




Benj. M. Everhart 1878.

9 volumes





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AMERICAN ORNITHOLOGY;

OR,

THE NATURAL HISTORY

OF THE

BIRDS OF THE UNITED STATES:

ILLUSTRATED WITH PLATES

Engraved and Colored from Original drawings taken from Nature.

BY ALEXANDER WILSON.

VOL. VII.

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.....

1824.

PREFACE.

WE now enter upon the second grand division of our subject, WATER BIRDS; and on that particular order, usually denominated *Grallæ*, or Waders. Here a new assemblage of scenery, altogether different from the former, presents itself for our contemplation. Instead of rambling through the leafy labyrinths of umbrageous groves, fragrance-breathing orchards, fields and forests, we must now descend into the watery morass, and moscheto-swamp; traverse the windings of the rivers, the rocky cliffs, bays and inlets of the seaboard shore, listening to the wild and melancholy screams of a far different multitude; a multitude less intimate indeed with man, tho' not less useful; as they contribute liberally to his amusement, to the abundance of his table, the warmth of his bed, and the comforts of his repose.

In contemplating the various, singular and striking peculiarities of these, we shall every where find traces of an infinitely wise and beneficent Creator. In every deviation of their parts from the common conformation of such as are designed for the land alone, we may discover a wisdom of design never erring, never failing in the means it provides for the accomplishment of its purpose. Instead therefore of imitating the wild presumption, or rather pro-

fanity, of those who have censured as rude, defective or deformed, whatever, in those and other organized beings, accorded not with their narrow conceptions; let it be ours to search with humility into the *intention* of those particular conformations; and thus, entering as it were into the designs of the Deity, we shall see in every part of the work of his hands abundant cause to exclaim with the enraptured poet of nature,

“ O Wisdom infinite ! Goodness immense !
And Love that passeth knowledge !”

In the present volume, the greater part of such of the Waders as belong to the territories of the United States, will be found delineated and described. This class naturally forms an intermediate link between the Land Birds and the Web-footed, partaking, in their form, food and habits, of the characters of both; and equally deserving of our regard and admiration. Tho' formed for traversing watery situations, often in company with the Swimmers, they differ from these last in one circumstance common to Land Birds, the separation of the toes nearly to their origin; and in the habit of seldom venturing beyond their depth. On the other hand, they are furnished with legs of extraordinary length, bare for a considerable space above the knees, by the assistance of which they are enabled to walk about in the water in pursuit of their prey, where the others are obliged to swim; and also with necks of corresponding length, by means of which they can search the bottom for food, where the others must have recourse to diving.

The bills of one family (the Herons) are strong, sharp pointed, and of considerable length; while the flexibility of the neck, the rapidity of its action, and remarkable acuteness of sight, wonderfully fit them for watching, striking and securing their prey. Those whose food consists of more feeble and sluggish insects, that lie concealed deeper in the mud, are provided with bills of still greater extension, the rounded extremity of which possesses such nice sensibility, as to enable its possessor to detect its prey the instant it comes in contact with it, tho' altogether beyond the reach of sight.

Other families of this same order, formed for traversing the sandy seabeach in search of small shell-fish that lurk just below the surface, have the bills and legs necessarily shorter; but their wants requiring them to be continually on the verge of the flowing or retreating wave, the activity of their motions forms a striking contrast with the patient habits of the Heron tribe, who sometimes stand fixed and motionless, for hours together, by the margin of a pool or stream, watching to surprize their sealy prey.

Some few again, whose favorite food lies at the soft oozy bottoms of shallow pools, have the bill so extremely slender and delicate, as to be altogether unfit for penetrating either the muddy shores, or sandy sea-beach; tho' excellently adapted for its own particular range, where lie the various kinds of food destined for their subsistence. Of this kind is the *Avoset* of the present volume, who not only wades with great activity in considerably deep water; but having the feet half-webbed, combines in one the characters of both wader and swimmer.

It is thus that, by studying the living manners of the different tribes in their native retreats, we not only reconcile the singularity of some parts of their conformation with divine wisdom; but are enabled to comprehend the reason of many others, which the pride of certain closet naturalists has arraigned as defective or deformed.

One observation more may be added: the migrations of this class of birds are more generally known and acknowledged than that of most others. Their comparatively large size and immense multitudes, render their regular periods of migration (so strenuously denied to some others) notorious along the whole extent of our seacoast. Associating, feeding, and travelling together in such prodigious and noisy numbers, it would be no less difficult to conceal their arrival, passage and departure, than that of a vast army through a thickly peopled country. Constituting also, as many of them do, an article of food and interest to man, he naturally becomes more intimately acquainted with their habits and retreats, than with those feeble and minute kinds, which offer no such inducement, and perform their migrations with more silence, in scattered parties, unheeded or overlooked. Hence many of the Waders can be traced from their summer abodes, the desolate regions of Greenland and Spitzbergen, to the fens and seashores of the West India islands and South America, the usual places of their winter retreat, while those of the Purple Martin and common Swallow still remain, *in vulgar belief*, wrapt up in all the darkness of mystery.

The figures in the plates which accompany this volume have been generally reduced to one half the dimensions of the living

birds. In the succeeding volumes, where some of the subjects measure upwards of five feet in height, one general standard of reduction will be used, by which means the comparative size of each species can be easily ascertained at first glance; and a greater number introduced in each plate, so as to comprehend the whole of our Ornithology in nine volumes; being one less than originally projected.

ALEXANDER WILSON.

Philadelphia, March 1st, 1813.

PREFACE

BY THE EDITOR.

THE publisher of this work having resolved to give a new edition of the seventh volume, the Editor conceived that he would render an acceptable service to naturalists by revising it, and adapting it to the present state of ornithological knowledge. In the prosecution of this task it will be perceived that he has taken the liberty of materially altering some of the articles, omitting synonymes and adding others; and changing the nomenclature. That in endeavouring to correct the mistakes of the author he has sometimes fallen into error himself, it may, probably, be objected to him; but for the greater part of the alterations he can produce the authority of a name which deservedly stands the first upon the roll of the ornithologists of the age, Mr. C. J. Temminck. From the second edition of the *Manuel d'Ornithologie* of this gentleman the Editor has derived important assistance; and he takes this opportunity to express his high sense of the merit of that comprehensive work.

It ought not, perhaps, to be concealed that Wilson committed more errors of nomenclature in his seventh volume than in any of his preceding volumes. These arose in the first place from his not

being as conversant with the Waders as with the Land birds ; and, secondly, from the necessity which he lay under of finishing his Ornithology in a given time, thereby being prevented from studying and collating the works of his predecessors : a labor which is indispensable in every department of Natural history, by all those who undertake to write upon this multifarious science. Had our excellent author lived to produce himself a new edition, there can be no doubt that it would have assumed a different aspect from the present, inasmuch as he would have had access to the rare collections of our scientific institutions, which, since his death, have been augmented with those works which it was never his good fortune to behold.

For the information of the reader the Editor here records his alterations in the nomenclature, in order that the whole may be embraced at one view ; premising that the first column comprises the names of the original edition.

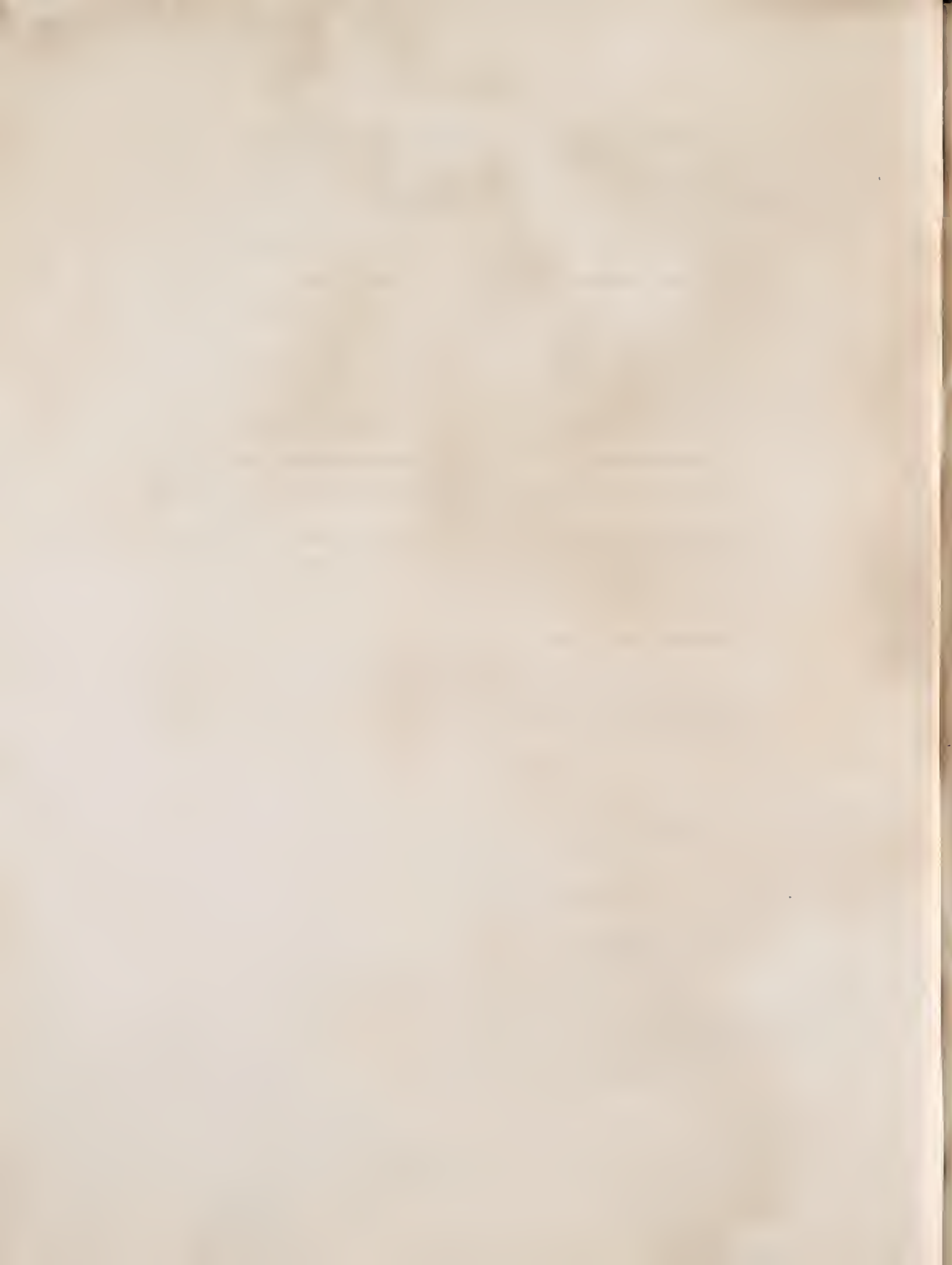
| | |
|--------------------------------|------------------------------|
| Falco ossifragus . . . | <i>Falco leucocephalus.</i> |
| Charadrius calidris . . . | <i>Calidris arenaria.</i> |
| C. rubidus . . . | <i>Idem.</i> |
| Recurvirostra himantopus . . . | <i>Himantopus Mexicanus.</i> |
| Tringa hiaticula . . . | <i>Charadrius hiaticula.</i> |
| Charadrius apricarius . . . | <i>Vanellus Helveticus.</i> |
| C. pluvialis . . . | <i>Idem.</i> |
| Tringa interpres . . . | <i>Strepsilas interpres.</i> |
| Ardea candidissima . . . | <i>Ardea Carolinensis.</i> |
| Scelopax borealis . . . | <i>Numenius borealis.</i> |
| Tringa cinclus . . . | <i>Tringa Alpina.</i> |

