barred with white; upper part of the abdomen white, merging into scarlet on the belly and under tail-coverts; tail deep sooty grey with a tinge of brown, the three outer feathers barred with black on their outer edges.

Total length, 9 inches; bill, 1; wing, 4; tail, 5; tarsi, $\frac{1}{2}$.

Trogon variegatus. Spix, Av. Sp. Nov. tom. 1. pl. xxxviii^a. p. 49.

I AM indebted to Mr. Swainson for the loan of three highly interesting examples of this species, from which specimens the figures on the accompanying Plate were drawn. I perfectly agree with this gentleman in considering the lower one to be a very old male; but with regard to the centre one I am rather uncertain, some appearances inducing me to believe it to be a young male in the state intermediate between youth and maturity, when it has acquired the perfect wings and tail but wants the brilliancy of the upper surface. I would here suggest that probably these birds may at some seasons, through the action of light and heat, lose the metallic lustre of their plumage, and consequently bear the sombre appearance of the centre bird in our Plate. Although not fully prepared to assert that this is the case, I am borne out in my opinion by discovering, on minutely examining the bird, that the wing-feathers are old, worn, and partly decomposed. The upper figure is without doubt that of an adult female.

On examining other specimens of this bird in the collection of M. Natterer, I find that it is subject to a very unusual and considerable variation of its markings; for although they all bear the general characteristics of the species, still scarcely two examples are to be found possessing strictly similar markings of the three lateral tail-feathers: in some specimens the black bars predominate, and in others the white; I have reason to believe, however, that in very old males the black bars become partially obliterated, as exhibited in the lower figure of the accompanying Plate.

The *Trogon variegatus* is a native of Brazil, where, M. Natterer informs me, it inhabits the woods bordering the rivers Negro and Paraguay. It was first discovered by Dr. Spix, in whose work is a good representation of the male: it will also form a conspicuous plate in Mr. Swainson's exquisite work on the birds of Brazil.



TROGON CALIGATUS, (Gould).
Booted Trogon.

From the collection of the British Museum

Painted by J. Gould

TROGON CALIGATUS, Gould.

Booted Trogon.

Trog. Capite, collo, pectoreque intensè violaceis; dorso, uropygio tectricibusque caudæ intensè et metallicè viridibus; alâ nigrâ, in medio cinereâ, lineisque delicatis-nigris undatim notatâ; primariis extus albo marginatis; reatricibus caudæ duabus intermediis, nec non proximis duabus ad barbam externam, intensè et metallicè viridibus, his ad barbam internam et ad apicem, illarumque apicibus nigris; ad has utrinquè proximâ nigrâ extus albo notatâ; reliquis alternatim albo nigroque fasciatis, ad apicem largè albis; lateribus cinereis; abdomine medio, crissoque aurantiacis; plumis femorum tarsorumque nigris, fimbriâ albâ anticè ad basin digitorum; rostro cærulescenti-corneo; pedibus olivaceis.

Head, neck, and chest deep violet; back, rump, and upper tail-coverts deep metallic green; centre of the wing grey, marked transversely with very minute, irregular, and wavy lines of black; remainder of the wing black, with the primaries edged externally with white; two centre tail-feathers and the outer web of the next on each side deep glossy green, the inner webs of the two latter, and the tips of all six black; the next on each side black, with a row of white spots on the outer margin; the three lateral feathers on each side alternately barred with black and white, and largely tipped with white; flanks grey; centre of the abdomen and under tail-coverts orange yellow; feathers of the thighs and tarsi black terminating in a fringe of white immediately above the toes; bill bluish horn colour; feet olive.

Total length, $8\frac{1}{2}$ inches; bill, 1; wing, $4\frac{1}{2}$; tail, 5; tarsi, $\frac{1}{2}$.

Trogon caligatus, Gould in Proc. of Zool. Soc. Part VI. 1838.

I REGRET exceedingly that it is not in my power to lay before my readers any account relative to the history of the elegant little Trogon figured in the accompanying Plate. My own specimen, which is a male, is the only one I have seen; I procured it during a recent visit to Paris, from a collection of South American birds: I was unable to obtain any information respecting its true habitat; but that portion of South America which extends from the Spanish Main to the River Amazon will in all probability ultimately prove to be its native locality.

It is one of the least of the genus, and is rendered remarkable by the circumstance of the tarsi being thickly clothed down to the toes; the black bars on the outer tail-feathers are also broad, and well-defined; and, contrary to what obtains in every other species, these bars are not confined to the three lateral feathers, but the outer web of the fourth partakes of the same character, although to a less extent.



TROGON ATRICOLLIS, (Vieill.)
Black-throated Trogon.

Drawn from Nature & en. Gravé by J. B. S. Le Vaillant.

Printed by G. Bligny.

TROGON ATRICOLLIS, Vieill.

Black-throated Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. vertice, dorso, pectoreque viridibus; alis in medio nigris cinereo maculatis; remigibus nigris pogoniis externis albo fimbriatis; auribus guttureque nigris, hoc posticè albo obsoletè cincto; pectore ventrequè aurantiaco; reatricibus duabus intermediis subcupreo-viridibus nigro apiculatis, duabus proximis utrinque nigris pogoniis externis viridi fimbriatis, cæteris prope rhachin nigris pogoniis albo nigroque fasciatis et ad apicem albis.*

Fœm. *Capite, dorso, gutture, reatricibusque sex intermediis brunneis, his nigro apiculatis; remigibus cæteris obsoletius fasciatis; ventre minus aurantiaco.*

Rostrum flavum olivaceo nebulosum.

Male. Beak yellow clouded with olive; throat and ear-coverts black; chest, top of the head, and the whole of the upper surface green; the two middle feathers of the tail are green with slight bronzy reflexions, the two next on each side are black, with their extreme outer edges of the same colour as the two middle ones, the tips of the whole six being black; the three outer ones on each side are regularly barred with black and white on their outer edges and slightly so on their inner ones, while their centres are black and their tips white; centre of the wings beautifully freckled with grey on a black ground; primaries black, with their extreme outer edges white; under surface fine orange, separated from the black of the throat by an obscure half band of white; feet brown.

Female. Head, throat, upper surface, and six middle tail-feathers brown, the latter slightly tipped with black; the remaining tail-feathers as in the male, but not so regularly barred; the centre of the wings freckled with brown on a black ground; the primaries black margined on the outer edges with white; under surface orange, but less pure than in the male.

Total length about 9 or 10 inches; *wing*, 4½; *tail*, 6.

Male. *Yellow-bellied Green Cuckoo.* Edw., vol. 7. pl. 331. p. 256.

Courucou aranga. LeVaill., Hist. Nat. des Couroucous, pl. 7. le mâle adult, pl. 8. la jeune, et pl. 15. le mâle bicoloré.

Courucou aranga. Vieill., 2nd edit. du Nouv. Dict. d'Hist. Nat., tom. 8. p. 318.

Female. *Courucou à queue rousse.* Buff., vol. vi. p. 293. Pl. Enl. 736.

Trogon rufus. Lath., Ind. Orn., 1. 209. Gm. Linn. 1. 404.

Rufous Curucui. Lath., Gen. Hist., 2nd edit., vol. 3. p. 309. pl. 49.

FIGURES of both sexes of this species have graced the pages of many ornithological publications, in almost every one of which it has been subjected to a different name. The female, from the dullness of her colouring when compared with her gaily-attired mate, has, in most instances, been characterized as a distinct species; and had not the illustrations of this bird been tolerably good, it would have been unsafe to have quoted so many synonyms as are recorded above.

I am induced to believe that the *Yellow-bellied Green Cuckoo* of Edwards is identical with the male, while the female is represented by Buffon in his *Planches Enluminées* under the title of *Courucou à queue rousse*; it is also the *Rufous Curucui* of Dr. Latham.

In the splendid work of LeVaillant will be found figures of both the sexes under the name of *Courucou aranga*, which name has been followed by Vieillot, who has figured the male in the second edition of his *Nouveau Dictionnaire d'Histoire Naturelle*, under the scientific name of *Trogon atricollis*. Although this latter name has not, perhaps, a strict claim to priority, yet in a case like the present, where the female has been described as a distinct bird from the male, and as it appears doubtful whether the latter is identical with the old *Trogon viridis*, I have thought it best to follow Vieillot in giving to this species the specific title which he has applied to it.

Habitat, Guiana, Cayenne, and the banks of the Amazon.

The Plate represents both the male and female.



LITTLE TROGON.
Trogon meridionalis (Swainson)

Drawn from Nature on Stone by J. B. E. Gould.

Printed by G. Baldwin.

TROGON MERIDIONALIS, Swains.

Little Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. capite pectoreque purpureis, aliquando viridi tinctis; auribus guttureque nigris; dorso saturatè aureo-viridi; alis nigrescenti-brunneis, remigibus albo marginatis; secundariis tegminibusque pulverulenti-cinereis; ventre aurantiaco; rectricibus intermediis duabus duarumque proximarum utrinque pogoniis externis viridibus, harum pogoniis internis nigris, his omnibus nigro apiculatis, reliquis albo nigroque fasciatis.*

Rostrum plumbeum, ad apicem pallidiùs; pedes saturatè plumbei.

Fœm. *saturatè cœruleo-canus, ventre aurantiaco; alis nigris, secundariis tegminibusque albo transversim lineatis; remigibus tribus extimis utrinque ad basin nigris, pogoniis externis albis nigro fasciatis.*

Male. Crown of the head and chest rich purple, changing to greenish purple in some specimens; throat and ears black; back and upper tail-coverts dark green tinged with gold; wings blackish brown, the primaries edged with white, secondaries and lesser wing-coverts finely powdered with grey; breast and under parts rich orange; middle tail-feathers deep green, two next on each side green on their outer webs and black on the inner, all six tipped with black, three outer feathers on each side strongly barred with lines of black and white; bill lead colour, lighter at the tip; feet dark lead colour.

Female. Whole of the head, chest, back, and six middle tail-feathers dark bluish grey; the three lateral feathers on each side black at their base, their outer edges white barred with black; wings black, secondaries and lesser wing-coverts finely marked with transverse lines of white; under surface orange; bill dark horn colour.

Total length, $8\frac{3}{4}$ inches; *bill*, 1; *wing*, $4\frac{1}{2}$; *tail*, $4\frac{3}{4}$; *tarsi*, $\frac{1}{2}$.

Trogon meridionalis. Swains.

——— *sulphureus.* Spix, Av. Sp. Nov., vol. 1. pl. xxxviii. p. 48.?

THIS species is very sparingly dispersed over the northern parts of Brazil, but is more abundant in Cayenne, Trinidad, and the adjacent islands. It is one of the commonest species in our cabinets, there being few collections sent from the last-named countries which do not contain examples.

The birds figured by Dr. Spix under the name of *Trogon sulphureus* are in all probability intended for this species, but in several particulars do not accord with it: I have therefore considered it best to adopt the name assigned to it by Mr. Swainson, who has paid much attention to the South American members of this group.

The sexes offer the usual differences in the colour of their plumage, the male being clothed above with rich green, while the female has the same parts dark bluish grey: the young during the first year are like the female.



TROGON MELANOPTERUS, (Swains)
Black-winged Trogon

Drawn from Nature & on Stone by J. E. Gould.

Printed by C. Billman.

TROGON MELANOPTERUS, Swains.

Black-winged Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. capite suprâ guttureque violaceo purpureis; auribus gulâque nigris; dorso uropygioque metallicè viridibus; caudæ tectricibus superioribus purpureis; reatricibus duabus intermediis viridibus purpureo tinctis, proximis duabus utrinque pogoniis, externis viridescenti-purpureis internis nigris, his omnibus nigro apiculatis, cæteris ad basin nigris ad apicem albis; alis nigris; ventre tectricibusque caudæ inferioribus aurantiaco-flavis.*

Irides saturatè brunneæ; rostrum cærulescenti-cinereum, apicem versus subflavescens; pedes cærulescenti-cinerei.

Fœm. *Suprà et ad pectus saturatè plumbeo-cinereus; alis brunnescenti-nigris, secundariis scapularibusque albo transversim strigatis; reatricibus brunnescenti-nigris, extimarum utrinque trium apicibus fasciâque pogonii interni albis.*

Rostrum quàm in mare saturatiùs.

Male. Bill bluish grey inclining to yellow at the tip; crown of the head and chest rich violet purple, throat and ear-coverts black; back and rump rich metallic green; upper tail-coverts purple; two middle tail-feathers green with a tinge of purple, two next on each side black on the inner web, and greenish purple on the outer, the whole six tipped with black; the three outer feathers on each side black at their base and white at their tips; wings black; abdomen and under tail-coverts rich orange yellow; feet bluish grey; irides dark brown.

Female. Bill as in the male but darker; head, chest, and all the upper surface deep leaden grey; wings brownish black; secondaries and scapularies transversely striated with fine lines of white; abdomen and under tail-coverts orange; six middle tail-feathers brownish black, the three outer on each side the same, but tipped with white and having bars of the same colour on their inner webs.

Total length, 10½ to 11½ inches; bill, 1½; wing, 5½ to 5¾; tail, 6½; tarsi, ¾.

Trogon violaceus, viridis, curucui, Auct.

Couroucou de la Guiane. Buff. Pl. Enl. 765? young male.

————— *Cayenne. Ibid. 766? female.*

ALTHOUGH I myself entertain no doubt that the *Trog. violaceus*, *Trog. viridis*, and *Trog. curucui* of different authors all refer to this bird, still the descriptions are so imperfect as to defy all attempts to assign it with any degree of certainty to either of them; and in consequence of this intolerable confusion I am induced to adopt Mr. Swainson's name of *melanopterus* for this common and well-known species.

The *Trogon melanopterus* appears to have a more extensive range than most other species, as it is dispersed, although but sparingly, through a great portion of the Brazils, and several of the West India Islands adjacent to the continent: I would remark, however, that the bird found in the islands is somewhat more diminutive in all its proportions than those from the continent, yet in every other particular they so strikingly accord as, in my opinion, to render their separation unnecessary.

This species gives a preference to dense and almost impenetrable forests, and like the other members of its race is solitary and unsocial in its habits. The male may be distinguished from all others by its large size and by the rich violet colour of its head and chest. The female is more sombre in her colouring, those parts being of a dusky grey which in the male are resplendent green and violet. The young male during the first year resembles the female; and I have frequently observed that while undergoing the changes from youth to maturity, it exhibits a blending of the colouring of the mature male with that of the female, assuming the rich colouring of the head and back, without having exchanged either the whole or any portion of the barred tail-feathers; hence, no doubt, has arisen the confusion among the older authors with respect to this bird, in consequence of their not being acquainted with its immature changes.

In the stomachs of some specimens of this bird which M. Natterer examined, were found the remains of fruit, and an insect nearly allied to *Mantis*.



TROGON MELANOPTERUS, (Swains.)
Black-winged Trogon.
Young Male.

Drawn from Nature & engraved by J. G. Cook.

Printed by C. Bulfinch.

TROGON MELANOPTERUS, Swains.

Black-winged Trogon.

(Young male.)

IN the foregoing Plate I have illustrated an adult male and female of this fine species, and in the description I have mentioned the great difference in the colouring of the sexes, and the circumstance of the plumage of the young male of the year being strictly similar to that of the female ; the present Plate represents a young male in the intermediate state, when, as will be perceived, it has partially acquired the rich purple of the head, and the mature tail, with the exception of one feather, which still retains the characteristic markings of immaturity. I would here repeat that the adult male of this species has the three outer tail-feathers on each side black at their base with tips of pure white, while the same feathers in young males of the year, and in the females at all ages, are strongly barred with black and white. These changes are always effected by the acquisition of new feathers.



TROGON MELANOCEPHALA.
Black-headed Trogon.

Drawn from Nature & on Stone by J. & E. Gould.

Printed by G. Hallenbeck.

TROGON MELANOCEPHALA.

Black-headed Trogon.

SPECIFIC CHARACTER.

Trog. capite, gutture, pectoreque nigris; dorso caudæque tectricibus superioribus saturatè viridibus purpureo parum tinctis; alis caudæque nigris, rectricibus intermediis duabus viridi tinctis, extimis utrinque tribus maculâ quadratâ albâ apicali notatis; ventre tectricibusque caudæ inferioribus aurantiacis.

Rostrum cærulescenti-cinereum.

Bill bluish grey; whole of the head, occiput, throat, and chest black; back and upper tail-coverts deep green with a tinge of purple; wings black; breast and under tail-coverts orange; tail black, the two middle feathers tinged with green, and the three outer ones on each side black, tipped with a square spot of white.

Total length, $11\frac{1}{2}$ inches; *bill*, 1; *wing*, $5\frac{1}{2}$; *tail*, 6; *tarsi*, 1.

Trogon melanocephala. Gould, Proceedings of Zool. Soc., Part III.

A SINGLE specimen of this new *Trogon* formed part of a series of birds collected in the neighbourhood of Tamaulipas, a district of Mexico situated between Vera Cruz and the Bay of Honduras. Although it possesses several characters by which it may be distinguished from all others of its race, the most novel and striking feature is the colouring of the head and chest, which is uniform dull black, in consequence of which I have given it the specific appellation of *melanocephala*. The specimen above mentioned is now in the collection of the Zoological Society of London, where it will be at all times available to those who may wish to examine it personally. I regret to add that it was much mutilated, although not to such an extent as to prevent me from making an accurate drawing of it. I feel confident that the specimen is that of a fully adult male, and that in point of affinity it is closely allied to *Trog. melanopterus*, from which, independently of its black head, it may readily be distinguished by having less white on the three outer tail-feathers, and by the square manner in which the white is joined to the black.



TROGON CITREOLUS, (Gould).
Lemon breasted Trogon

TROGON CITREOLUS, Gould.

Mas. *Trog.* *vertice, collo, dorso, guttureque cærulescenti-viridibus; reatricibus duabus intermediis ad apicem, proximarum duarum utrinque pogoniis internis, reliquisque ad basin nigris, his apicem versus albis; ventre citrino in aurantiacum vergente; alis brunnescenti-nigris, retri-cum pogoniis externis albo fimbriatis; rostro cærulescenti-corneo; pedibus brunneis.*

Fœm. *Capite, gutture, dorsoque saturatè cinereis; reatricibus sex intermediis brunnescenti-nigris; in cæteris mari simillima.*

Male. Crown of the head, neck, back and throat bluish green; tips of the two middle tail-feathers, the internal web of the two next on each side, and the base of the remainder black, the rest of each feather white; abdomen lemon-yellow passing into orange; wings brownish black, the outer webs of the primaries fringed with white; bill bluish horn colour; feet brown.

Female. Head, throat and back dark grey; six middle tail-feathers brownish; in other respects the same as in the male.

Total length, $10\frac{1}{2}$ inches; *bill*, 1; *wing*, $5\frac{1}{2}$; *tail*, 6; *tarsi*, $\frac{3}{4}$.

Trogon citreolus, Gould in Proc. of Zool. Soc. Part III. 1835, p. 30.

THIS interesting and very rare Trogon is a native of Mexico, and may be distinguished from all other known species by the delicate lemon-yellow of the under surface, by the greater extent of the white on the lateral tail-feathers, and by the uniform colouring of the central portion of the wing.

The birds figured in the accompanying Plate are an immature male, and an adult female. When more fully adult, the male has the whole of the head, neck, chest, and upper surface of an uniform rich green. The specimens from which the above description and the figures are taken form a part of the collection of the Zoological Society, in which are also contained nearly all the species represented in the present Monograph.



TROGON AURANTIUS, (Spix.)
Orange-breasted Trogon

Drawn from Nature & in Stone by J. E. Gould

Engraved by C. Heath

TROGON AURANTIUS, Spix.

Orange-breasted Trogon.

Mas. *Trog. vertice, pectoreque violaceo-ceruleis nitore viridi, gutture nigrescenti; dorso et uropygio intensè viridibus, hinc cærulescenti; alis nigris, in medio lineis delicatis cinereis undatim striatis; primariis albo extus marginatis lateribus cinereis; abdomine medio crissoque splendidè aurantiacis; reatricibus caudæ duabus intermediis intensè viridibus; utrisque duabus proximis nigrescenti-fuscis extus viridi lavatis, his atque illis ad apicem albis; reatricibus tribus externis nigrescenti-fuscis per dimidium basale, dimidio apicali albo; rostro lividè corneo; pedibus plumbeis.*

Fæm. *Capite, corpore suprâ, gutture, pectore, lateribusque nigrescenti-cinereis; caudâ nigrescenti-cinereâ, reatricibus intermediis ad apicem nigerrimis, tribus externis albo extus marginatis, apicibusque albis; alâ mediâ albo striatâ; abdomine medio, crissoque aurantiacis; rostro obscurè corneo, ad apicem pallidiore; pedibus plumbeis.*

Male. Crown of the head and chest violet blue, with green reflections, passing into brownish black on the throat; back and rump rich dark green inclining to blue on the latter; wings black, with the centre very finely striated with greyish white, and the primaries margined on the outer edges with white; flanks grey; centre of the abdomen and under tail-coverts rich orange yellow; two centre tail-feathers rich green; the two next on each side blackish brown, tinged with green on their outer webs, and all six tipped with black; the three lateral feathers on each side blackish brown at the base, and pure white for the remainder of their length; bill blueish horn-colour; feet lead colour.

Female. Head, all the upper surface, throat, chest, flanks and tail dark blackish grey, the middle feathers of the latter tipped with jet black, and the three lateral ones on each side margined on their external webs, and tipped with white; centre of the wing striated with white; centre of the abdomen and under tail-coverts orange yellow; bill dark horn colour, becoming lighter at the point; feet lead colour.

Total length, 10½ inches; bill, 1; wing, 5; tail, 6; tarsi, ½.

Trogon aurantius, Spix, Av. Sp. Nov., tom. i. p. 47. tab. xxxvi.

I HAVE but little hesitation in referring the present beautiful species to the *Trogon aurantius* of Spix, and this opinion coincides with that of my friend Mr. John Natterer, who when in London examined my specimens, and informed me that it was not uncommon in the woods near Rio de Janeiro: I have myself received it from various parts of the Brazils, which country would appear to constitute its natural habitat. Much difference exists in the colour of the upper surface of different specimens, particularly in the head and throat; some having those parts of a rich violet purple, while others have the same parts of a rich metallic green; but as I find no difference in their relative admeasurements, I am led to regard them as merely varieties of the same species. The plumage of the young male resembles that of the female, but the central tail-feathers are at all times glossed with green on the upper surface: they are however apt to puzzle the ornithologist unless he has made himself acquainted with the peculiar changes of the tribe, from the circumstance of the feathers of the body frequently undergoing a change before those of the wings and tail. I have a specimen in my collection, in which an almost perfect change has taken place in the plumage of the body, its tint being nearly as rich as that of the adult: this specimen is also rendered more remarkable by the centre of the wing having assumed the fine and minute markings of maturity, while the tail resembles that of the female, in which the white only occupies the outer webs and extreme tips of three lateral feathers.