| | | | |
|-------------------------|---|---|------------------------------|
| Tringa Bartramia | . | . | <i>Totanus Bartramius.</i> |
| Tringa solitaria | . | . | <i>Totanus glareolus.</i> |
| Tringa macularia | . | . | <i>Totanus macularius.</i> |
| Scelopax vociferus | . | . | <i>Totanus melanoleucos.</i> |
| Scelopax flavipes | . | . | <i>Totanus flavipes.</i> |
| Scelopax semipalmata | . | . | <i>Totanus semipalmatus.</i> |
| Scelopax fedoa | . | . | <i>Limosa fedoa.</i> |
| Scolopax noveboracensis | . | . | <i>Scolopax grisea.</i> |
| Procellaria pelagica | . | . | <i>Procellaria Wilsonii.</i> |

The Editor has also made some verbal alterations in the text ; and added some matter, the fruits of his personal experience, which he hopes will be acceptable to the American ornithologist.

GEORGE ORD.

Philadelphia, May 1, 1824.



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B. M. EVERHART,
West Chester Pa.,
1880.

Not to be loaned on any Condition



Drawn from Nature by A. Wilson

1. Ring-tail Eagle.

2. Sea Eagle.

Engraved by S. J. W. Wood

AMERICAN ORNITHOLOGY.

RING-TAILED EAGLE.

FALCO FULVUS.

[Plate LV.—Fig. 1.]

LINN. *Syst.* 125.—*Black Eagle, Aret. Zool.* p. 195, No. 87. *Id. Yellow-headed Eagle?* No. 86, *D.*—LATH. I, 32, No. 6. *Idem, Golden Eagle,* p. 31, No. 5.—*White-tailed Eagle,* EDW. I, 1.—*L'Aigle Commun,* BUFF. I, 86. *Pl. Enl.* 409, 410.—BEWICK, I, p. 49.—*Ind. Orn.* I, No. 4, *fulvus*; No. 8, *chrysaëtos*; No. 26, *melanonotus?*; No. 3, *melanætos?* PEALE'S *Museum,* No. 84; No. 85, *young.*

THE reader is now presented with a portrait of this celebrated Eagle, drawn from a fine specimen shot in the county of Montgomery, Pennsylvania. The figure here given, tho reduced to one-third the size of life, is strongly characteristic of its original. With respect to the habits of the species, such particulars only shall be selected as are well authenticated, rejecting whatever seems vague, or savours too much of the marvellous.

This noble bird, in strength, spirit and activity, ranks among the first of its tribe. It is found, tho sparingly dispersed, over the whole temperate and arctic regions, particularly the latter; breeding on high precipitous rocks; always preferring a mountainous country. In its general appearance it has so great a resemblance to the Golden Eagle, that I do not hesitate to consider them the same. When young, the color of the body is considerably lighter, but deepens into a blackish brown as it advances in age.

The tail feathers of this bird are highly valued by the various tribes of American Indians for ornamenting their calumets, or pipes of peace. Several of these pipes which were brought from the remote regions of Louisiana by captain Lewis, are now deposited in Mr. Peale's Museum, each of which has a number of the tail feathers of this bird attached to it. The Northern as well as Southern Indians seem to follow the like practice, as appears by the numerous calumets, formerly belonging to different tribes, to be seen in the same magnificent collection.

Mr. Pennant informs us, that the independent Tartars train this Eagle for the chase of hares, foxes, wolves, antelopes, &c. and that they esteem the feathers of the tail the best for pluming their arrows. The Ring-tailed Eagle is characterized by all as a generous spirited and docile bird; and various extraordinary incidents are related of it by different writers, not, however, sufficiently authenticated to deserve repetition. The truth is, the solitary habits of the Eagle now before us, the vast inaccessible cliffs to which it usually retires, united with the scarcity of the species in those regions inhabited by man, all combine to render a particular knowledge of its manners very difficult to be obtained. The author has, once or twice, observed this bird sailing along the alpine declivities of the White mountains of New Hampshire, early in October, and again, over the Highlands of Hudson's river, not far from West Point. Its flight was easy, in high circuitous sweeps, its broad white tail, tipped with brown, expanded like a fan. Near the settlements on Hudson's bay it is more common, and is said to prey on hares, and the various species of Grouse which abound there. Buffon observes, that tho' other Eagles also prey upon hares, this species is a more fatal enemy to those timid animals, which are the constant object of their search, and the prey which they prefer. The Latins, after P̄līn̄y, termed the Eagle *Valeria quasi valens viribus*, because of its strength, which appears greater than that of the other Eagles in proportion to its size.

The Ring-tailed Eagle measures nearly three feet in length; the bill is of a brownish horn color; the cere, sides of the mouth and feet yellow; iris of the eye reddish hazel, the eye turned considerably forwards; eyebrow remarkably prominent, projecting over the eye, and giving a peculiar sternness to the aspect of the bird; the crown is flat; the plumage of the head, throat and neck long and pointed; that on the upper part of the head and neck very pale ferruginous; fore part of the crown black; all the pointed feathers are shafted with black; whole upper parts dark blackish brown; wings black; tail rounded, long, of a white or pale cream color, minutely sprinkled with specks of ash and dusky, and ending in a broad band of deep dark brown of nearly one-third its length; chin, cheeks and throat black; whole lower parts a deep dark brown, except the vent and inside of the thighs, which are white, stained with brown; legs thickly covered to the feet with brownish white down or feathers; claws black, very large, sharp and formidable, the hind one full two inches long.

The Ring-tailed Eagle is found in Russia, Switzerland, Germany, France, Scotland, and the northern parts of America. As Marco Polo, in his description of the customs of the Tartars, seems to allude to this species, it may be said to inhabit the whole circuit of the arctic regions of the globe. The Golden Eagle is said, by some, to be found only in the more warm and temperate countries of the ancient continent.* It is now, however, ascertained to be also an inhabitant of the United States.

* BUFFON, vol. i, p. 56. Trans.

BALD EAGLE.

FALCO LEUCOCEPHALUS.[Plate LV.—Fig 2,—*Young.*]*Sea Eagle, Arct. Zool. p. 194, No. 86, A.—PEALE'S Museum, No. 80, male.*

THIS Eagle inhabits the same countries, frequents the same situations, and lives on the same kind of food, as the Bald Eagle, with whom it is often seen in company. It resembles this last so much in figure, size, form of the bill, legs and claws, and is so often seen associating with it, both along the Atlantic coast, and in the vicinity of our lakes and large rivers, that I have strong suspicions, notwithstanding ancient and very respectable authorities to the contrary, of its being the same species, only in a different stage of color.

That several years elapse before the young of the Bald Eagle receive the white head, neck and tail; and that during the intermediate period their plumage strongly resembles that of the Sea Eagle, I am satisfied from my own observation on three several birds kept by persons of this city. One of these belonging to the late Mr. Enslin, collector of natural subjects for the emperor of Austria, was confidently believed by him to be the Black, or Sea Eagle, until the fourth year, when the plumage on the head, tail and tail-coverts began gradually to become white; the bill also exchanged its dusky hue for that of yellow; and before its death, this bird, which I frequently examined, assumed the perfect dress of the full-plumaged Bald Eagle. Another circumstance corroborating these suspicions, is the variety that occurs in the colors of the Sea Eagle. Scarcely two of these are found to be alike, their plumage being

more or less diluted with white. In some the chin, breast and tail-coverts are of a deep brown; in others nearly white; and in all evidently unfixed and varying to a pure white. Their place and manner of building, on high trees, in the neighborhood of lakes, large rivers, or the ocean, exactly similar to the Bald Eagle, also strengthen the belief. At the celebrated cataract of Niagara great numbers of these birds, called there Gray Eagles, are continually seen sailing high and majestically over the watery tumult, in company with the Bald Eagles, eagerly watching for the mangled carcasses of those animals that have been hurried over the precipice, and cast up on the rocks below, by the violence of the rapids. These are some of the circumstances on which my suspicions of the identity of these two birds are founded. In some future part of the work I hope to be able to speak with more certainty on this subject.

Were we disposed, after the manner of some, to substitute for plain matters of fact all the narratives, conjectures, and fanciful theories of travellers, voyagers, compilers, &c. relative to the history of the Eagle, the volumes of these writers, from Aristotle down to his admirer the Count de Buffon, would furnish abundant materials for this purpose. But the author of the present work feels no ambition to excite surprise and astonishment at the expense of truth, or to attempt to elevate and embellish his subject beyond the plain realities of nature. On this account, he cannot assent to the assertion, however eloquently made, in the celebrated parallel drawn by the French naturalist between the Lion and the Eagle, *viz.* that the Eagle, like the Lion, “disdains the possession of that property which is not the fruit of his own industry, and rejects with contempt the prey which is not procured by his own exertions;” since the very reverse of this is the case in the conduct of the Bald and the Sea Eagle, who, during the summer months, are the constant robbers and plunderers of the Osprey or Fish-Hawk, by whose industry alone both are usually fed. Nor that “*though*

famished for want of prey, he disdains to feed on carrion," since we have ourselves seen the Bald Eagle, while seated on the dead carcass of a horse, keep a whole flock of Vultures at a respectful distance, until he had fully sated his own appetite. The Count has also taken great pains to expose the ridiculous opinion of Pliny, who conceived that the Ospreys formed no separate race, and that they proceeded from the intermixture of different species of Eagles, the young of which were not Ospreys, only Sea Eagles; *which Sea Eagles, says he, breed small Vultures, which engender great Vultures that have not the power of propagation.** But, while labouring to confute these absurdities, the Count himself, in his belief of an occasional intercourse between the Osprey and the Sea Eagle, contradicts all actual observation, and one of the most common and fixed laws of nature; for it may be safely asserted that there is no habit more universal among the feathered race, in their natural state, than that elastity of attachment, which confines the amours of individuals to those of their own species only. That perversion of nature produced by domestication is nothing to the purpose. In no instance have I ever observed the slightest appearance of a contrary conduct. Even in those birds which never build a nest for themselves, nor hatch their young, nor even pair, but live in a state of general concubinage; such as the Cuckoo of the old, and the Cow Bunting of the new, continent; there is no instance of a deviation from this striking habit. I cannot therefore avoid considering the opinion above alluded to, that "the male Osprey by coupling with the female Sea Eagle produces Sea Eagles; and that the female Osprey by pairing with the male Sea Eagle gives birth to Ospreys"† or Fish-Hawks, as altogether unsupported by facts and contradicted by the constant and universal habits of the whole feathered race in their state of nature.