Habitat. Brazils.

The Plate represents a male and female of the natural size.



TROGON SURUCURA; (Vieill.)
Surucua Trogon.

Drawn from Nature & on stone by J. & L. Smith.

Printed by C. Hullmandel.

TROGON SURUCURA, Vieill.

Surucua Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. vertice, cervice, pectoreque iridescenti-viridibus; facie guttureque nigris; dorso saturatè iridescenti-aureo-viridi in cæruleum ad uropygium vergente; rectricibus intermediis duabus cærulescenti-viridibus, duabus proximis utrinque pogoniis externis cærulescenti-viridibus internis nigris, harum omnium apicibus nigris, reliquis dimidio basali nigro apicali albo; remigibus nigrescenti-brunneis, albo ad pogonia externa fimbriatis; secundariis alâque suprâ nigro alboque lineolatim punctatimque variis; abdominis medio tectricibusque caudæ inferioribus coccineis.*

Irides saturatè rufescenti-brunneæ; rostrum flavescenti-albidum; pedes saturatè brunnei.

Fœm. *Fuliginoso-cinerea; ventre imo caudæque tectricibus inferioribus coccineis; alis brunnescenti-nigris, remigibus albo fimbriatis, secundariis plumisque cæteris cinereo-albido fasciatis; rectricibus nigrescenti-brunneis; intermediis sex nigro apiculatis, reliquis albo fimbriatis nisi basin versus pogoniorum internorum.*

Rostrum cinereo-albidum.

Male. Crown of the head, back of the neck, and chest changeable green and violet; throat and face black; back and upper tail-coverts deep changeable golden green, inclining to blue on the rump; the two middle tail-feathers bluish green, the two next on each side with their outer webs only bluish green, the inner black, the whole six tipped with black; the three outer feathers on each side have their basal half black, the remainder white; primaries blackish brown bordered with white on their exterior edges; secondaries and upper part of the wing freckled with markings of black and white; centre of the abdomen and under tail-coverts crimson scarlet; bill yellowish white; irides deep reddish brown; feet dark brown.

Female. Whole of the head, neck, chest, back and rump sooty grey; lower part of the belly and under tail-coverts scarlet; wings brownish black, primaries edged with white; the secondaries and upper part of the wings transversely rayed with greyish white; six centre tail-feathers blackish brown tipped with black, three outer feathers on each side blackish brown margined on their exterior edges and partly so on their inner ones with white; bill greyish white.

Total length, $10\frac{1}{2}$ inches; bill, 1; wing, 5; tail, $5\frac{1}{2}$; tarsi, $\frac{3}{4}$.

Le Surucua. Azara, Voy. dans l'Amérique Méridionale, tom. iv. No. cclxx.

————— Ibid., Sonnini's Translation, tom. iv. p. 41.

Trogon Surucura. Vieill., L'Encyclopédie Méthodique, tom. 3. p. 1362.

I HAVE not the slightest hesitation in asserting this species of Trogon to be the *Surucua* of Azara, from whose elaborate work I am consequently induced to insert the following nearly literal translation.

After informing us that *Surucua* is the native name of this bird in Paraguay, he proceeds to state that "it is not common, and it does not quit the largest woods. It generally remains on the upper portions of the trees without descending to the lower branches or to the earth: it sits a long time motionless, watching for insects which may pass within its reach, and which it seizes with adroitness; it is not gregarious, but dwells either in solitude or in pairs; its flight, which is rapid and performed in vertical undulations, is not prolonged. These birds are so tame as to admit of a near approach; I have seen them killed with a stick. They do not migrate, and they are never heard except in the love season; their note then consists but of the frequent repetition of the syllables *pio* in a strong, sonorous and melancholy voice: the male and female answer each other. They form their nest on the trees by digging into the lower part of the nest of a species of ant known by the name of *cupiy*, until they have made a cavity sufficiently large, in which the female deposits in the month of September two white eggs according to some, and four according to others. I have seen the male clinging to a tree, after the manner of the Woodpeckers, occupied in digging a nest with his beak, while the female remained tranquil on a neighbouring tree."

Azara states that he has only seen this bird from Paraguay; I have, however, received it from the southern parts of the Brazils, and a single specimen formed part of the fine collection made by Capt. P. P. King during his survey of the Straits of Magellan. Although I have not been able to ascertain from what precise locality Capt. King's specimen was procured, I am inclined to believe that it has a more extensive range than is generally suspected.



TROGON MASSENA; *(Gould)*.
Prince Masenas Trogon.

Drawn from Nature & printed by J. E. Smith

Printed by C. Trueman

TROGON MASSENA, Gould.

Prince Massena's Trogon.

Mas. *Trog. vertice, corpore suprâ, pectoreque nitidè viridibus; loro, plumis auricularibus, et gutture nigris; alâ mediâ cinereâ nigro delicatè striatâ, primariis extûs albo marginatis; rectricibus caudæ duabus intermediis purpurco-viridibus, ad apicem nigris; reliquis nigris; pectore, corporeque subtûs coccineis; rostro flavo; pedibus cinereo-olivaceis.*

Fœm. *Vertice, corpore suprâ, gutture, pectore, abdomineque superiore intensè cæruleo-cinereis; abdomine imo, lateribus, crissoque coccineis, alis caudâque nigris; secundariis, tectricibusque alæ minoribus guttulis cinereis adspersis; mandibulâ superiore nigrâ, inferiore flavâ; pedibus fuscis.*

Male. Crown of the head, all the upper surface and chest fine green; lores, ear-coverts and throat black, gradually passing into the green; centre of the wing finely pencilled with black on a grey ground; primaries black, margined on their external webs with white; two centre tail-feathers purplish green, tipped with black, the remainder wholly black; breast and under surface rich scarlet; bill yellow; feet greyish olive.

Female. Crown of the head, the upper surface, throat, chest and upper half of the belly dark bluish grey; lower part of the belly, flanks and under tail coverts scarlet; wings and tail black, the secondaries and lesser wing-coverts powdered with extremely fine spots of grey; upper mandible black; lower mandible yellow; feet dark brown.

Total length, 14 inches; *bill*, $1\frac{1}{2}$; *wing*, $7\frac{1}{2}$; *tail*, 7; *tarsi*, $\frac{3}{4}$.

I BELIEVE I may safely assert that no example of this fine Trogon exists in any of the public or private collections of England. On the continent, however, I have had opportunities of examining specimens in the Museums at Vienna and Leyden, and in the fine collection of the "Jardin de Plantes," at Paris: Prince Massena also possesses several examples; among which there is a series consisting of the old and young male, and the female; and it is from these that my figures are taken.

In dedicating this species to Prince Massena, I am desirous of paying a just compliment to a nobleman ardently attached to the science of Zoology, and to acknowledge his many acts of kindness towards myself.

Habitat. Mexico.



TROGON MACROURA, (Gould).
Large-tailed Trogon.

Drawn from Nature & on Stone by J. B. Gould.

Printed by C. Bulfinch.

TROGON MACROURA, Gould.

Large-tailed Trogon.

Trog. capite, corpore suprà pectoreque splendidè aureo-viridibus, uropygio cærulescenti; loro, plumis auricularibus et gutture nigris; alis nigris, in medio lineis delicatis cinereis undatim striatis; primariis extùs albo marginatis; pectore albo fasciato; corpore subtùs intensè coccineo; caudâ nigrâ, reatricibus duabus intermediis viridescenti-purpureo splendentibus, nec non utrisque proximis duabus ad marginem externum; reliquis guttulis cinereis adspersis; rostro flavo; pedibus plumbeis.

Head, all the upper surface and chest rich golden green, tinged with blue on the rump; lores, ear-coverts and throat black, gradually passing into the golden green; wings black, with the centre finely striated with irregular wavy lines of greyish white; and the primaries margined externally with white; across the breast a band of white, beyond which all the under surface is of a rich fiery scarlet; tail black, the two centre feathers, and the external webs of the two next on each side glossed with greenish purple, the remainder powdered with very fine specks of greyish white; bill yellow; feet lead colour.

Total length, 13 inches; *bill*, $1\frac{1}{4}$; *wing*, $6\frac{1}{2}$; *tail*, 8; *tarsi*, $\frac{3}{4}$.

Trogon macroura, Gould in Proc. of Zool. Soc., Part VI. 1838.

THE specimen from which the accompanying drawing is taken was procured in Paris; it had a label attached, on which was the word "*Mexique*," and this was all the information I could obtain respecting it. I have since seen other examples in a collection sent from Carthagena, whence I am led to infer that the Caraccas, the Spanish Main, and the southern portions of Mexico are its true habitat.

In its colour it is so closely allied to the *Trogon melanurus*, that it might readily be mistaken for that species; but it is so much larger in all its measurements, that I feel confident it is specifically distinct, and have named it accordingly.



TROGON NIGRICAUDATA; (Swains)
Black-tailed Trogon.

TROGON MELANURUS, Swains.

Black-tailed Trogon.

Mas. *Trog. vertice, pectore summo corporeque suprâ, intensè aureo-viridibus; loro, plumis auricularibus, gulâque nigris, hâc colore in aureo viridi transeunte; pectore albo transversim fasciato; corpore subtùs pulcherrimè coccineo; alis nigris, in medio lineis delicatis albis striatis, primariisque extùs albo marginatis; caudâ nigrâ, rectricibus sex intermediis, purpureo et viridi tinctis; duabus externis extùs lineis obscuris albis striatis; rostro flavo; pedibus stramineis.*

Fœm. *Capite, corpore suprâ, gutture pectoreque intensè cinereis; alis nigris obscurè in medio striis albis notatis; caudâ nigrâ, rectricibus duabus externis extùs, crissoque coccineis.*

Male. Crown of the head, chest and all the upper surface dark golden green; space between the bill and the eye, ear-coverts and throat black gradually passing into the golden green; breast crossed by a band of white, beyond which all the under surface is rich fiery scarlet; wing black, the centre striated with fine wavy lines of white, and the primaries margined externally with the same colour; tail black, the six centre feathers tinged with purple and green, and the outer web of the lateral feather on each side faintly striated with white, as in the centre of the wing; bill yellow; feet straw yellow.

Female. Head, all the upper surface, throat and breast dark grey; wings and tail black, with a faint indication of the white striæ on the centre of the wing and the outer webs of the lateral tail-feathers; vent and under tail-coverts scarlet.

Total length, 12 inches; *bill*, 1½; *wing*, 6½; *tail*, 6½; *tarsi*, ½.

Le Couroucou d'Amérique mâle à ventre rose, Le Vaill. Hist. des Couroucous, Pl. 1.

————— *à ventre rose dans son premier âge*, Hist. des Couroucous, Pl. 2.

Couroucou à ventre rouge de Cayenne, Buff. Pl. Enl. 452. male, 737. female.

Trogon Curucui, Griff. An. Kingd. vol. vii. p. 474.

————— *melanurus*, Swains.

THE present bird is one of the oldest known and commonest species of the genus, but so much confusion has existed respecting the South American members of the group that I have been induced to adopt the specific title of *melanurus* given to this species by Mr. Swainson. Both sexes are figured by Le Vaillant in his "Histoire des Couroucous et des Barbus," Pls. 1 and 2, and he states it to be a native of Cayenne. I have myself frequently observed it in collections from Demerara, and if I mistake not from Trinidad. Mr. Natterer also informs me that he once, and only once, observed it on the banks of the River Paraguay; I am therefore led to consider that the interior of Demerara will constitute its natural habitat.

By mistake the name of *nigricaudata* has been inserted on the Plate instead of *melanurus*.



TROGON TEMNURUS (Temm.)
Cuba Trogon

Drawn from Nature & colored by J. A. S. Gould.

Printed by G. S. Barlow.

TROGON TEMNURUS, Temm.

Cuba Trogon.

SPECIFIC CHARACTER.

Trog. capite saturatè chalybeo-cæruleo; dorso alisque viridibus, harum secundariis ad apicem albo latè unifasciatis, remigibus nigris albo fasciatis; gutture pectoreque cinereis; ventre coccineo; reatricibus intermediis sex viridibus, ad apicem (pogoniis expansis) latè emarginatis, reliquis ad basin viridibus, in medio fasciâ albâ alterâque viridi notatis, ad apicem latè albis.

Rostrum sanguineum ad culmen nigro notatum; pedes brunnei.

Bill blood red with a broad culminal mark of black; whole of the head and ear-coverts deep glossy steel-blue; back and upper tail-coverts green; throat and breast light grey; lower part of the abdomen and under tail-coverts scarlet; upper part of the wings green, the secondaries being crossed near their tip with a broad bar of white; primaries black strongly barred with white; six middle tail-feathers green, each having the web at the tip elongated from the stem on each side, forming the end of the feather into a deep scollop; the three outer feathers on each side green at the base, succeeded by an alternate bar of white and green, and deeply tipped with white; feet brown.

Total length, $10\frac{1}{2}$ inches; bill, 1; wing, 6; tail, $6\frac{1}{2}$; tarsi, $\frac{1}{2}$.

Trogon temnurus. Temm. Pl. Col. 326.

So extremely scarce is this singular species in the collections of Europe, and so little information has been obtained relative to its history, that its habits and manners are totally unknown. The female, as far as I am aware, has never yet been described or even seen by any ornithologist. Its native habitat, Cuba, is I believe the most northern locality from which any of its race has been received, and it is to be hoped that ere long some enterprising naturalist will direct his attention to the country of which this bird is a native, and afford us some information respecting its economy. It was first figured in the Planches Coloriées of M. Temminck, who states that specimens form part of the collections of Leyden, Brussels, and Paris: these, with an imperfect skin in the possession of the Zoological Society, are, I believe, all the examples of this bird in Europe.

Upon looking at the markings of the wing, we cannot fail to be struck with their resemblance to those on the same part of several of the Woodpeckers; the peculiar termination of the tail also, together with its more attenuated bill, are features equally conspicuous, yet these must be considered as relations of analogy and not of affinity.



TROGON ROSEIGASTER, (Vieill.)
St Domingo Trogon.

TROGON ROSEIGASTER, Vieill.

Rosy-vented Trogon.

“ *T. supra viridi-aureus ; gulâ, jugulo, pectoreque griseo-viridibus ; corpore subtùs rosaceo ; re-
tricibus intermediis cœruleis ; lateribus extùs et apice albis ; rostro pedibusque flavis.*”

“ Crown of the head, neck, cheeks, mantle and upper tail-coverts brilliant aqua-marine green ;
throat, forepart of the neck and chest pearly grey, changing into aqua-marine green ;
under surface rosy red ; middle tail-feathers changeable bluish green ; lateral feathers
white on their exterior webs and tips ; wing-coverts finely rayed with greenish black and
white ; quills alternately barred with black and white ; bill and feet yellow.”

“ *Couroucou à ventre rouge de Saint Dominique*, Buff., Hist. Nat. des Ois.

“ *Le Couroucou à caleçon rouge, ou Le Couroucou Damoiseau*, Le Vaill., Hist. Nat. des Courou-
cous, pl. 13.”

Le Couroucou Damoiseau, T. roseigaster, Vieill., Tab. Ency. et Méth., troisième partie, p. 1359.

THIS species is so extremely rare that I have never been able to see a specimen in any collection, nor to learn anything respecting it ; but as I am perfectly satisfied of its being a good species, rather than omit it I have copied the figure published by Le Vaillant in his Hist. Nat. des Couroucous ; and also the short account he has there given of it.

“ This species comes from St. Domingo, and is alluded to by Buffon, who seems to have considered it a mere local variety of the *Couroucou à ventre rouge de la Guyane*. But I think that a comparison of our figure of this species with those of the species alluded to in its adult, as well as its young state, will convince any one of Buffon's mistake in this respect.

“ I am not aware whether the individual which forms part of my collection be male or female ; I know, however, for certain that it is an adult. It is surprising that M. le Chevalier Lefebvre Deshayes, who has given so long an account of this species, should have said nothing upon the differences of the sexes,—a kind of information in my opinion which would have been more instructive than what he tells us, when he says, that this bird with its beak reduces to powder sound wood when it cannot find worm-eaten wood to deposit its eggs in, which certainly seems like an impossibility. This species is very rare in collections, for I have only seen, in addition to the specimen in my own collection, two others in the collections of the late Abbé Aubry and Dr. Mauduit. It has never been in the collection of the Paris Museum, although Buffon is quite correct in saying that he received a figure and description of it.”

In the “ *Tableau Encyclopédique*,” above-quoted, M. Vieillot states that it is found in Mexico, but from my own knowledge of the group I am of opinion that he is mistaken on this point, and that he has confounded it with a species inhabiting that country. In its affinities it is most nearly allied to the *Trog. temmurus* ; the marking of the wing and other particulars being very similar in both species.

At Saint Domingo several names are applied to it ; in some of the provinces it is called *Caleçon rouge*, in others *Dame*, or *Demoiselle Anglaise* ; and also *Pie de Montagnes*, from its continually residing among the mountains.



TROGON RESPLENDENS.
Resplendent Trogon

TROGON RESPLENDENS.

Resplendent Trogon.

SPECIFIC CHARACTER.

Trog. cristatus; *tectricibus caudæ superioribus longissimis tripedalibus*; *suprà et ad guttur pectusque splendè aureo-viridis*; *ventre crissoque coccineis*; *rectricibus sex intermediis nigris, reliquis albis ad basin tantummodo nigris.*

Fœm. vel Junior. *Capite, gutture, pectoreque obscurè viridibus*; *dorso viridi*; *ventre cinerascenti-brunneo*; *crisso coccineo*; *capite subcristato*; *tectricibus caudæ superioribus brevibus*; *rectricibus externis albis nigro fasciatis.*

Rostrum flavum, in junioribus? nigrum; *tarsi brunnei.*

Beak gamboge yellow; head covered with long filamentous plumes forming a rounded crest; from the shoulders spring a number of lance-shaped feathers, which hang gracefully over the wings; from the rump are thrown off several pairs of narrow flowing plumes, the longest of which in fine adults measure from three feet to three feet four inches; the others gradually diminishing in length towards the rump, where they again assume the form of the feathers of the back; these plumes, together with the whole of the upper surface, throat, and chest, are of a most resplendent golden green; the breast, belly, and vent are of a rich crimson scarlet; the middle feathers of the tail black; the six outer ones white for nearly their whole length, their bases being black; feet brown.

Total length, from the bill to the end of the tail, 12 to 14 inches; *wing*, 8 to 9; *tail*, 8 to 9; *tarsi*, 1; length of longest plume about 3 feet.

The female or young of the year have only rudiments of the long plumes, seldom reaching more than an inch beyond the tip of the tail; the feathers of the crest are more rounded and not filamentous; the feathers of the shoulders but slightly lanceolate; the outer tail-feathers white barred with black, the centre ones black; the whole of the chest, throat, and head obscure green, the remainder of the upper surface bright green; the breast and belly greyish brown; vent fine scarlet; bill black.

Trogon resplendens. Gould, Proceedings of Zool. Soc., Part III.

——— *pavoninus.* Temm., Pl. Col. 372.

It is scarcely possible for the imagination to conceive anything more rich and gorgeous than the golden-green colour which adorns the principal part of the plumage of this splendid bird; or more elegant and graceful than the flowing plumes which sweep pendent from the lower part of the back, forming a long train of metallic brilliancy. Nature appears to have ordained that birds possessing unusual brilliancy of plumage should be inhabitants of retired and obscure situations; and in strict conformity with this law the Resplendent Trogon, by far the most beautiful of its tribe, is only to be found in the dense and gloomy forests of the southern states of Mexico, remote from the haunts of civilized man; which may, perhaps, account for its being so little known to Europeans until within the last few years, for although the long plumes were used to adorn the head-dresses of the ancient Mexicans, and at a later period were transmitted by the Spaniards from time to time to Europe, yet it is only very recently that we have become acquainted with the entire bird. I believe the first perfect example was received by the late Right Hon. George Canning: after that statesman's decease it passed into the hands of Mr. Leadbeater. The representation of this bird in the "Planches Coloriées" of M. Temminck is undoubtedly the first that was published; but the author has evidently confounded it with a nearly allied species discovered in Brazil, and figured in the "Avium Species Novæ," &c., of Dr. Spix.

I feel assured that all those who have noticed it under the name of *pavoninus* will, upon comparing it with the original bird described by Dr. Spix, fully agree with me in considering it as specifically distinct. I am induced to believe that the plumes of the species so named never extend more than a few inches beyond the tail, that it is devoid of crest, that the whole of the tail-feathers are black, and that its size is much inferior to that of *Trog. resplendens*.

Although the extreme brilliancy of the colours of this bird renders it impossible to give more than a faint idea of the beauty of the original, yet I trust that the accompanying Plate will not be devoid of interest, since it contains a figure of either the female or young male which has not before been delineated. Scarce as this bird has hitherto been, there are now few collections of any extent which do not contain examples.

Habitat Guatemala in Mexico, where it is called *Quesal*.

The Plate represents an adult male and a female or young male of the natural size.



TROGON PULCHELUS, (Gould)
Peruvian Trogon.

Plumage from the collection of the British Museum.

Painted by G. S. S. Gould.

TROGON PULCHELLUS, Gould.

Beautiful Trogon.

Trog. capite, gulâ, corpore suprâ humeris, tectricibus alæ, caudâque splendide aureo-viridibus ; primariis reatricibusque caudæ sex intermediis nigris ; reatricibus tribus externis albis et ad basin nigris ; abdomine, lateribus, crissoque coccineis ; rostro flavo ; pedibus plumbeis.

Head, throat, all the upper surface, shoulders, wing-coverts, and upper tail-coverts rich golden green ; primaries and six middle tail-feathers jet black ; the three lateral tail-feathers black at the base, and pure white for the remainder of their length ; abdomen, flanks, and under tail-coverts rich carmine red ; bill yellow ; feet lead colour.

Total length, 14 inches ; bill, $1\frac{1}{2}$; wing, $7\frac{1}{2}$; tail, 7 ; tarsi, $\frac{3}{4}$.

Trogon (Calurus) pulchellus, Gould in Proc. of Zool. Soc., Part VI. 1838.

FOR the discovery of this beautiful species science is indebted to M. D'Orbigny of Paris, who obtained it, together with many other rarities, during his travels in Peru. When recently at Paris, I was permitted by the Officers of the Zoological Department of the "Jardin de Plantes" to take a sketch and description of the specimen in the national collection, from which the accompanying drawing was executed.