The Sea Eagle is said by Salerne, to build on the loftiest oaks a very broad nest, into which it drops two large eggs, that are

* Hist. Nat. lib. x, c. 3.

† BUFFON, vol. I, p. 80. Trans.

quite round, exceedingly heavy, and of a dirty white color. Of the precise time of building we have no account, but something may be deduced from the following circumstance. In the month of May, while on a shooting excursion along the seacoast, not far from Great Egg-Harbor, accompanied by my friend Mr. Ord, we were conducted about a mile into the woods to see an Eagle's nest. On approaching within a short distance of the place, the bird was perceived slowly retreating from the nest, which we found occupied the centre of the top of a very large yellow pine. The woods were cut down, and cleared off, for several rods around the spot, which circumstance gave the stately erect trunk, and large crooked wriggling branches of the tree, surmounted by a black mass of sticks and brush, a very singular and picturesque effect. Our conductor had brought an axe with him to cut down the tree; but my companion, anxious to save the eggs, or young, insisted on ascending to the nest, which he fearlessly performed, while we stationed ourselves below, ready to defend him in case of an attack from the old Eagles. No opposition, however, was offered; and on reaching the nest, it was found, to our disappointment, empty. It was built of large sticks, some of them several feet in length; within it lay sods of earth, sedge, grass, dry reeds, &c. piled to the height of five or six feet, by more than four in breadth; it was well lined with fresh pine tops, and had little or no concavity. Under this lining lay the recent exuviae of the young of the present year, such as scales of the quill feathers, down, &c. Our guide had passed this place late in February, at which time both male and female were making a great noise about the nest; and from what we afterwards learnt, it is highly probable it contained young, even at that early time of the season.

A few miles from this is another Eagle's nest, built also on a pine tree, which, from the information received from the proprietor of the woods, had been long the residence of this family of Eagles. The tree on which the nest was originally built had been

for time immemorial, or at least ever since he remembered, inhabited by these Eagles. Some of his sons cut down this tree to procure the young, which were two in number; and the Eagles soon after commenced building another nest on the very next adjoining tree, thus exhibiting a very particular attachment to the spot. The Eagles, he says, make it a kind of *home* and *lodging place* in all seasons. This man asserts, that the Gray, or Sea Eagles, are the young of the Bald Eagle, and that they are several years old before they begin to breed. It does not drive its young from the nest like the Osprey, or Fish-Hawk; but continues to feed them long after they leave it.

The bird from which the figure in the plate was drawn, and which is reduced to one-third the size of life, measured three feet in length, and upwards of seven feet in extent. The bill was formed exactly like that of the Bald Eagle, but of a dusky brown color; cere and legs bright yellow; the latter, as in the Bald Eagle, feathered a little below the knee; irides a bright straw color; head above, neck and back streaked with light brown, deep brown and white, the plumage being white, tipped and centred with brown; scapulars brown; lesser wing-coverts very pale, intermixed with white; primaries black, their shafts brownish white; rump pale brownish white; tail rounded, somewhat longer than the wings when shut, brown on the exterior vanes, the inner ones white, sprinkled with dirty brown; throat, breast and belly white, dashed and streaked with different tints of brown and pale yellow; vent brown, tipped with white; femorals dark brown, tipped with lighter; auriculars brown, forming a bar from below the eye backwards; plumage of the neck long, narrow and pointed, as is usual with Eagles, and of a brownish color tipped with white.

The Sea Eagle is said by various authors to hunt at night as well as during the day, and that besides fish it feeds on chickens, birds, hares and other animals. It is also said to catch fish during the night; and that the noise of its plunging into the water is heard

at a great distance. But in the descriptions of these writers this bird has been so frequently confounded with the Osprey, as to leave little doubt that the habits and manners of the one have been often attributed to both; and others added that are common to neither.

The Bald Eagle may be tamed, so as to become quite sociable, permitting one to handle it at pleasure, and even seeming pleased with such familiarities. The Hawks, on the contrary, are apt to retain their savage nature under the kindest treatment, and, like the cat, will frequently remind one, on the slightest provocation, to beware of those powerful weapons with which nature has provided them.

SHORT-BILLED CURLEW.*

NUMENIUS BOREALIS.

[Plate LVI.—Fig. 1.]

Eskimaux Curlew, Arct. Zool. No. 364.—*Brasilian Whimbrel?* LATH. *Syn. vol. 3, p. 125.*—*Numenius Guarauna?* Ind. Orn. 712, No. 8; *N. borealis. Idem, No. 9*; *N. Hudsonicus, Id. No. 7.*—*Le Courly brun d'Amérique?* BRISS. *Orn. vol. 5, p. 330.*

IN prosecuting our researches among the feathered tribes of this extensive country, we are at length led to the shores of the ocean, where a numerous and varied multitude, subsisting on the gleanings of that vast magazine of nature, invite our attention; and from their singularities and numbers, promise both amusement and instruction. These we shall, as usual, introduce in the order we chauce to meet with them in their native haunts. Individuals of various tribes, thus promiscuously grouped together, the peculiarities of each will appear more conspicuous and striking, and the detail of their histories less formal, as well as more interesting.

The Short-billed Curlew, is peculiar to the new continent. Mr. Pennant, indeed, conceives it to be a mere variety of the English Whimbrel (*S. Phæopus*); but among the great numbers of these birds which I have myself shot and examined, I have never yet met with one corresponding to the descriptions given of the *Whimbrel*, the colors and markings being different, the bill much more bent, and nearly an inch and a half longer; and the manners in certain particulars very different: these reasons have determined its claim to that of an independent species.

The Short-billed Curlew arrives in large flocks on the sea-coast of New Jersey early in May from the south; frequents the

* Named in the Plate Esquimaux Curlew.

Drawn from Nature by W. H. Edwards

1. *Caprimachus vociferans*

2. *Puffinus pacificus*

3. *Diomedea immutabilis*

4. *Phaethon rubricauda*

Engraved by W. H. Edwards





salt marshes, muddy shores and inlets, feeding on small worms and minute shell fish. They are most commonly seen on mud-flats at low water, in company with various other waders; and at high water roam along the marshes. They fly high and with great rapidity. A few are seen in June and as late as the beginning of July, when they generally move off towards the north. Their appearance on these occasions is very interesting: they collect together from the marshes as if by premeditated design, rise to a great height in the air, usually about an hour before sunset, and forming in one vast line, keep up a constant whistling on their way to the north, as if conversing with one another to render the journey more agreeable. Their flight is then more slow and regular, that the feeblest may keep up with the line of march; while the glittering of their beautifully speckled wings, sparkling in the sun, produces altogether a very pleasing spectacle.

In the month of June, while the dew-berries are ripe, these birds sometimes frequent the fields in company with the Long-billed Curlews, where brambles abound, soon get very fat, and are at that time excellent eating. Those who wish to shoot them, fix up a shelter of brushwood in the middle of the field, and by that means kill great numbers. In the early part of spring, and indeed during the whole time that they frequent the marshes, feeding on shell fish, they are much less esteemed for the table.

Pennant informs us that the Eskimaux Curlews "were seen in flocks innumerable on the hills about Chatteux bay, on the Labrador coast, from August the ninth to September sixth, when they all disappeared, being on their way from their northern breeding place."—He adds, "they kept on the open grounds, fed on the *empetrum nigrum*, and were very fat and delicious. They arrive at Hudson's bay in April, or early in May; pair and breed to the north of Albany fort among the woods, return in August to the marshes, and all disappear in September."*

* Arct. Zool. vol. 2, p. 163.—Phil. Trans. LXII, 411.

return in accumulated numbers to the shores of New Jersey, whence they finally depart for the south early in November.

The Short-billed Curlew is eighteen inches long, and thirty-two inches in extent; the bill, which is four inches and a half long, is black towards the point, and a pale purplish flesh color near the base; upper part of the head dark brown, divided by a narrow stripe of brownish white; over each eye extends a broad line of pale drab; iris dark colored; hind part of the neck streaked with dark brown, fore part and whole breast very pale brown; upper part of the body pale drab, centred and barred with dark brown, and edged with spots of white on the exterior vanes; three first primaries black, with white shafts; rump and tail-coverts barred with dark brown; belly white; vent the same, marked with zig-zag lines of brown; whole lining of the wing beautifully barred with brown on a dark cream ground; legs and naked thighs a pale lead color.

The figure of this bird, and of all the rest on the same plate, are reduced to exactly one-half the size of life.

I have some doubts whether or not this species is the Eskimaux Curlew (*N. borealis*) of Dr. Latham; as this ornithologist states his bird to be only thirteen inches in length, and in breadth twenty-one; whilst that above described is eighteen inches long, and thirty-two in breadth. Besides, Latham's species has a bill of two inches in length, and the bill of mine is four inches and a half long. I am aware, however, that the bills of some birds increase greatly with age; and if it should turn out hereafter, that the two birds are identical, the specimen from which Latham took his description must have been quite immature.

RED-BACKED SANDPIPER.

TRINGA ALPINA.

[Plate LVI.—Fig. 2.]

Dunlin, Arct. Zool. p. 476, No. 391.—BEWICK, II, p. 113.—*La Brunette, BUFF. VII, 493.*
 —*Tringa variabilis, MEYER, Tass. Deut.*—*Tringa Alpina, Ind. Orn. 736, No. 37.*—*La*
Beccassine d'Angleterre, BRISS. 5, p. 309.

THIS bird inhabits both the old and new continents, being known in England by the name of the Dunlin; and in the United States, along the shores of New Jersey, by that of the Red-back. Its residence here is but transient, chiefly in April and May, while passing to the arctic regions to breed; and in September and October when on its return southward to winter quarters. During their stay they seldom collect in separate flocks by themselves; but mix with various other species of strand birds, among whom they are rendered conspicuous by the red color of the upper part of their plumage. They frequent the muddy flats and shores of the salt marshes at low water, feeding on small worms and other insects which generally abound in such places. In the month of May they are extremely fat.