No species of this group exceeds the present bird either in the richness of its colouring or in the elegance of its form. It differs from the Resplendent Trogon in being rather less in size ; in having an elevated tuft of feathers springing from the forehead and covering the nostrils and the greater part of the bill, instead of a rounded and compressed crest covering the whole of the head as in that species ; in the greater extent of the white on the three lateral tail-feathers, and in the prolonged upper tail-coverts exceeding the tail by about two inches only.

At the meeting of the British Association for the Advancement of Science, held at Liverpool in September 1837, I proposed the name of *Peruvianus* for this species ; but as their Report is not yet published, and Mr. Swainson has since characterized another species under that name, I have found it necessary to alter my specific appellation to *pulchellus* in order to prevent confusion.



TROGON PAVONINUS, (Spix.)
Peacock Trogon.

Drawn from Nature & on Stone by J. & E. Gould.

Printed by G. Hallmandel.

TROGON PAVONINUS, Spix.

Pavonine Trogon

SPECIFIC CHARACTER.

Mas. *Trog. corpore suprà, capite, gutture, pectore, scapularibusque splendenti-viridibus; alis caudâque nigris; caudæ tectricum superiorum intermediis duabus caudam longitudine subæquantibus; ventre tectricibusque caudæ inferioribus coccineis; femoribus tarsisque nigris viridi-splendentibus.*

Irides miniacæ; rostrum ad basin miniaceum ad apicem flavum; pedes ochracei.

Fœm. *Capite, gutture, pectoreque saturatè cinereo-brunneis viridi tinctis; ventre tectricibusque caudæ inferioribus coccineis; scapularibus dorsoque viridibus; alis caudâque brunnescenti-nigris, remigum pogoniis externis flavescentibus, reetricibus duabus extimis cinereo-albido obscurè fasciatis.*

Irides brunnescenti-miniacæ; rostri mandibula superior saturatè brunnea, inferior ad basin sordidè miniacea apicem versus in brunneum transiens.

Male. Head, throat, chest, shoulder of the wing and whole of the upper surface rich glossy green; upper tail-coverts green, the two centre feathers reaching the end of the tail but rarely exceeding it; wings and tail black; breast and under tail-coverts rich scarlet; feathers of the thighs and tarsi black with green reflections; irides dark carmine; feet ochre yellow; bill carmine at the base and yellow at the tip.

Female. Head, throat, and chest dark greyish brown tinged with green; upper part of the abdomen dark greyish brown, the lower part and the under tail-coverts deep scarlet; feathers of the thighs and tarsi black with green reflections; shoulders and whole of the upper surface including the upper tail-coverts, which nearly reach to the end of the tail, rich green; wings brownish black with the outer edges of the feathers buff; tail-feathers black, the two outer on each side obscurely rayed with greyish white; upper mandible dark brown, under mandible dusky carmine becoming brown at the point; irides brownish carmine.

Total length, $13\frac{1}{2}$ inches; bill, $1\frac{1}{2}$; wing, $7\frac{1}{2}$; tail, 7; tarsi, $\frac{3}{4}$.

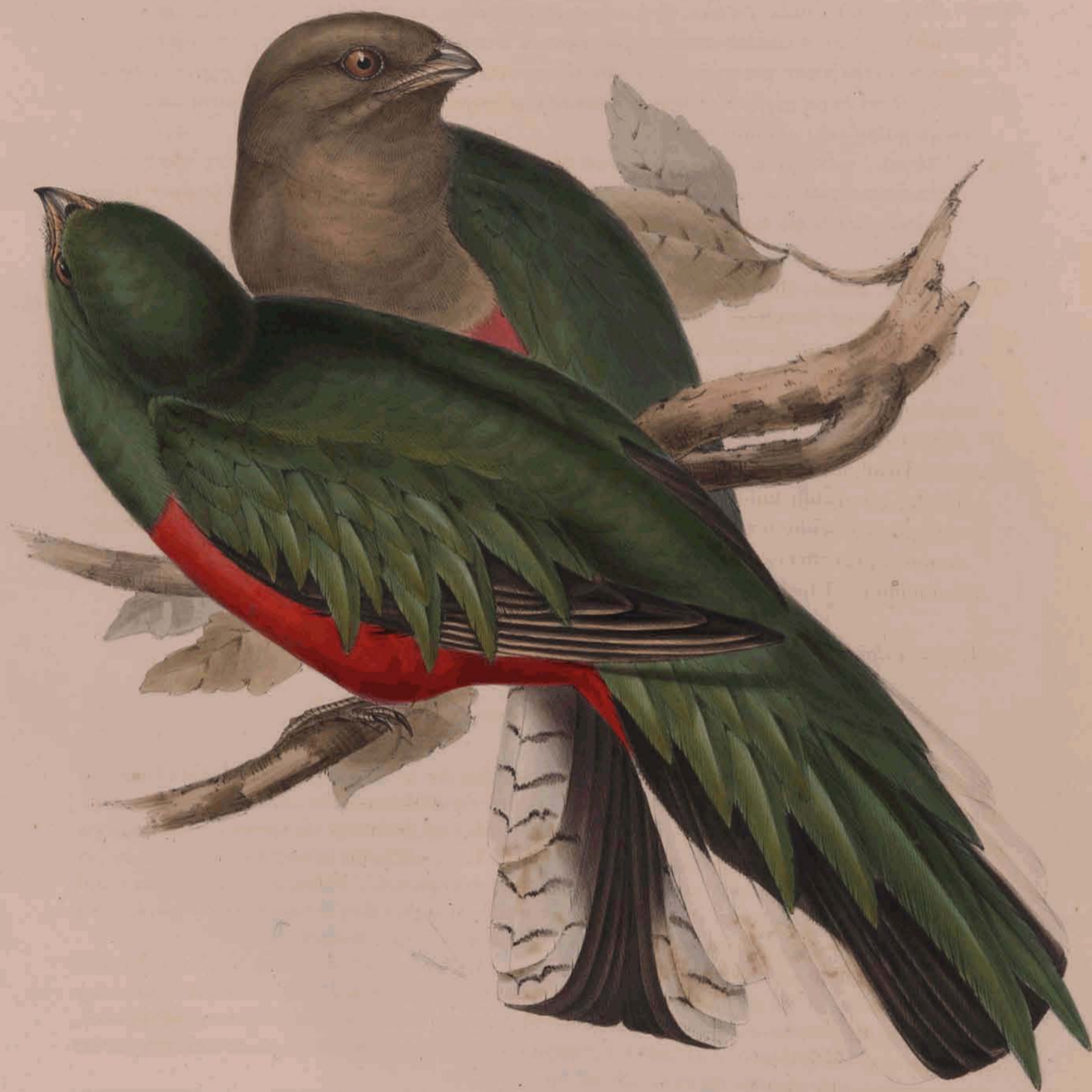
Trogon pavoninus. Spix, Av. Sp. Nov. vol. 1. pl. xxxv. p. 47.

THE *Trogon pavoninus* was first described by Dr. Spix in his work on the birds of Brazil. His account of it, however, is so meagre as to afford us but little insight into its history; and twelve years have now elapsed since the publication of his work without any additional information having been made known. Through the kindness of M. Jean Natterer of Vienna, I am enabled to illustrate both sexes of this species, from very fine specimens which he has confided to my care for that purpose. During his sixteen years' sojourn in the Brazils, M. Natterer had frequent opportunities of observing this bird in a state of nature; and he informs me that it inhabits the high woods bordering the upper parts of the river Amazon and the Rio Negro, where it is only seen among the highest branches of the trees.

Upon examining the contents of the stomach M. Natterer has almost invariably found it to consist of the fruit of a certain species of palm; he therefore concludes that this, together with various berries and stoned fruits, forms its subsistence. It arrives in the localities above mentioned when its favourite fruit is ripe; and when the trees no longer yield an adequate supply it retires again to other districts. In the nature of its food this bird differs from most of the other species, which are well known to subsist principally on insects; and its difference in this respect is accompanied by an equal diversity of form, the wings being more lengthy, the tail less abruptly truncated, the bill destitute of serratures, and the claws strong, curved, and admirably adapted for clinging.

In my description of the magnificent species from Guatemala which I have designated *resplendens*, I have pointed out the characters by which that bird may at all times be distinguished from the one now represented; it will therefore be unnecessary to repeat them here.

Although the females of this bird and of *Trogon resplendens* offer a considerable difference in their plumage from each other, yet they assimilate more nearly than do the females of most other species; for they both possess the rich glossy green plumage, and the upper tail-coverts are alike, but in the present bird they are not so elongated as in *Trog. resplendens*. The young males during the first year resemble the female.



TROGON FULGIDUS, (Gould)
Shining Trogon.

Drawn from Nature & on Stone by J. E. Gould.

Printed by C. Bulfinch.

TROGON FULGIDUS, Gould.

Mas. *Trog. capite, gulâ, pectore, tectricibus alarum, dorso, tectricibusque caudæ intensè aureo-viridibus; harum duabus caudam ipsam quoad longitudinem excellentibus; alis nigris, primariis extûs fusco marginatis; rectricibus caudæ sex intermediis omninò nigris, reliquis albis, et ad basin nigris; abdomine, lateribus, crissoque intensè sanguineis; rostro corneo, ad basin pallidiore; pedibus fuscis.*

Fœm. *Capite, collo, pectoreque viridescenti-olivaceis; corpore suprâ intensè viridi; alis nigris, rectricibus caudæ sex intermediis nigris; reliquis cineraceis fasciis tribus vel quatuor fuscis ornatis, et ad basin fuscescenti-nigris.*

Male. Head, throat, chest, wing-coverts, back, and upper tail-coverts deep golden green; the two longest of the upper tail-coverts rather longer than the tail; wings black, the primaries margined externally with brown; six centre tail-feathers wholly black; the three lateral feathers on each side black at the base, and pure white for the remainder of their length; abdomen, flanks, and under tail-coverts deep carmine red; bill horn colour, becoming lighter at the base; feet dark brown.

Female. Head, neck, and chest greenish olive brown; all the upper surface deep green; wings black; six middle tail-feathers black; the three lateral feathers brownish black at the base, and greyish white for the remainder of their length, the latter portion crossed by three or four irregular arrow-shaped markings of blackish brown; bill and feet as in the male.

Total length, 13 inches; *bill*, $1\frac{1}{4}$; *wing*, 7; *tail*, 6; *tarsi*, $\frac{3}{4}$.

Trogon fulgidus, Gould in Proc. of Zool. Soc. Part VI. 1838.

Two examples of this rare species, (an adult male and female,) are in the possession of Madame Goubie at Paris, to whose collection I was introduced through the kindness of Monsieur Florent Prevost. I am also indebted to Mr. John Leadbeater for an opportunity of comparing my drawing of the species with a bird in his collection which is the identical specimen referred to by M. Temminck in the letter-press of the bird he has called *Pavoninus*, and which he observes had not the lengthened plumes. Although Mr. Leadbeater's bird has lost the outer tail-feather on each side, has a more golden tint pervading the whole of the green, and a lighter-coloured bill, I am inclined to consider it identical with the bird here represented.

No doubt exists in my mind as to the specific value of the *Trogon fulgidus*, differing as it does from all the other members of the group; it may be distinguished from the *Trogon Pavoninus* of Spix by its rather larger size, by the male having the outer tail-feathers largely tipped with white, instead of being wholly black, and by the outer tail-feathers of the female being greyish white, crossed with dark brown on both webs instead of being spotted with white on the outer web and tip only.

I am unable to state the precise locality inhabited by this species; but judging from the circumstance of its being contained in a collection which I believe had been received from Guiana, we may reasonably conclude that that country is its native habitat.



TROGON NEOXENUS; (Gould).
Welcome Trogon.

From the collection of the British Museum

British Museum

TROGON NEOXENUS, Gould.

Welcome Trogon.

(Young Male.)

Mas. jun. *Trog. capite, collo, pectore femoribusque cineraceo-fuscis; plumis dorsi, uropygiique, tectricibus alæ, superioribusque caudæ, ad basin fuscis, ad apicem metallicè viridibus; alis fuscis, primariis ad basin extus albo marginatis; caudâ metallicè caruleâ, rectricibus utrinque tribus externis ad apicem largè albis; abdomine crissoque splendide coccineis; rostro plumbeo; pedibus fuscis.*

Head, neck, breast and thighs greyish brown; all the feathers of the back, rump, upper tail- and wing-coverts brown at the base, and deep shining metallic green at the extremity; wings brown, the primaries margined on the base of the exterior web with greyish white; tail deep metallic blue, the three lateral feathers on each side largely tipped with white; abdomen and under tail-coverts rich scarlet; bill lead colour; feet brown.

Total length, $13\frac{1}{2}$ inches; bill, 1; wing, $7\frac{3}{4}$; tail, 8; tarsi, $\frac{3}{4}$.

Trogon neoxenus, Gould in Proc. of Zool. Soc. Part VI., 1838.

I HAVE seldom been more gratified by the sight of any species of this beautiful family than I was on the receipt of the bird figured in the accompanying Plate, which exhibits characters of the highest interest, although the specimen (the only one I have seen) is evidently in a state of immaturity. Judging from analogy, I should conceive that it is the young male of an aberrant species of that splendid minor group, to which the sub-generic name of *Calurus* has been applied; and that the adult, which is at present unknown, will, whenever it is discovered, prove to be a bird of very great beauty. The individual represented was received from Mexico by John Taylor, Esq., by whom it was presented to the Zoological Society of London.

The difficulty of assigning a specific name to any species of which the young only has been seen, has induced me to propose that of *neoxenus* (welcome stranger) for the present bird, adult examples of which will be sought for with the highest interest by every ornithologist.



TROGON NARINA; (Shaw).
Narina Trogon.

TROGON NARINA, *Levaill.*

Narina Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. splendenti-viridis*, ventre sanguineo; alis brunneis, secundariis tegminibusque cinereo-albido pulverulentis, harum pogoniis externis metallicè viridi tinctis; rectricibus duabus intermediis saturatè purpureo-viridibus, duabus proximis utrinque olivaceo-viridibus, reliquis saturatè viridibus ad apices latè albis.

Rostrum flavum cœruleo tinctum; pedes pallidè brunnescenti-flavi.

Fœm. *mari simillima*, differt orbitis gutture, pectoreque rufo-brunneis, hâc pallidiore roseoque parùm tinctâ, ventre tectricibusque caudæ inferioribus saturatè roseis.

Male. Bill yellow with a tinge of blue; whole of the head, throat, chest, shoulders, back, and upper tail-coverts resplendent green; breast and under surface bright blood red; the wings brown, the greater coverts and secondaries powdered with greyish white, the outer edge of each feather having a tinge of metallic green; two centre feathers of the tail dark purplish green, two next on each side olive green, the three outer on each side dark green at their base, largely tipped with white; feet light brownish yellow.

Female. The upper surface and tail closely resemble those of the male; round the eye and throat rufous brown, becoming paler on the chest, which is slightly tinted with rosy pink; lower part of the abdomen and under tail-coverts deep rose red.

Total length, $11\frac{1}{2}$ inches; bill, $1\frac{1}{2}$; wing, $5\frac{1}{2}$; tail, $6\frac{1}{2}$; tarsi, $\frac{3}{4}$.

Trogon Narina. Le Vaill., Hist. Nat. des Ois. d'Afrique, pl. 228 et 229.

Vieill., 2nd Edit. Nouv. Dict. d'Hist. Nat., tom. 8. p. 318.

WHILE the tropical regions of Asia and America are inhabited by numerous species of this group, the whole continent of Africa has not, up to the present time, presented us with more than a single one, the *Trogon Narina*, which, we believe, was first discovered by Le Vaillant, whose description in his elaborate work on the birds of Africa affords us much information respecting its habits and economy.

M. Le Vaillant states that the favourite haunts of the *Trogon Narina* are the densest parts of the forest, where it sits on a low dead branch nearly motionless during the middle part of the day, it being only in the morning and evening that it displays its activity in the capture of its food, which consists chiefly of locusts, beetles, and other winged insects, to which are added the larger kinds of caterpillars. Its flight is said to be short and rapid; darting from its favourite perch with unerring aim at each passing insect, and either returning to its former station or perching near the spot. This mode of life has procured for the *Trogon Narina* the character of a sad, melancholy and stupid bird.

It frequents the large woods called Autemiquoi, and those on the banks of the river Gamtoos in the Caffre country. The nest is placed in the holes of trees; the eggs are four in number, almost round, and of a rosy white; the female sits for twenty days; and the moment the young are excluded they take flight and follow their parents for a considerable period. During the pairing-season the male frequently utters a melancholy-sounding cry, but at other times he is silent.



TROGON REINWARDTII; (Temm.)
Reinwardt's Trogon.

TROGON REINWARDTII, Temm.

Reinwardt's Trogon.

SPECIFIC CHARACTER.

Trog. capite, dorso, tectricibusque caudæ superioribus saturatè viridibus; alis in medio scapularibusque flavo transversim lineatis; remigibus nigris, pogoniis externis albis; gutture flavo; auribus, colli lateribus, pectoreque olivaceo-brunneis; ventre flavo ad latera aurantiaco; rectricibus cærulescenti-atris iridescentibus, tribus externis utrinque apicem versus albis.

Rostrum aurantiaco-rubrum; regio ophthalmica nuda cærulea; tarsi flavi.

Bill bright reddish orange; top of the head, back, and upper tail-coverts dark green; six middle tail-feathers bluish black with green reflexions; the bases of the three outer feathers on each side the same colour as the middle ones, the remaining portions being white; centre of the wings and shoulders green, transversely rayed with fine lines of yellow; primaries black, with the exception of the outermost web, which is white; throat yellow; ear-coverts, sides of the neck, and chest olive brown; belly and under surface yellow, becoming rich orange on the sides; tarsi yellow; bare skin round the eye blue.

Total length from $12\frac{1}{2}$ to $13\frac{1}{2}$ inches; tail, $7\frac{1}{2}$; wing, $5\frac{1}{2}$.

Trogon Reinwardtii. Temm., Pl. Col. 124.

FROM the circumstance of the present bird and the *Trogon narina* of Southern Africa being the only species yet discovered in the Old World possessing a green plumage, it would appear that they approximate more nearly to the American Trogons, in which this feature is so conspicuous, than do any of their congeners, though at the same time they possess characters which readily distinguish them, viz. the absence of serratures along the edges of the bill and of bars on the tail.

The native habitat of this species are Java and Sumatra, where it was discovered by Professor Reinwardt, that truly worthy and justly celebrated naturalist, whose exertions have added so much to the stores of science, and after whom it has been named.

The *Trogon Reinwardtii* offers a singularity to our notice in the great similitude of the plumage of the sexes, the female possessing the same characteristic markings as the male, from whom she differs only in having the colours more obscure, and by the rich orange of the throat and flanks giving place to a pale yellow.

I am highly indebted to my valued friend M. Temminck for an example of the young of this species, a figure of which is given in the accompanying Plate; and which, as illustrating the change which the present species undergoes from youth to maturity, will not be uninteresting to the ornithologist. It will be seen that although in this immature state, it exhibits a similarity to the adult, particularly in the colours of the back and tail, a circumstance which rarely occurs in the family, as in all the Trogons where the plumage of the female differs much from that of the male, the young birds generally resemble the former; while, as in the present case, where the sexes are nearly alike, the young partake of the adult colouring, differing only in the markings of the wings and the rufous brown tint of the breast.

That the *Trogon Reinwardtii* should rarely occur in collections is a fact which may probably be accounted for by the circumstance of its appearing to be very local in its habitat. The vast collections brought to this country by Sir T. Stamford Raffles and Dr. Horsfield did not contain an example.

The Plate represents an adult male and a young bird of the natural size.



TROGON GIGAS, (Vieill.)
Giant Trogon.

TROGON GIGAS, Vieill.

Giant Trogon.

"*T. Suprà flavescente-viridis, nitens; pectore, corpore subtus albis; rostro flavo; pedibus fuscis.*"

"Head, throat, neck, upper surface, scapularies, rump and upper tail-coverts shining golden green; chest and under surface white; tail golden green above, whitish grey beneath; centre of the wing finely rayed across with blackish green and white, the remainder of the wing brownish black; bill yellow; feet brown."

"*Le Grand Couroucou à ventre blanc de Java, ou le Couroucou géant*, Le Vaill. Hist. Nat. des Couroucous, Pl. 12."

"*Le Couroucou géant, T. Gigas*, Vieill. 2nd Edit. du Nouv. Dict. d'Hist. Nat. tom. 8. p. 315."
Vieill. Tab. Ency. et Méth. troisième partie, p. 1359.

THIS species, like the *T. roseigaster*, is so extremely rare that I have never seen an example in any of the numerous collections I have examined. M. Temminck informs me that he has a specimen as stated by Le Vaillant, but owing to the Leyden collection being at present inaccessible, he could not favour me with the loan of it; I have therefore thought it best to copy Le Vaillant's figure, with a slight alteration as to position, and subjoin below all that he has said respecting it.

"This handsome Indian species is not only new, but the largest of its genus. It is 18 inches long from the top of the head to the extremity of the tail. Its body is twice the size of the largest American species.

"I have only seen three specimens of this fine species; one in the collection of M. Carbintus at the Hague, a second at Rotterdam in the possession of M. Gevers, and another in the large and splendid collection of my friend M. Temminck at Amsterdam. This individual, from which our figure was taken, was sent along with many other birds from Java. I have seen a fourth specimen in the Paris Museum; but as it was in an imperfect state, it has not as yet been placed in the gallery."



TROGON TEMMINCKII.
Temminck's Trogon.

From Nature & on Stone by J. E. Leach

Printed by C. Blomfield

TROGON TEMMINCKII.

Temminck's Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. vertice, gutture, pectoreque nigris, hoc posticè torque albo; abdomine, strigâ inde ductâ nuchamque cingente coccineis; dorso tectricibusque caudæ superioribus flavescendo-brunneis; alis nigris striis transversis albis vix numerosis ornatis; reatricibus duabus intermediis castaneis ad apicem nigris, duabus proximis utrinque nigris, reliquis ad basin nigris apicem versus latè albis.*

Fœm. *Magis obscura; capite guttureque saturatè grisescento-brunneis; pectore arenaceo-brunneo; alarum strigis brunneis; torque pectorali cinguloque nuchali nullis.*

Rostrum ad apicem tantum saturatè cæruleum, ad basin (sicut et regio ophthalmica nuda) pallidiùs.