This bird is said to inhabit Greenland, Iceland, Scandinavia, the Alps of Siberia; and in its migrations the coasts of the Caspian sea.* It has not, till now, been recognized by naturalists as inhabiting this part of North America. Wherever its breeding place may be, it probably begins to lay at a late period of the season, as in numbers of females which I examined on the first of June, the eggs were no larger than grains of mustard seed.

Length of the Red-back eight inches and a half, extent fifteen inches; bill black, longer than the head, (which would seem to

* Pennant.

rank it with the Snipes) slightly bent, grooved on the upper mandible, and wrinkled at the base; crown, back and scapulars bright reddish rust, spotted with black; wing-coverts pale olive; quills darker; the first tipt, the latter crossed with white; front, cheeks, hind-head and sides of the neck quite round, also the breast, grayish white, marked with small specks of black; belly white, marked with a broad crescent of black; tail pale olive, the two middle feathers centred with black; legs and feet ashy black; toes divided to their origin, and bordered with a slightly scalloped membrane; irides very dark.

The males and females are nearly alike in one respect, both differing greatly in color even at the same season, probably owing to difference of age; some being of a much brighter red than others, and the plumage dotted with white. In the month of September, many are found destitute of the black crescent on the belly; these have been conjectured to be young birds.

After an attentive examination of many of these birds on the coast of Cape May, in the month of April, I am perfectly convinced, that the hitherto supposed two species, the present and the Purre, constitute but one species, the latter being in immature plumage. In some instances, I found the Purres were beginning to get the broad band of black on the belly, and the back thickening with ruddy feathers, appearing almost perfect Black-bellied Sandpipers.

WILLET.*

TOTANUS SEMIPALMATUS.

[Plate LVI.—Fig. 3.]

LATH. *Syn.* vol. 3, p. 152, No. 22.—*Ind. Orn.* p. 722, No. 27.—*Semipalmated Snipe, Arct. Zool.* p. 469, No. 380.—PEALE'S *Museum*, No. 3942.

THIS is one of the most noisy and noted birds that inhabit our salt marshes in summer. Its common name is the *Willet*, by which appellation it is universally known along the shores of New York, New Jersey, Delaware and Maryland, in all of which places it breeds in great numbers.

The Willet is peculiar to America. It arrives from the south on the shores of the middle states about the twentieth of April, or beginning of May; and from that time to the last of July its loud and shrill reiterations of *Pill-will-willet, Pill-will-willet*, resound, almost incessantly, along the marshes; and may be distinctly heard at the distance of more than half a mile. About the twentieth of May the Willets generally begin to lay.† Their nests are built on the ground, among the grass of the salt marshes, pretty well towards the land, or cultivated fields, and are composed of wet rushes and coarse grass, forming a slight hollow or cavity in a tussock. This nest is gradually increased during the period of laying and sitting, to the height of five or six inches. The eggs are usually four in number, very thick at the great end, and tapering to a narrower point at the other than those of the common hen; they measure two inches and one-eighth in length, by one and a half in their greatest breadth, and are of a dark dingy olive, largely

* Named in the plate *Semipalmated Snipe*.

† From some unknown cause, the height of laying of these birds is said to be full two weeks later than it was twenty years ago.

blotched with blackish brown, particularly at the great end. In some the ground color has a tinge of green; in others of bluish. They are excellent eating, as I have often experienced when obliged to dine on them in my hunting excursions through the salt marshes. The young are covered with a gray-colored down; run off soon after they leave the shell; and are led and assisted in their search of food by the mother; while the male keeps a continual watch around for their safety.

The anxiety and affection manifested by these birds for their eggs and young, are truly interesting. A person no sooner enters the marshes than he is beset by the Willets, flying around and skimming over his head, vociferating with great violence their common cry of *Pill-will-willet*; and uttering at times a loud clicking note, as he approaches nearer to their nest. As they occasionally alight, and slowly shut their long white wings speckled with black, they have a mournful note, expressive of great tenderness. During the term of incubation, the female often resorts to the sea shore, where, standing up to the belly in water, she washes and dresses her plumage, seeming to enjoy great satisfaction from these frequent ablutions. She is also at other times seen to wade more in the water than most of her tribe; and when wounded in the wing will take to the water without hesitation, and swims tolerably well.

The eggs of the Willet, in every instance which has come under my observation, are placed during incubation in an almost upright position, with the large end uppermost; and this appears to be the constant practice of several other species of birds that breed in these marshes. During the laying season the Crows are seen roaming over the marshes in search of eggs, and wherever they come spread consternation and alarm among the Willets, who in united numbers attack and pursue them with loud clamours. It is worthy of remark, that among the various birds that breed in these marshes, a mutual respect is paid to each other's

eggs; and it is only from intruders from the land side, such as Crows, Jays, weasels, foxes, minxes and man himself, that these affectionate tribes have most to dread.

The Willet subsists chiefly on small shell-fish, marine worms and other aquatic insects; in search of which it regularly resorts to the muddy shores and flats at low water; its general rendezvous being the marshes.

This bird has a summer and also a winter dress, in its colors differing so much in these seasons as scarcely to appear to be the same species. Our figure in the plate exhibits it in its spring and summer plumage, which in a good specimen is as follows:

Length fifteen inches, extent thirty inches; upper parts dark olive brown, the feathers streaked down the centre, and crossed with waving lines of black; wing-coverts light olive ash; the whole upper parts sprinkled with touches of dull yellowish white; primaries black, white at the root half; secondaries white, bordered with brown; rump dark brown; tail rounded, twelve feathers, pale olive waved with bars of black; tail-coverts white barred with olive; bill pale lead color, becoming black towards the tip; eye very black; chin white; breast beautifully mottled with transverse spots of olive on a cream ground; belly and vent white, the last barred with olive; legs and feet pale lead color; toes half-webbed.

Towards the fall, when these birds associate in large flocks, they become of a pale dun color above, the plumage being shafted with dark brown, and the tail white or nearly so. At this season they are extremely fat, and esteemed excellent eating. Experienced gunners always select the lightest colored ones from a flock, as being uniformly the fattest.

The female of this species is generally larger than the male. In the months of October and November they gradually disappear.

GREAT MARBLED GODWIT.

LIMOSA FEDOA.[Platc LVI.—Fig. 4.—*Female.*]

Arct. Zool. No. 371, 372, 373.—*La Barge rousse de la Baie d'Hudson*, BUFF. VII, 507.—*American Godwit*, LATH. *Syn.* 3, p. 142, No. 12.—*Marbled Godwit*, *Id. Sup.* p. 245, No. 33.—*Hudsonian Godwit?* *Id. Sup.* p. 246, No. 34.—*La Barge rousse d'Amérique*, BRISS. 5, p. 287, No. 7.

THIS is another transient visitant of our seacoasts in spring and autumn, to and from its breeding place in the north. Our gunners call it the *Straight-billed Curlew*, and sometimes the *Red Curlew*. It is a shy, cautious, and watchful bird; yet so strongly are they attached to each other, that on wounding one in a flock, the rest are immediately arrested in their flight, making so many circuits over the spot where it lies fluttering and screaming, that the sportsman often makes great destruction among them. Like the Curlew, they may also be enticed within shot, by imitating their call or whistle; but can seldom be approached without some such manœuvre. They are much less numerous than the Short-billed Curlews, with whom, however, they not unfrequently associate. They are found among the salt marshes in May, and for some time in June, and also on their return in October and November; at which last season they are usually fat, and in high esteem for the table.

The female of this bird having been described by several writers as a distinct species from the male, it has been thought proper to figure the former; the chief difference consists in the undulating bars of black with which the breast of the male is marked, and which are wanting in the female.

The male of the Great Marbled Godwit is nineteen inches long, and thirty-four inches in extent; the bill is nearly six inches in length, a little turned up towards the extremity, where it is black, the base is of a pale purplish flesh color; chin and upper part of the throat whitish; head and neck mottled with dusky brown and black on a ferruginous ground; breast barred with wavy lines of black; back and scapulars black, marbled with pale brown; rump and tail-coverts of a very light brown, barred with dark brown; tail even, except the two middle feathers, which are a little the longest; wings pale ferruginous, elegantly marbled with dark brown, the four first primaries black on the outer edge; whole lining and lower parts of the wings bright ferruginous; belly and vent light rust color, with a tinge of lake.

The female differs in wanting the bars of black on the breast. The bill does not acquire its full length before the third year.

About fifty different species of the *Scelopax* genus are enumerated by naturalists. These are again by some separated into three classes or sub-genera; *viz.* the straight-billed, or Snipes; those with bills bent downwards, or the Curlews; and those whose bills are slightly turned upwards, or Godwits. The whole are a shy, timid and solitary tribe, frequenting those vast marshes, swamps and morasses, that frequently prevail in the vicinity of the ocean, and on the borders of large rivers. They are also generally migratory, on account of the periodical freezing of those places in the northern regions where they procure their food. The Godwits are particularly fond of salt marshes; and are rarely found in countries remote from the sea.

B. M. EVERHART,
West Chester, Pa.,
1886.

TURN-STONE.

STREPSILAS INTERPRES.

[Plate LVII.—Fig. 1.]

Hebridal Sandpiper, Arct. Zool. p. 472, No. 382.—Le Tourne-pierre, BUFF. VII, 130. Pl. enl. 340, 857, 856.—BEWICK, II, p. 119, 121.—CATESBY, I, 72.—Tringa interpres, LATH. Ind. Orn. p. 738, No. 45.—PEALE'S Museum, No. 4044.

THIS beautifully variegated species is common to both Europe and America; consequently extends its migrations far to the north. It arrives from the south on the shores of New Jersey in April; leaves them early in June; is seen on its return to the south in October; and continues to be occasionally seen until the commencement of cold weather, when it disappears for the season. It is rather a scarce species in this part of the world, and of a solitary disposition; seldom mingling among the large flocks of other Sandpipers; but either coursing the sands alone, or in company with two or three of its own species. On the coast of Cape May and Egg-Harbor this bird is well known by the name of the *Horse-foot Snipe*, from its living, during the months of May and June, almost wholly on the eggs or spawn of the great King Crab, called here by the common people the *Horse-foot*. This animal is the *Monoculus polyphemus* of entomologists. Its usual size is from twelve to fifteen inches in breadth, by two feet in length; tho sometimes it is found much larger. The head, or forepart, is semicircular, and convex above, covered with a thin elastic shelly case. The lower side is concave, where it is furnished with feet and claws resembling those of a crab. The posterior extremity consists of a long, hard, pointed, dagger-like tail, by means of which, when overset by the waves, the animal turns itself on its belly again. The male may be distinguished from the female by

Drawn from Nature by J. Wilson



Engraved by W. Shinn

his two large claws having only a single hook each, instead of the forceps of the female. In the bay of Delaware, below Egg-island, and in what is usually called Maurice river cove, these creatures seem to have formed one of their principal settlements. The bottom of this cove is generally a soft mud, extremely well suited to their accommodation. Here they are resident, burying themselves in the mud during the winter; but early in the month of May they approach the shore in multitudes to obey the great law of nature, in depositing their eggs within the influence of the sun, and are then very troublesome to the fishermen, who can scarcely draw a seine for them, they are so numerous. Being of slow motion, and easily upset by the surf, their dead bodies cover the shore in heaps, and in such numbers, that for ten miles one might almost walk on them without touching the ground.