Male. Top of the head, throat, and chest black; a crescent-shaped band of white separates the chest from the breast, which, with the abdomen and vent, is scarlet, and from which extends a narrow band of the same colour round the nape of the neck; back and upper tail-coverts yellowish brown; wings black, transversely rayed with fine lines of white rather thinly disposed; two middle tail-feathers chestnut brown tipped with black, the two next on each side wholly black, the remainder black at the base and largely tipped with white; naked skin round the eyes fine blue, which extends over nearly the whole of the bill, becoming darker at the tip; feet brown.

Female. Differs from the male in being destitute of the nuchal and pectoral bands, in the head and throat being dark brown inclining to grey instead of being wholly black, in the breast being sandy brown, and in the markings of the wings being brown instead of white; in the remainder of the plumage she resembles the male, except that the colours are more obscure.

Total length, about 12 inches; *wing*, 6½; *tail*, 6½.

Trogon Temminckii. Gould, Proceedings of Zool. Soc., Part III.

——— *fasciatus.* Temm., Pl. Col., 321.

AFTER a careful examination I have been induced to differ from the opinion of my friend M. Temminck, who considers the present bird as identical with a species originally described by Forster and Pennant under the name of *Trogon fasciatus*: the confusion appears to have been heightened by Dr. Latham, who in the second edition of his "General History of Birds" has illustrated the original description of Forster and Pennant by a drawing of a bird nearly allied to, if not identical with, my *Trog. erythrocephalus*.

Having examined the drawing in the British Museum, which formed the subject of the original *fasciatus*, I have no hesitation in stating it to be quite distinct from the present species, which consequently demands for itself a peculiar specific title; and as it was first figured in that magnificent work the "Planches Coloriées des Oiseaux" of M. Temminck, I have thought it due to the author to name it after him, although in so doing I am departing from the rule I generally observe in nomenclature: at the same time I may mention that the difficulty which attends the finding an appropriate specific title for a bird by which it may be distinguished from all its congeners is very great; for it is scarcely safe to name it after the colour or character of the markings, as in most groups, and especially in the present one, so great a similarity exists that it is almost impossible to find a term sufficiently significant: the crescent-shaped band on the chest, the transverse markings of the wings, the barred, or plain tail, are all characters which belong to the family; and if any peculiar feature exists, it is scarcely if ever confined to single species, but is generally the characteristic of a division or minor group of the family; for instance, before the discovery of the *Trog. Diardii* we knew of no other species than the present possessing the nuchal band which characterizes both of them; and it is obvious that it would have been unsafe to take a specific title from this character in the first bird, as it would have been equally applicable to both, although in other respects they are quite different.

I believe that this bird is not a native of Ceylon, but that Sumatra, Java, and probably Borneo, form its exclusive habitat.

The Plate represents a male and female.



TROGON DIARDII: (Temm.)
Diard's Trogon.

Drawn from Nature & engrav'd by J. E. Gould.

Printed by C. Bulmer & Co.

TROGON DIARDII, Temm.

Diard's Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. capite sanguineo; fasciâ nuchali rosaceâ; dorso arenaceo-brunneo; alis albo nigroque minutè fasciatis, remigibus nigris; gutture pectoreque nigris; ventre miniaceo; rectricibus intermediis duabus brunneis nigro apiculatis, duabus proximis utrinque nigris, reliquis ad basin nigris apicem versus nigro alboque marmoratis.*

Fœm. *Fasciâ nuchali nullâ; capite fusco-brunneo; alis brunneo nigroque fasciatis; pectore brunneo; ventre quàm in mare pallidiore.*

Rostrum nigrescens; orbitæ nudæ coccineæ; pedes flavescenti-brunnei.

Male. Crown of the head deep blood red; throat and chest black; a nuchal band of rose pink separates the rich colouring of the head from the back, which with the upper tail-coverts are dark sandy brown; wings minutely barred with black and white, quills black; breast and under surface carmine; thighs black; two middle tail-feathers rich brown tipped with black, the two next on each side black, the rest black at their base and marbled for the remainder of their length with black and white; bill blackish; bare space round the eye scarlet; feet yellowish brown.

Female. Destitute of the nuchal band and having the top of the head dusky brown; the back and tail as in the male, the outer feathers being less thickly dotted with black; chest brown; wings barred with brown and black; quills black; abdomen pale carmine.

Total length, $12\frac{1}{2}$ inches; bill, $1\frac{1}{2}$; wing, $5\frac{3}{4}$; tail, $6\frac{1}{2}$; tarsi, $\frac{3}{4}$.

Trogon Diardii. Temm., Pl. Col. 54

THE islands of Sumatra and Borneo constitute the native habitat of this beautiful species, which has been dedicated to the memory of an intelligent French naturalist, who in the flower of his youth fell a sacrifice to the unhealthy climate of the East. His name is associated in most of his zoological pursuits with that of the son-in-law of the illustrious Cuvier, the intelligent and zealous Duvaucel.

Like *Trogon Temminckii* it possesses a nuchal band of rose pink, a feature not to be found in any other than these two species.

The general contour of *Trogon Diardii* with its robust bill indicates it to be a bird of considerable power and strength; in these particulars it exceeds *Trogon Temminckii*, from which it also differs in the markings of the three outer tail-feathers, in the total absence of the white pectoral band, and in the colouring of the bare skin round the eyes.

It is the only species yet discovered in the Old World exhibiting any tendency to the barred markings of the three outer tail-feathers, a character so frequently observed in the members of this family inhabiting the new continent: in this instance the white feathers of the tail are covered with fine marbled markings rather than with decided bars.



TROGON MALABARICUS.
Malabar Trogon.

TROGON MALABARICUS.

Malabar Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. capite, gutture, pectoreque fuliginoso-nigris, hoc torque lato albo; ventre coccineo; dorso tectricibusque caudæ superioribus sordidè arenaceo-brunneis; scapularibus tectricibusque alæ majoribus nigris albo flexuosim strigatis; remigibus nigris, pogoniis externis albo fimbriatis; reatricibus duabus intermediis subcastaneis nigro apiculatis, proximis duabus utrinque nigris prope rhachidem brunneis, reliquis ad basin nigris ad apicem albis.*

Fæm. *Capite, dorso, gutture, pectoreque sordidè brunneis; ventre luteo; pectore haud torquato; scapularibus nigro brunneoque strigatis.*

Rostrum nigrum; mandibularum basis regioque ophthalmica nuda cœruleæ.

The male has the whole of the head and throat and chest sooty black; a crescent of white separates the black of the chest from the breast, which, with the whole of the under surface, is scarlet; the back and upper surface brownish yellow; the middle of the wings black, with fine transverse lines of white; primaries black, with their extreme outer edges white; the two middle tail-feathers chestnut brown; the two next black, with a streak of chestnut down the sides of the shafts; the three outer ones on each side black at their base, with white tips; naked space round the eyes deep blue, gradually uniting with black on the bill; legs and feet lead colour.

The female has the crown of the head, chest, and all the upper surface brown, inclining to grey on the chest; breast and under surface yellowish brown; wings black, their centres having fine transverse lines of brown; the tail-feathers nearly resembling those of the male, but much duller in hue; naked space round the eyes blueish lead colour; feet and legs dark brown.

Total length, 11 to 11½ inches; wing, 5 inches; tail, 6½ to 7.

Trogon Malabaricus. Gould, Proceedings of Zool. Soc., Part II. p. 26.

I AM unwilling in most instances to bestow as a specific title upon any bird the name of the country of which it is an inhabitant; in the present instance, however, I have been induced to depart from this rule, from the circumstance of the present species being, as I believe, extremely local in its habitat. The Trogons in general do not appear to be a migratory tribe; it is therefore probable that that portion of the eastern continent alone which includes Malabar is the only country in which this fine species is to be seen in a state of nature. I am the more strengthened in this opinion as I have never observed it in collections brought from the adjacent islands.

In point of affinity it is somewhat allied to the *Trogon Temminckii*, while its inferior size, lengthened form, and more elegant contour, together with the total absence of the red ear-coverts and nuchal band, at once distinguish it from that species.

Capt. Walter Smee informs me that it is a solitary species, inhabiting the jungles which run parallel to the coast; and that it is generally seen in pairs in the most dense parts of the forest, sitting motionless on the dead branch of some elevated tree, until passing insects arouse it to exertion. Being partly nocturnal in its habits, it becomes animated on the approach of evening, when it glides after its prey (in the pursuit of which it displays the greatest activity and adroitness) with meteor-like swiftness, returning again to some dead branch, much after the manner of the Flycatchers.

Habitat, Malabar.

The Plate represents a male and female.



TROGON DUVAUCELI. (Temm.)
Duvacel's Trogon.

Drawn from Nature on stone, by J. E. Gould.

Printed by G. H. Colver.

TROGON DUVAUCELII, Temm.

Duvaucel's Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. dorso castaneo; corpore subtus, uropygio, caudæque tectricibus superioribus coccineis; capite, gutture, alisque nigris, his (præter remigibus) albo transversim strigatis; reatricibus duabus intermediis castaneis nigro apiculatis, duabus proximis utrinque nigris, reliquis ad basin nigris ad apicem albis.*

Rostrum orbitaque nuda cœruleæ.

Fœm. *Capite, pectore, dorsoque brunneis; uropygio rufescenti-brunneo; ventre pallidè rubro; alis nigris brunneo fasciatis.*

Male. The whole of the head and throat black; breast, under surface, rump, and upper tail-coverts rich scarlet; back chestnut brown; wings black, and, with the exception of the primaries, marked transversely with fine lines of white; the three outer tail-feathers black at the base and white at the tip, the two next on each side wholly black, and the two middle ones chestnut brown, tipped with black; bill and space round the eye blue.

Female. Head, chest, and back brown; rump reddish brown; under surface light red; wings black rayed transversely with broad lines of brown; tail as in the male.

Total length, 9 inches; *bill*, 1; *wing*, 4; *tail*, 6; *tarsi*, $\frac{1}{2}$.

Trogon Duvaucelii. Temm. Pl. Col. 291.

FOR brilliancy of colouring nothing can surpass the tints that adorn the plumage of this little Trogon, which, unlike every other species of the family that has come under my notice, has the rump and lower portion of the back of a scarlet colour, vying in every respect with the rich and fiery hue of the breast. The admiration with which these birds must be viewed even when seen in preserved collections will enable us to form some idea of their still greater beauty in a state of nature, when darting meteor-like through the dark recesses of the dense and gloomy parts of the forests; and when so seen they cannot fail to call forth the admiration and inflame the enthusiasm of the naturalist, who has ventured to seek their haunts in those primitive districts.

The sexes offer the usual differences in the colouring of the plumage which characterize several other species, the female being less gaily attired, having the head brown instead of black, and the wings transversely rayed with broad lines of brown instead of fine lineations of white as in the male.

Habitat Sumatra.



TROGON ERYTHROCEPHALUS.
Red-headed Trogon.

TROGON ERYTHROCEPHALUS.

Red-headed Trogon.

Mas. *Trog. capite guttureque sordidè sanguineis, hoc posticè strigâ albâ obsoletâ cincto; pectore ventreque coccineis; dorso, tectricibusque caudæ superioribus arenaceo-castaneis; scapularibus alæque tectricibus majoribus nigro alboque flexuosim strigatis; remigibus nigris, pogoniis externis albo fimbriatis; recticibus duabus intermediis castaneis ad apicem nigris, duabus proximis utrinque nigris, reliquis nigris albo latè apiculatis.*

Juv. vel Fœm. *Capite guttureque arenaceo-brunneis; torque albo magis quam in mare conspicuo; scapularibus nigro brunneoque strigatis.*

Rostrum brunneum; mandibularum basis regioque ophthalmica nuda coccineæ.