The hogs from the neighboring country are regularly driven down, every spring, to feed on them, which they do with great avidity; tho by this kind of food their flesh acquires a strong, disagreeable, fishy taste. Even the small turtles, or terrapins, so eagerly sought after by our epicures, contract so rank a taste by feeding on the spawn of the king crab, as to be at such times altogether unpalatable. This spawn may sometimes be seen lying in hollows and eddies in bushels; while the Snipes and Sandpipers, particularly the Turn-stone, are hovering about, feasting on the delicious fare. The dead bodies of the animals themselves are hauled up in wagons for manure, and when placed at the hills of maize, in planting time, are said to enrich the soil, and add greatly to the increase of the crop.

The Turn-stone derives its name from another singularity it possesses, of turning over with its bill small stones and pebbles, in search of various marine worms and insects. At this sort of work it is exceedingly dexterous; and even when taken and domesticated, is said to retain the same habit.* Its bill seems particu-

* Catesby.

larly well constructed for this purpose, differing from all the rest of its tribe, and very much resembling, in shape, that of the common Nuthatch. We learn from Mr. Pennant, that these birds inhabit Hudson's bay, Greenland, and the arctic flats of Siberia, where they breed, wandering southerly in autumn. It is said to build on the ground, and to lay four eggs, of an olive color, spotted with black; and to inhabit the isles of the Baltic during summer.

The Turn-stone flies with a loud twittering note, and runs with its wings lowered; but not with the rapidity of others of its tribe. It examines more completely the same spot of ground, and, like some of the Woodpeckers, will remain searching in the same place, tossing the stones and pebbles from side to side for a considerable time.

These birds vary greatly in color, scarcely two individuals are to be found alike in markings. These varieties are most numerous in autumn when the young birds are about; and are less frequently met with in spring. The most perfect specimens I have examined are as follows:

Length eight inches and a half, extent seventeen inches; bill blackish horn; frontlet, space passing through the eyes, and thence dropping down and joining the under mandible, black, enclosing a spot of white. Crown white, streaked with black; breast black, whence it turns up half across the neck; behind the eye a spot of black; upper part of the neck white, running down and skirting the black breast as far as the shoulder; upper part of the back black, divided by a strip of bright ferruginous; scapulars black, glossed with greenish, and interspersed with rusty red; whole back below this pure white, but hid by the scapulars; rump black; tail-coverts white; tail rounded, white at the base half, thence black to the extremity; belly and vent white; wings dark dusky, crossed by two bands of white; lower half of the lesser coverts ferruginous; legs and feet a bright vermilion, or red lead;

hind toe standing inwards, and all of the toes edged with a thick warty membrane. The male and female are alike variable; and when in perfect plumage nearly resemble each other.

Bewick, in his History of British Birds, has figured and described what he considers to be two species of Turn-stone; one of which, he says, is chiefly confined to the southern, and the other to the northern parts of Great Britain. The difference, however, between these two appears to be no greater than commonly occurs among individuals of the same flock, and evidently of the same species, in this country. As several years probably elapse before these birds arrive at their complete state of plumage, many varieties must necessarily appear, according to the different ages of the individuals. This is the only species of the genus *Streptopelia* at present known to naturalists. It is found in almost every quarter of the world.

ASH-COLORED SANDPIPER.

TRINGA CINEREA.

[Plate LVII.—Fig. 2.]

LATH. *Ind. Orn.*, *Tringa cinerea*, p. 733, No. 25, *grisea*, No. 23; p. 732, *nævia*, No. 22; p. 737, *australis*, No. 40; p. 738, *Canutus?* No. 44.—*The Knot, Arct. Zool.* No. 384; *Ash-colored Sandpiper, Ibid.* No. 386.—TEM. *Man. d'Orn.* p. 627.—PEALE'S *Museum*, No. 4060.

THE regularly disposed concentric semicircles of white and dark brown that mark the upper parts of the plumage of this species, distinguish it from all others, and give it a very neat appearance. In activity it is superior to the preceding; and traces the flowing and recession of the waves along the sandy beach, with great nimbleness, wading and searching among the loosened particles for its favorite food, which is a small thin oval bivalve shell-fish, of a white or pearl color, and not larger than the seed of an apple. These usually lie at a short depth below the surface; but in some places are seen at low water in heaps, like masses of wet grain, in quantities of more than a bushel together. During the latter part of summer and autumn, these minute shell-fish constitute the food of almost all those busy flocks that run with such activity along the sands, among the flowing and retreating waves. They are universally swallowed whole; but the action of the bird's stomach, assisted by the shells themselves, soon reduces them to a pulp. If we may judge from their effects they must be extremely nutritious, for almost all those tribes that feed on them are at this season mere lumps of fat. Digging for these in the hard sand would be a work of considerable labour, whereas when the particles are loosened by the flowing of the sea, the birds collect them with great ease and dexterity. It is amusing to observe with what

adroitness they follow and elude the tumbling surf, while at the same time they seem wholly intent on collecting their food.

The Ash-colored Sandpiper, the subject of our present account, inhabits both Europe and America. It has been seen in great numbers on the Seal islands near Chattenx bay; is said to continue the whole summer in Hudson's bay, and breeds there. Mr. Pennant suspects that it also breeds in Denmark; and says, that they appear in vast flocks on the Flintshire shores during the winter season.* With us they are also migratory, being only seen in spring and autumn. They are plump birds; and, by those accustomed to the sedge taste of this tribe, are esteemed excellent eating.

The length of this species is ten inches, extent twenty; bill black, straight, fluted to nearly its tip, and about an inch and a half long; upper parts brownish ash, each feather marked near the tip with a narrow semicircle of dark brown, bounded by another of white; tail-coverts white, marbled with olive; wing quills dusky, shafts white; greater coverts black, tip with white; some of the primaries edged also with white; tail plain pale ash, finely edged and tip with white; crown and hind head streaked with black, ash and white; stripe over the eye, checks and chin white, the former marked with pale streaks of dusky, the latter pure; breast white, thinly specked with blackish; belly and vent pure white; legs a dirty yellowish clay color; toes bordered with a narrow thick warty membrane; hind toe directed inwards as in the Turn-stone; claws and eye black.

These birds vary a little in color, some being considerably darker above, others entirely white below; but, in all, the concentric semicircles on the back, scapulars, and wing-coverts are conspicuous.

I think it probable that these birds become much lighter colored during the summer, from the circumstance of having shot

* Arct. Zool. p. 474.

one late in the month of June, at Cape May, which was of a pale drab or dun color. It was very thin and emaciated; and on examination appeared to have been formerly wounded, which no doubt occasioned its remaining behind its companions.

Early in December I examined the same coast every day for nearly two weeks without meeting with more than one solitary individual of this species; although in October they were abundant. How far to the southward they extend their migrations, we have no facts that will enable us to ascertain; tho it is probable that the shores of the West India islands afford them shelter and resources during our winter.

It would appear by the synonymes at the head of this article, that there has been great confusion among ornithologists with respect to this bird. That it has been described under six or seven different names I have little doubt. However, I shall leave the subject to those who are willing to investigate it; contenting myself with pointing out the quarters whence information may be derived.

THE PURRE.

TRINGA ALPINA.

[Plate LVII.—Fig. 3.]

LINN. *Syst.* 251.—*Arct. Zool.* p. 475, No. 390.—BEWICK, II, p. 115.—*L'Alouette de mer*, BUFF. VII, 548.—*Tringa cinclus*, *Ind. Orn.* 735, No. 35; *T. ruficollis*, *ibid*, No. 36.—BRISS. 5, p. 211, pl. 19, fig. 1.—TEMM. *Man. d'Orn.* p. 612.

THIS is one of the most numerous of our *Strand-birds*, as they are usually called, that frequent the sandy beach, on the frontiers of the ocean. In its habits it differs so little from the preceding, that, except in being still more active and expert in running and searching among the sand, on the reflux of the waves, as it nimbly darts about for food, what has been said of the former will apply equally to both, they being pretty constant associates on these occasions.

The Purre continues longer with us both in spring and autumn than either of the two preceding; many of them remain during the severest of the winter, tho the greater part retire to the more genial regions of the south; where I have seen them at such seasons, particularly on the seacoasts of both Carolinas, during the month of February, in great numbers.

These birds, in conjunction with several others, sometimes collect together in such flocks, as to seem, at a distance, a large cloud of thick smoke, varying in form and appearance every instant, while it performs its evolutions in air. As this cloud descends and courses along the shores of the ocean, with great rapidity, in a kind of waving serpentine flight, alternately throwing its dark and white plumage to the eye, it forms a very grand and interesting appearance. At such times the gunners make prodigious

gious slaughter among them ; while, as the showers of their companions fall, the whole body often alight, or descend to the surface with them, till the sportsman is completely satiated with destruction. On some of these occasions, while crowds of victims are fluttering along the sand, the small Pigeon Hawk, constrained by necessity, ventures to make a sweep among the dead in presence of the proprietor, but as suddenly pays for his temerity with his life! Such a tyrant is man, when vested with power and unrestrained by the dread of responsibility.

The Purre is eight inches in length, and fifteen inches in extent ; the bill is black, straight, or slightly bent downwards, about an inch and a half long, very thick at the base, and tapering to a slender blunt point at the extremity ; eye very small, iris dark hazel ; checks grey ; line over the eye, belly and vent white ; back and scapulars of an ashy brown, marked here and there with spots of black bordered with bright ferruginous ; sides of the rump white ; tail-coverts olive, centred with black ; chin white ; neck below gray ; breast and sides thinly marked with pale spots of dusky, in some pure white ; wings black, edged and tipped with white ; two middle tail-feathers dusky, the rest brown ash, edged with white ; legs and feet black ; toes bordered with a very narrow scalloped membrane. The usual broad band of white crossing the wing, forms a distinguishing characteristic of almost the whole genus.

On examining more than a hundred of these birds they varied considerably in the black and ferruginous spots on the back and scapulars ; some were altogether plain, while others were thickly marked, particularly on the scapulars, with a red rust color, centred with black. The females were uniformly more plain than the males ; but many of the latter, probably young birds, were destitute of the ferruginous spots. On the twenty-fourth of May, the eggs in the females were about the size of partridge shot. In

what particular regions of the north these birds breed is altogether unknown. It is now ascertained that the Purre is no other than the young of the Dunlin: hence we must class the two under the trivial name of *Alpina*.

In the latter part of October I procured two specimens of this bird, male and female, which were shot below Philadelphia. They were young, measuring seven inches and a half in length; and their bills were only *one* inch long. The crown, back and scapulars, dusky olive, edged and tipped with bright ferruginous; some of the scapulars, and back feathers, tipped with white; rump dusky olive, faintly tipped with rust; tail-coverts, above and below, pure white, with a few touches of pale ash. The tail of this species is composed of twelve feathers.

BLACK-BELLIED PLOVER.

VANELLUS HELVETICUS.

[Plate LVII.—Fig. 4.]

Vanellus Helveticus, BRISS. 5, p. 107, pl. 10, fig. 1; *V. griseus*, *Id.* p. 100, pl. 9, fig. 1; *V. varius*, *Id.* p. 103, pl. 9, fig. 2.—*Tringa Helvetica*, *Ind. Orn.* p. 728, No. 10; *T. squatarola*, *Id.* p. 729, No. 11.—*Le Vanneau varié*, *Plan. Enl.* 923; *Le Vanneau gris*, *Id.* 854; *Le Vanneau suisse*, *Id.* 853.—*Gray Sandpiper*, *Arct. Zool.* No. 393; *Swiss Sandpiper*, *Id.* No. 396.—*British Zool.* No. 191.—EDWARDS, vol. 3, pl. 140.—*Vanellus melanogaster*, BECHSTEIN, vol. 4, p. 356.—LATH. *Syn.* 3, p. 167, No. 10; p. 168, No. 11; p. 169, var. A.; *Id. Sup.* p. 248.—TEM. *Man. d'Orn.* 549.—PEALE'S *Museum*, No. 4196.

THIS bird is known in some parts of the country by the name of the large Whistling Field Plover. It generally makes its first appearance in Pennsylvania late in April; frequents the countries towards the mountains; seems particularly attached to newly ploughed fields, where it forms its nest of a few slight materials, as slightly put together. The female lays four eggs, large for the size of the bird, of a light olive color dashed with black; and has frequently two brood in the same season. It is an extremely shy and watchful bird, tho clamorous during breeding time. The young are without the black color on the breast and belly until the second year, and the colors of the plumage above are likewise imperfect till then. They feed on worms, grubs, winged insects, and various kinds of berries, particularly those usually called dew-berries, and are at such times considered exquisite eating. About the beginning of September they descend with their young to the seacoast, and associate with the numerous multitudes then returning from their breeding places in the north. At this season they abound on the plains of Long Island. They have a loud whistling note; often fly at a great height; and are called by many gunners

along the coast the Black-bellied Kildeer. They continue about the coast until early in November, when they move off to the south.

This species is twelve inches long, and twenty-four inches in extent; the bill is thick, deeply grooved on the upper mandible, nearly an inch and a half in length, and of a black color; the head and globe of the eye are both remarkably large, the latter deep bluish black; forehead white; crown and hind-head black, spotted with golden yellow; back and scapulars dusky, sprinkled with the same golden or orange colored spots, mixed with others of white; throat, and thence down the breast and belly, as far as the thighs black; sides of the breast whitish; wing quills black, middle of the shafts white; greater coverts black, tip with white; lining of the wing black; tail regularly barred with blackish and pure white; tail-coverts, vent and thighs, pure white; legs and feet a dusky lead color; the exterior toe joined to the middle by a broad membrane; hind toe very small.

An adult male, shot the 26th April, near Philadelphia, measured eleven inches in length; space between the eye and bill, and cheeks, black; throat, and thence down the breast and belly, as far as the thighs, black, with white intermixed; front pure white, which extends in a narrow line over the eyes, bordering the black of the neck, as far as the breast; crown, and thence down the back part of the neck, brown and white; upper parts, with wing-coverts, banded with white and black, with some ashy brown feathers interspersed, the whole presenting an irregularly spotted appearance—the back, scapulars and tertials with greenish reflections; lower part of abdomen, thighs, vent, lining of the wings, and under tail-coverts, pure white, the exterior vanes of the last spotted with brown black; sides under the wings very pale ash, with faint ashy brown bars; upper tail-coverts white, with narrow ashy brown bars, which increase in size, and become darker, up the rump; the upper part of the inner webs of the primaries white;

bill, legs and feet, of a shining black; no golden or orange colored spots. The parts not mentioned agreeing with those of the foregoing.

Another adult male, shot at Egg-Harbor, on the 10th of May, was twelve inches in length, and had its cheeks, lores, throat, middle of the breast and belly, as far as the thighs, black; the *long feathers of the sides*, at the junction of the wings, also black; feathers of the crown ash, centred with black, and tipped with white; back brownish black, plumage broadly tipped with white; wing-coverts brown ash and black, broadly spotted and tipped with white; tail white, broadly barred with black; no golden spots.

An adult female, shot at Egg-Harbor, on the 26th May, was twelve inches in length; upper parts olive brown, spotted with black and white, the *long feathers of the sides*, at the junction of the wings, black; wings crossed with a broad band of white, immediately under their coverts, spreading over their shafts; secondaries pale olive, edged and tipped with white; primaries, and their coverts, black; throat and sides of the neck white, spotted with dark olive; breast and belly, as far as the thighs, black, intermixed with white; legs and feet deep purplish slate. The black of the lower parts was not so deep as that of the foregoing male. Her eggs were small.

A young male, shot at Egg-Harbor, in the month of October, had whitish spots on a brownish black ground; crown nearly black, spotted with brownish yellow; breast, throat and eye-brows, pure white; the *long feathers of the sides*, at the junction of the wings, black; legs and feet lead-colored.

A young bird in Peale's collection, supposed to be a male of the first year, has its head, neck, and whole upper parts, brown ash or dark gray, spotted with white; breast white, with pale brown ash intermixed; lower part of the abdomen, and under tail-coverts, white; tail white, with large bars of ashy brown;

lining of the wings white; the *long feathers of the sides*, at the junction of the wings, dusky; primaries paler than in the adult, but similarly marked with white. It has no golden or orange colored spots.

I have little doubt that the Black-bellied Plover described by Pennant as common at Hudson's bay, and called there Hawk's-eye, is this species, although authors record it among the synonyms of the Golden Plover, in its spring dress. The hind toe of this species is very small and slender; and in dried specimens it adheres so closely to the tarsus that it is frequently overlooked. It likewise is liable to be rubbed off; this accident probably occurred to the specimen figured and described by Edwards, under the name of Spotted Plover; for I have no hesitation in pronouncing it to be of the same species with the subject of this article. The bird figured in the British Zoology of Pennant, as the Golden Plover, (Plate LXXII,) appears to be the young of this species, in its winter dress; for it is represented with a hind toe, which the true Golden Plover is never furnished with. Hence we must conclude that those authors, who describe the latter as having *sometimes* a hind toe, confound the young of the two species, which in truth so nearly resemble each other in their plumage that it requires a close observation to distinguish them. But the young of the Black-bellied Plover, or present species, may be known by their large head and stout bill; by their hind toe; and by the long dusky or black feathers which lie next to the sides, at the junction of the wings.

From the length of time which these birds take to acquire their full colors, they are found in very various stages of plumage. The breast and belly are at first white, gradually appear mottled with black, and finally become totally black in the breeding season. The spots of orange, or golden, on the crown, hind-head and back, are at first white, and sometimes even the breast itself

is marked with these spots, mingled among the black. We are told, that in the winter the breast and belly of the adults change to white; but this point I cannot ascertain from my own experience.

In the Manuel d'Ornithologie of Temminek, unquestionably the best work on the birds of Europe which has ever been published, the changes which this species undergoes are clearly detailed; and its synonymes are so well settled, that the future ornithologist will find his labours much lightened, when the subject of this article, in any stage of plumage, shall come before him. In the excellent Supplement to Montagu's Ornithological Dictionary we are also presented with some valuable references; and the editor of this volume with pleasure acknowledges the sources whence he has drawn that information which has enabled him to determine the species.

RED-BREASTED SANDPIPER.

TRINGA RUFÆ.

[Plate LVII.—Fig. 5.]

Tringa Islandica? LATH. *Ind. Orn.* p. 737, No. 39.—*Red Sandpiper?* PENN. *Arct. Zool.* No. 392.—TEMM. *Man. d'Orn.* p. 629.—PEALE'S *Museum*, No. 4050.

OF this prettily marked species I can find no satisfactory description. The *Tringa Islandica*, or Aberdeen Sandpiper, of Pennant and others, is the only species that has any resemblance to it; the descriptions of that bird, however, will not altogether apply to the present.

The common name of this species on our seacoast is the *Gray-back*, and among the gunners it is a particular favorite, being generally a plump, tender and excellent bird for the table; and, consequently, brings a good price in market.

The Gray-backs do not breed on the shores of the middle states. Their first appearance is early in May. They remain a few weeks, and again disappear until October. They usually keep in small flocks, alight in a close body together on the sand-flats, where they search for the small bivalve shells already described. On the approach of the sportsman they frequently stand fixed and silent for some time; do not appear to be easily alarmed, neither do they run about in the water as much as some others, or with the same rapidity, but appear more tranquil and deliberate. In the month of November they retire to the south.

This species is ten inches long, and twenty in extent; the bill is black, and about an inch and a half long; the chin, eyebrows and whole breast is a pale brownish orange color; crown, hind-head from the upper mandible backwards, and neck, dull

white, streaked with black; back a pale slaty olive, the feathers tipped with white, barred and spotted with black and pale ferruginous; tail-coverts white, elegantly barred with black; wings plain dusky, black towards the extremity; the greater coverts tipped with white; shafts of the primaries white; tail pale ashy olive, finely edged with white, the two middle feathers somewhat the longest; belly and vent white, the latter marked with small arrow-heads of black; legs and feet black; toes bordered with a narrow membrane; eye small and black.

In some specimens, both of males and females, the red on the breast was much paler, in others it descended as far as the thighs. Both sexes seemed nearly alike.

I am altogether in doubt whether or not this species is new; and my doubts are not lessened when I reflect upon the careless manner in which our birds have been taken notice of in the works of the European naturalists. Even should it prove to be the Aberdeen Sandpiper of Pennant, a question will still occur, is it the Ash-colored Sandpiper in its perfect adult plumage? I must confess my inability, with my present means of information, to determine this question.





Engraved by A. Lawson.

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- 1. Red-breasted Snipe.
- 2. Long-legged Avocet.
- 3. Solitary Sandpiper.
- 4. Yellow-necked Snipe.
- 5. Tattler Snipe.