Male. The head, throat, and chest dull red; a narrow band of white separates the chest from the breast, which with the whole of the under parts are scarlet; back and upper tail-coverts sandy brown; centre of the wings striated with fine wavy lines of black and white; primaries black, with the exception of the outer edge of each quill, which is white; two middle tail-feathers chestnut brown tipped with black, the next two on each side wholly black, the rest black at their base only with the remaining portion white; naked space round the eyes red; bill black.

Young or Female? Similarly clothed to the male, except that the whole head and chest are sandy brown and the linear markings on the centre of the wing are brown on a black ground instead of white, which is characteristic of the male only.

Total length, 12 to 13 inches; *wing*, 5; *tail*, 6½ to 7.

Trogon erythrocephalus. Gould, Proceedings of Zool. Soc., Part II. p. 25.

Trogon fasciatus. Lath. Gen. Hist., 2nd Edit., vol. 3. pl. 50. p. 212.

THIS fine species appears to enjoy a range of habitat extending from Rangoon to the rich valley of Nepaul, from which latter country we have seen a single specimen. In Rangoon it is a bird of common occurrence. Like the rest of its genus, it gives a preference to the thickest jungles; hence in that luxuriant country it finds a retreat at once congenial with its habits and mode of life. It is a species of extreme rarity in our collections, doubtless owing to the little intercourse we have hitherto had with the interesting country of which it is a native, and from the probability of its being entirely confined to the continent. My own specimens, two or three which were killed and brought to this country by Major Godfrey, and one sent from Nepaul by B. H. Hodgson, Esq., are all the examples of this bird that I have seen.

I am induced to believe that the bird figured in Dr. Latham's General History (quoted above) under the title of *Trogon fasciatus* is identical with the present, notwithstanding that the weight recorded by him, one ounce and a half, and some difference in the colouring would seem to contradict such an opinion. One thing is certain, it cannot be referred to the original *fasciatus* described and figured in the Indian Zoology of Forster and Pennant, a species about which there is considerable confusion.

If we may judge from analogy, the upper bird in the accompanying Plate represents a young male, and not, as I at first supposed, a female; if this be the case, the female is at present unknown.

Habitat, Rangoon, Nepaul, &c.



TROGON HODGSONII, (Gould)
Hodgson's Trogon.

TROGON HODGSONII, Gould.

Hodgson's Trogon.

Mas. *Trog. capite, collo, pectore, corporeque subtus intensè sanguineis; dorso, tectricibusque caudæ superioribus, flavescenti-fuscis; alis in medio lineis delicatis albis et nigris striatis; primariis nigris, extus albo marginatis; reatricibus caudæ duabus intermediis castaneis, ad apicem nigris; utrisque proximis nigris; extus per tres partes basin versus, castaneis; intus lineâ castaneâ prope calammum excurrente ornatis; ad has proximis nigris, extus ad basin per dimidiam partem castaneis; reatricibus reliquis nigris, ad apicem largè albo notatis; rostro nigro; pedibus olivaceis.*

Fœm. *Quoad colorem a fœminâ speciei Tr. Erythrocephalus dictæ haud distingui potest.*

Head, neck, breast and all the under surface deep blood red; back and upper tail-coverts sandy brown; centre of the wing striated with fine wavy lines of black and white; primaries black, margined on their outer webs with white; two centre tail-feathers rich chestnut brown, tipped with black; the next on each side black, with two-thirds from the base of the outer web, and a fine line down the side of the shaft on the inner web rich chestnut brown; the next on each side black with the basal half of the outer web rich chestnut brown; the three lateral feathers on each side black largely tipped with white, which extends for some length down the outer web; bill black; feet olive.

Total length, $13\frac{1}{2}$ inches; wing, $5\frac{1}{2}$; tail, 8; tarsi, $\frac{3}{4}$.

In the letter-press accompanying the preceding species (*Trog. erythrocephalus*) I have stated the range of that bird to extend from Rangoon to the rich valley of Nepaul, believing as I then did that the bird here figured was identical with that species. At the time that account was published I had only seen a single specimen of the bird inhabiting the latter country: the lapse of two years has afforded me opportunities of inspecting other specimens from this highly interesting and little explored region, an examination of which has convinced me that the Nepaulese bird is specifically distinct. I have also gained some further information respecting the range of *T. erythrocephalus*, which I can now positively state to extend to the Islands of the Indian Ocean as well as Rangoon, specimens having been forwarded to me by M. Temminck, who received them direct from Sumatra.

In naming the present species after Mr. Hodgson of Nepaul, I am desirous of paying a slight compliment to a gentleman, who, besides diligently fulfilling his high official duties, is labouring with assiduity in the field of science, and that too, in a country, the interesting nature of whose productions will crown his labours with success; and whose forthcoming work, on the Zoology of those regions, cannot fail to be of the highest interest.

The *T. Hodgsonii* differs from *T. erythrocephalus* in being considerably larger in all its proportions, particularly in the size and length of the tail, while at the same time it possesses a smaller and more compressed bill; the colouring also in all the specimens I have seen is less vivid, particularly in the blood red, which is much duller on the head and chest; in several specimens the scarlet had entirely given way to a dull grey colouring, which would appear to have been the consequence of the bird having just performed the task of incubation.

I subjoin the measurements of the two species in order that their differences may be more clearly perceptible.

Trogon Hodgsonii. . . Total length $13\frac{1}{2}$ inches; wing, $5\frac{1}{2}$; tail, 8; tarsi, $\frac{3}{4}$.

Trogon erythrocephalus. Total length $11\frac{1}{2}$ inches; wing, 5; tail, $6\frac{1}{2}$; tarsi, $\frac{3}{4}$.

The female so closely resembles the female of *T. erythrocephalus*, that a description is unnecessary.

Habitat. Nepaul.



TROGON ARDENS, (Linn.)
Rosy-breasted Trogon.

TROGON ARDENS, Temm.

Rosy-breasted Trogon.

Mas. *Trog. vertice, nuchâ, plumisque auricularibus intensè sanguineo-rubris; dorso, tectricibusque caudæ superioribus rufo-castaneis; alâ in medio nigrâ lineis delicatis albis, transversim ornatâ; primariis nigris, extûs albo marginatis; reatricibus caudæ duabus intermediis rufo-castaneis, ad apicem nigris; utrinque proximis duabus omninò nigris; reliquis, ad apicem largè albis, ad basin nigrescenti-fuscis; pectore rosaceo; abdomine coccineo; rostro aurantiaco, ad basin cæruleo; pedibus flavescenti-fuscis.*

Fœm. *Vertice, genisque intensè fuscis; gulâ nigrescenti-fuscâ; dorso tectricibusque caudæ superioribus obscurè rubricatis; pectore et abdomine pallidè ochraceo-fuscis, crisso potiùs flavescente; alâ in medio nigrescenti-fuscâ, lineis ochraceo-fuscis, transversim notatis; caudâ sicut in mare.*

Male. Crown of the head, back of the neck and ear-coverts dark blood red; throat black; back and upper tail-coverts reddish chestnut; centre of the wing black crossed with fine lines of white; primaries black, externally margined with white; two centre tail-feathers reddish chestnut tipped with black; the two next on each side wholly black; the three outer on each side largely tipped with white, which gradually passes into blackish brown at the base; chest delicate rosy red; the remainder of the under surface scarlet; bill orange yellow, passing into blue at the base; feet yellowish brown.

Female. Crown of the head and cheeks dark brown; throat blackish brown; back and upper tail-coverts dull reddish; breast and all the under surface light sandy brown, becoming more yellow on the under tail-coverts; centre of the wing blackish brown, crossed with lines of sandy brown; tail as in the male.

Total length, 12 inches; *bill*, $1\frac{1}{4}$; *wing*, $5\frac{3}{4}$; *tail*, 8; *tarsi*, $\frac{3}{4}$.

Trogon ardens, Temm., Pl. Col. 404.

THIS fine bird received the specific appellation of *ardens* from M. Temminck, whose description and figure, published in the "Planches Coloriées," was taken from a specimen of the female in the possession of M. Le Baron Laugier de Chartreuse, at Paris. His specimen was at that time unique, and was received from Mindanao. When the Baron's fine collection was sold this bird, together with many others, was purchased by the British Museum, of whose splendid collection it now forms a part.

It is to the unremitting and spirited researches of Mr. Hugh Cuming that I am indebted for the knowledge of the male of this fine species, of which an example accompanied by a female has been recently transmitted to the Museum of the Zoological Society, together with many other rarities, which were collected at in the Manillas.

In point of affinity it is closely related to the other red-headed species, such as *Trog. erythrocephalus*, *T. Hodgsonii*, *T. Diardii*, &c.; but may be distinguished from all others by the beautiful band of delicate rose-colour which crosses the breast.



TROGON ORESKIOS, (Tenn.)
Mountain Trogon.

TROGON ORESKIOS, Temm.

Mountain Trogon.

SPECIFIC CHARACTER.

Mas. *Trog. capite, gutture, pectoreque lutescentibus; dorso tectricibus caudæ superioribus, reatricibus duabus intermediis saturatè rufis; alis nigris in medio transversim albo pluri-fasciatis, remigibus externè albo fimbriatis; reatricibus tribus externis utrinque ad basin nigris, ad apicem albis, duabus proximis nigris; ventre aurantiaco in medio, et ad crissum flavo; femoribus nigris.*

Fœm. *Capite, pectore, dorsoque sordidè brunneis, uropygio reatricibusque duabus intermediis minùs sordidis; alarum fasciis albis; ventre flavo ad latera subaurantiaco.*

Rostrum ad apicem nigrum, in flavum basin versus transiens.

Male. The top of the head, throat, and chest greenish yellow; back, coverts of the tail, and two middle tail-feathers rich maroon heightened on the rump; wings black, with their middles transversely rayed with strong bars of white; outer edge of the primaries white; three outer tail-feathers black at their base and white at their tips, the two next on each side black; breast and flanks rich orange; middle of the belly and vent yellow; thighs black; legs and feet flesh colour; bill black at the tip, gradually passing into yellow at the base.

Female. Head, chest, and all the upper surface dull brown, becoming more rich on the rump and two middle tail-feathers; the remainder of the tail as in the male; the transverse marks on the centre of the wings brown instead of white; whole of the under surface yellow, inclining to orange on the flanks.

Total length, 10 to 10 $\frac{3}{4}$ inches; wing, 4 $\frac{3}{4}$; tail, 6 $\frac{1}{2}$.

Trogon Oreskios. Temm., Pl. Col. 121.

NEARLY all that is here said respecting this species is gleaned from the "Planches Coloriées des Oiseaux" of M. Temminck, who states that science is indebted to the research of MM. Diard and Reinwardt for the first knowledge of its existence. It appears to have been unknown to Sir Stamford Raffles and Dr. Horsfield, as it is not enumerated in their Catalogue of the Birds of Java, a country in which, and probably Sumatra, says M. Temminck, it is to be found. According to M. Kuhl, it subsists on insects, and inhabits woods and mountains.

As far as my own experience goes, I have never seen it in collections from the countries above mentioned, while on the other hand I possess several individuals from Rangoon, where it appears to be a species of common occurrence. It may be readily distinguished from all the other members of its family by the chaste and less gaudy style of colouring which its plumage exhibits.

Habitat, Java.

The Plate represents an adult male and female.