Drawn from Nature by A. Wilson.

RED-BREASTED SNIPE.

SCOLOPAX GRISEA.

[Plate LVIII.—Fig. 1.]

Scolopax noveboracensis, LATH. *Ind. Orn.* p. 723, No. 32; *grisea*, p. 724, No. 33.—*Arct. Zool.* p. 464, No. 368, 369.—TEM. *Man. d'Orn.* p. 679.—PEALE'S *Museum*, No. 3932.

THIS bird has a considerable resemblance to the common Snipe, not only in its general form, size and colors, but likewise in the excellence of its flesh, which is in high estimation. It differs, however, greatly from the common Snipe in its manners, and in many other peculiarities, a few of which, as far as I have myself observed, may be sketched as follows:—The Red-breasted Snipe arrives on the seacoast of New Jersey early in April; is seldom or never seen inland; early in May it proceeds to the north to breed, and returns by the latter part of July or beginning of August. During its stay here it flies in flocks, sometimes very high, and has then a loud and shrill whistle, making many evolutions over the marshes; forming, dividing, and reuniting. They sometimes settle in such numbers, and so close together, that eighty-five have been shot at one discharge of a musket. They spring from the marshes with a loud whistle, generally rising high, and making several circuitous manœuvres in air, before they descend. They frequent the sand-bars and mud-flats at low water, in search of food; and being less suspicious of a boat than of a person on shore, are easily approached by this medium, and shot down in great numbers. They usually keep by themselves, being very numerous; are in excellent order for the table in September; and on the approach of winter retire to the south.

I have frequently amused myself with the various action of these birds. They fly very rapidly, sometimes wheeling, coursing

and doubling along the surface of the marshes ; then shooting high in air, there separating and forming in various bodies, uttering a kind of quivering whistle. Among many which I opened in May, were several females, that had very little rufous below, and the backs were also much lighter and less marbled with ferruginous. The eggs contained in their ovaries were some of them as large as garden peas. Their stomachs contained masses of those small snail shells that lie in millions on the salt marshes : the wrinkles at the base of the bill, and the red breast, are strong characters of this species, as also the membrane which unites the outer and middle toes together.

The Red-breasted Snipe is ten inches and a half long, and eighteen inches in extent ; the bill is about two inches and a quarter in length, straight, grooved, black towards the point, and of a dirty eel-skin color at the base, where it is tumid and wrinkled ; lores dusky ; cheeks and eyebrows pale yellowish white, mottled with specks of black ; throat and breast a reddish buff color ; sides white, barred with black ; belly and vent white, the latter barred with dusky ; crown, neck above, back, scapulars and tertials black, edged, mottled and marbled with yellowish white, pale and bright ferruginous, much in the same manner as the common Snipe ; wings plain olive, the secondaries centred and bordered with white ; shaft of the first quill very white ; rump, tail-coverts and tail (which consists of twelve feathers) white, thickly spotted with black ; legs and feet dull yellowish green ; outer toe united to the middle one by a small membrane ; eye very dark. The female, which is paler on the back, and less ruddy on the breast, has been described by Mr. Pennant as a separate species.*

These birds doubtless breed not far to the northward of the United States, if we may judge from the lateness of the season when they leave us in spring, the largeness of the eggs in the ova-

* See his Brown Snipe, *Arct. Zool.* No. 369.

ries of the females before they depart, and the short period of time they are absent. Of all our sea-side Snipes it is the most numerous, and the most delicious for the table.

From these circumstances and the crowded manner in which it flies and settles, it is the most eagerly sought after by our gunners, who send them to market in great numbers.

AMERICAN STILT.*

HIMANTOPUS MEXICANUS.

[Plate LVIII.—Fig. 2.]

*L'Echasse du Mexique, (Himantopus Mexicanus,) BRISSON, vol. 5, p. 36, No. 2.—PEALE'S
Museum, No. 4210.*

THE resemblance between this species and the Avoset of this volume, figured in Plate LXIII, extends to their general appearance, their voice, manners, food, place and mode of breeding, and the color of their eggs; so that a common observer would, without hesitation, pronounce them to belong to the same family. If we were at liberty to pursue our inclinations, we should certainly class these birds together, from a conviction that what nature appears to have so closely conjoined ought not to be separated. But in a methodical arrangement, an adherence to recognised distinctive characters must be paramount to every consideration: hence the formation of the feet of this species forbids us to consider it as congenerous with the Avoset. The genus *Himantopus* was established many years ago by Brisson; but later ornithologists did not think proper to adopt it, contenting themselves with classing the birds on which it was founded with the Plovers, and yet affecting to make the particular conformation of the bill, legs or feet, the rule of their arrangement. In the present subject, however, excepting the trivial circumstance of the want of a hind toe, there is no resemblance whatever of those parts to the bill, legs or feet of the Plover; on the contrary, they are so entirely different, as to create no small surprise at the adoption, and general acceptance, of a classification evidently so absurd and unnatural.

* Named in the plate Long-legged Avoset.

This species arrives on the seacoast of New Jersey about the twenty-fifth of April, in small detached flocks, of twenty or thirty together. These sometimes again subdivide into lesser parties; but it rarely happens that a pair is found solitary, as during the breeding season they usually associate in small companies. On their first arrival, and indeed during the whole of their residence, they inhabit those particular parts of the salt marshes, pretty high up towards the land, that are broken into numerous shallow pools, but are not usually overflowed by the tides during the summer. These pools or ponds are generally so shallow, that with their long legs the Stilts can easily wade through them in every direction; and as they abound with minute shell-fish, and multitudes of aquatic insects and their larvæ, besides the eggs and spawn of others deposited in the soft mud below, these birds find here an abundant supply of food, and are almost continually seen wading about in such places, often up to the breast in water.

In the vicinity of these *bald places*, as they are called by the country people, and at the distance of forty or fifty yards off, among the thick tufts of grass, one of these small associations, consisting perhaps of six or eight pair, takes up its residence during the breeding season. About the first week in May they begin to construct their nests, which are at first slightly formed of a small quantity of old grass, scarcely sufficient to keep the eggs from the wet marsh. As they lay and sit, however, either dreading the rise of the tides, or for some other purpose, the nest is increased in height, with dry twigs of a shrub very common in the marshes, roots of the salt grass, sea-weed, and various other substances, the whole weighing between two and three pounds. This habit of adding materials to the nest after the female begins sitting, is common to almost all other birds that breed in the marshes. The eggs are four in number, of a dark yellowish clay color, thickly marked with large blotches of black. These nests are often placed

within fifteen or twenty yards of each other ; but the greatest harmony seems to prevail among the proprietors.

While the females are sitting, the males are either wading through the ponds, or roaming over the adjoining marshes ; but should a person make his appearance, the whole collect together in the air, flying with their long legs extended behind them, keeping up a continual yelping note of *click click click*. Their flight is steady, and not in short sudden jerks like that of the Plover. As they frequently alight on the bare marsh, they drop their wings, stand with their legs half bent, and tremble as if unable to sustain the burden of their bodies. In this ridiculous posture they will sometimes stand for several minutes, uttering a curring sound, while from the corresponding quiverings of their wings and long legs, they seem to balance themselves with great difficulty. This singular manœuvre is, no doubt, intended to induce a belief that they may be easily caught, and so turn the attention of the person from the pursuit of their nests and young to themselves. The Red-necked Avoset, which we have introduced in the present volume, practises the very same deception, in the same ludicrous manner ; and both alight indiscriminately on the ground, or in the water. Both will also occasionally swim for a few feet, when they chauce, in wading, to lose their depth, as I have had several times an opportunity of observing.

The names by which this bird is known on the seacoast are the Stilt, Tilt, and Long-shanks. They are but sparingly dispersed over the marshes, having, as has been already observed, their particular favorite spots ; while in large intermediate tracts, there are few or none to be found. They occasionally visit the shore, wading about in the water, and in the mud, in search of food, which they scoop up very dexterously with their delicately formed bills. On being wounded while in the water, they attempt to escape by diving, at which they are by no means expert. In au-

turnn their flesh is tender, and well tasted. They seldom raise more than one brood in the season, and depart for the south early in September. As they are well known in Jamaica, it is probable some of them may winter in that and other of the West India islands.

The dimensions, colors and markings of a very beautiful specimen of the American Stilt, newly shot, were as follow :

Length from the point of the bill to the end of the tail fourteen inches, to the tips of the wings sixteen; extent twenty-eight inches; bill three inches long, slightly curved upwards, tapering to a fine point, the upper mandible rounded above, the whole of a deep black color; nostrils an oblong slit, pervious; tongue short, pointed; forehead, spot behind the eye, lower eyelid, sides of the neck, and whole lower parts, pure white; *back, rump and tail-coverts* also white, but so concealed by the scapulars as to appear black; tail even, or very slightly forked, and of a dingy white; the vent feathers reach to the tip of the tail below; line before the eye, auriculars, crown, back part of the neck, scapulars, and whole wings, deep black, richly glossed with green; legs and naked thighs a fine pale carmine: the latter measure three, the former four, inches and a half in length, exceedingly thin, and *so flexible that they may be bent considerably without danger of breaking*. This thinness of the leg enables the bird to wade with expedition, and without fatigue. Feet three-toed, the outer toe connected to the middle one by a broad membrane; wings long, extending, when shut, two inches beyond the tail, and sharp pointed; irides a bright rich scarlet; pupil black. In some, the white from the breast extends quite round the neck, separating the black of the hind neck from that of the body; claws blackish horn; lining of the wings black.

The female is about half an inch shorter, and differs in having the plumage of the upper back and scapulars, and also the tertials, of a deep brown color. The stomach, or gizzard, is extremely

muscular; those which I examined contained fragments of small snail shells, winged bugs, and a slimy matter, supposed to be the remains of some aquatic worms. In one of these females I counted upwards of one hundred and fifty eggs, some of them as large as buck shot. The singular form of the legs and feet, with the exception of the hind toe, and one membrane of the foot, is exactly like those of the Avoset. The upward curvature of the bill, tho not quite so great, is also the same as in the other, being rounded above, and tapering to a delicate point in the same manner. In short, a slight comparison of the two is sufficient to satisfy the most scrupulous observer that nature has elassed these two birds together; and so believing, it is with reluctance that we are compelled to separate them.

I at first thought this bird was the Long-legged Plover (*Charadrius himantopus*) of Europe, but I am now convinced that it is a distinct species. In Brisson's account of it, there is a little disagreement with the above description; but it must be recollected, that it inhabits Mexieo during the winter only; and there is reason to conclude that, in common with several other species, its plumage undergoes a slight change after its departure from its native regions. I have never been enabled to ascertain that it winters in any part of the United States; but think it more than probable that many remain during the winter in Louisiana.

SOLITARY SANDPIPER.

TOTANUS GLAREOLUS.

[Plate LVIII.—Fig. 3.]

Wood Sandpiper, LATH. *Syn.* vol. 3, p. 172.—*Tringa glareola*, GMEL. *Syst.* 1, p. 677.—
 TEM. *Man. d'Orn.* p. 654.—*Arct. Zool.* vol. 2, p. 188, G.—*Ind. Orn.* p. 730, No. 13.—
 PEALE'S *Museum*, No. 7763.

THIS species inhabits the watery solitudes of our highest mountains during the summer, from Kentucky to New York ; but is no where numerous, seldom more than one or two being seen together. It takes short low flights ; runs nimbly about among the mossy margins of the mountain springs, brooks and pools, occasionally stopping, looking at you, and perpetually nodding the head. It is so unsuspecting, or so little acquainted with man, as to permit one to approach within a few yards of it, without appearing to take any notice, or to be the least alarmed. At the approach of cold weather it descends to the muddy shores of our large rivers, where it is occasionally met with, singly, on its way to the south. I have made many long and close searches for the nest of this bird, without success. They regularly breed on Pocahontas mountain, between Easton and Wilkesbarre, in Pennsylvania ; arriving there early in May, and departing in September. It is usually silent, unless when suddenly flushed, when it utters a sharp whistle.

This species has considerable resemblance, both in manners and markings, to the Green Sandpiper of Europe (*Tringa Ochropus*) ; but differs from that bird in being nearly one third less, and in wanting the white-rump and tail-coverts of that species ; it is also destitute of its silky olive green plumage. How far north its migrations extend I am unable to say.

The Solitary Sandpiper is eight inches and a half long, and fifteen inches in extent; the bill is one inch and a quarter in length, dusky, and yellowish green at its base; nostrils pervious, bill fluted above and below; irides dark, pupil large, and of a bluish black; line over the eye, chin, belly and vent pure white; breast white, spotted with pale olive brown; crown and neck above dark olive, streaked with white; back, scapulars and rump, dark brown olive, each feather marked along the edges with small round spots of white; wings plain, and of a darker tint; under tail-coverts spotted with black; tail slightly rounded, the five exterior feathers on each side white, broadly barred with black; the two middle ones, as well as their coverts, plain olive; legs long, slender, and of a yellowish green, in some specimens of a dusky green. Male and female alike in color.

Since the above was written I have examined the descriptions of the Wood Sandpiper in the works of several European ornithologists, and a foreign specimen in Mr. Peale's cabinet, and am inclined to conjecture that our bird is no other than the former, the difference between them being no greater than what may be observed in several species common to both continents, but which are admitted by all naturalists to be identical. I the more readily yield to this opinion, from the circumstance of having lately shot two individuals of this bird, the tail feathers of which were *all barred* as above mentioned. This fact is important, inasmuch as it removes the only difference which I have been enabled to perceive between the two birds in question.

YELLOW-SHANKS SNIPE.

TOTANUS FLAVIPES.

[Plate LVIII.—Fig. 4.]

Arct. Zool. p. 463, No. 378.—*Ind. Orn.* p. 723, No. 29.—*LATH. Syn.* vol. 3, p. 152, No. 24.
—*PEALE'S Museum*, No. 3938.

OF this species I have but little to say. It inhabits our sea-coasts and salt marshes during summer; frequents the flats at low water, and seems particularly fond of walking among the mud, where it doubtless finds its favorite food in abundance. Having never met with its nest, nor with any person acquainted with its particular place or manner of breeding, I must reserve these matters for further observation. It is a plentiful species, and great numbers are brought to market in Boston, New York, and Philadelphia, particularly in autumn. On the fifth of September I shot several dozens of them in the meadows of Schuylkill, below Philadelphia. There had been a violent north-east storm a day or two previous, and a large flock of these, accompanied by several species of *Tringa*, and vast numbers of the Short-tailed Tern, appeared at once among the meadows. As a bird for the table the Yellow-shanks, when fat, is in considerable repute. Its chief residence is in the vicinity of the sea, where there are extensive mud-flats. It has a sharp whistle of three or four notes when about to take wing, and when flying. They may be shot with great facility if the sportsman, after the first discharge, will only lie close, and permit the wounded birds to flutter about without picking them up; the flock will generally make a circuit and alight repeatedly, until the greater part of them may be shot down. In the early part of May, these birds are very common on the muddy-flats of

our rivers, particularly in the vicinity of Philadelphia, and are then in good condition.

Length of the Yellow-shanks upwards of ten inches, breadth twenty inches; irides brown; bill slender, straight, an inch and a half in length, and black, mandibles of equal length, the upper bent downwards at the tip; throat, lower parts, thighs, and under tail-coverts, white—the last are generally marked on their exterior vanes with brown; those next to the tail barred with the same; lower part of the neck, with the breast, gray, the feathers streaked down their centres with dusky; head and back part of the neck black, the plumage edged with gray, in some specimens edged with brown ash; upper parts black, with oblong spots of white, intermixed with pale brown feathers; rump brown, edged with white; upper tail-coverts white, barred with brown; the tail is composed of twelve feathers, white, barred with ashy brown, the upper feathers, in some, gray brown, marked on their vanes, though not across, with brown and white; wings, when closed, extend somewhat beyond the tail; primaries and secondaries dusky; shaft of first primary whitish above, the rest of the shafts brown above, in some black, all white below; lesser wing-coverts dusky, slightly edged with white, and in some spotted with brown on the exterior vanes; secondaries slightly edged with white; legs bare above the knees upwards of an inch; length of tarsus two inches; outer toe connected as far as the first joint to the middle one, the membrane of the inner toe quite small; legs and feet yellow ochre; the claw of the middle toe has the appearance of having a supplemental nail at its base. This was a female shot the 22d April. A young male, shot at the same time, had its upper parts mixed with cinereous. The sexes can hardly be distinguished.

TELL-TALE SNIPE.

TOTANUS MELANOLEUCOS.

[Plate LVIII.—Fig. 5.]

GMEL. *Syst.* p. 659.—*Ind. Orn.* p. 723, No. 28.—*Spotted Snipe*, LATH. *Syn.* vol. 3, p. 149, var. A.—*Arct. Zool.* No. 374; *Stone Snipe*, *Id.* No. 376.—PEALE'S *Museum*, No. 3940.

THIS species and the preceding are both well known to our Duck-gunners, along the seacoast and marshes, by whom they are detested, and stigmatized with the names of the greater and lesser *Tell-tale*, for their faithful vigilance in alarming the Ducks with their loud and shrill whistle, on the first glimpse of the gunner's approach. Of the two the present species is by far the most watchful; and its whistle, which consists of four notes rapidly repeated, is so loud, shrill and alarming, as instantly to arouse every Duck within its hearing, and thus disappoints the eager expectations of the shooter. Yet the cunning and experience of the latter, is frequently more than a match for all of them, and before the poor *Tell-tale* is aware, his warning voice is hushed for ever, and his dead body mingled with those of his associates.

This bird arrives on our coast early in April; breeds in the marshes; and continues until November, about the middle of which month it generally moves off to the south. The nest I have been informed is built in a tuft of thick grass, generally on the borders of a bog or morass. The female, it is said, lays four eggs of a dingy white, irregularly marked with black.

These birds appear to be unknown in Europe. They are simply mentioned by Mr. Pennant, as having been observed in autumn, feeding on the sands on the lower part of Chatteaux bay,

continually nodding their heads; and were called there Stone Curlews.*

The *Tell-tale* seldom flies in large flocks, at least during summer. It delights in watery bogs, and the muddy margins of creeks and inlets; is either seen searching about for food, or standing in a watchful posture, alternately raising and lowering the head, and on the least appearance of danger utters its shrill whistle, and mounts on wing, generally accompanied by all the feathered tribes that are near. It occasionally penetrates inland along the muddy shores of our large rivers, seldom higher than tide water, and then singly and solitary. They sometimes rise to a great height in the air, and can be distinctly heard when beyond the reach of the eye. In the fall when they are fat their flesh is highly esteemed, and many of them are brought to our markets. The colors and markings of this bird are so like those of the preceding, that unless in point of size, and the particular curvature of the bill, the description of one might serve for both.

The Tell-tale is fourteen inches and a half long, and twenty-five inches in extent; the bill is two inches and a quarter long, of a dark horn color, and slightly bent upwards; the space round the eye, chin and throat, pure white; lower part of the neck pale ashy white, speckled with black; general color of the upper parts an ashy brown, thickly spotted with black and dull white, each feather being bordered and spotted on the edge with black; wing quills black; some of the primaries, and all of the secondaries with their coverts, spotted round the margins with black and white; head and neck above streaked with black and white; belly and vent pure white; rump white, dotted with black; tail also white, barred with brown; the wings when closed reach beyond the tail; thighs naked nearly two inches above the knees; legs two inches and three quarters long; feet four-toed, the outer joined by a mem-

* Arct. Zool. p. 468.

brane to the middle, the whole of a rich orange yellow; some of the tertials are scalloped on their edges, as if cut with dull seissors. The female differs little in plumage from the male; sometimes the vent is slightly dotted with black, and the upper parts more brown.

Nature seems to have intended this bird as a kind of spy, or sentinel, for the safety of the rest; and so well acquainted are they with the watchful vigilance of this species, that, while it continues silent among them, the Ducks feed in the bogs and marshes without the least suspicion. The great object of the gunner is to escape the penetrating glance of this guardian, which is sometimes extremely difficult to effect. On the first whistle of the Tell-tale, if beyond gunshot, the gunner abandons his design, but not without first bestowing a few left-handed blessings on the author of his disappointment.

Pennant's Spotted Snipe is undoubtedly this species. He states that it arrives at Hudson's bay in the spring; feeds on small shellfish and worms; and frequents the banks of rivers. Called there, by the natives, from its noise, *Sa-sa-shew*.* This Indian word, pronounced with rapidity, gives a tolerable idea of the whistle of the Tell-tale; and is a proof of the advantage of recording the vulgar names of animals, when these names are expressive of any peculiarity of voice or habit.

* Arct. Zool. vol. 2, p. 170.

SPOTTED SANDPIPER.

TOTANUS MACULARIUS.

[Plate LIX.—Fig. 1.]

Arct. Zool. p. 473, No. 385.—La Grive d'eau, BUFF. VIII, 140.—EDW. 277.—Tringa macularia, LATH. Ind. Orn. p. 734, No. 29.—TEMM. Man. d'Orn. p. 656.—PEALE'S Museum, No. 4056.

THIS very common species arrives in Pennsylvania about the twentieth of April, making its first appearance along the shores of our large rivers, and, as the season advances, tracing the courses of our creeks and streams towards the interior. Along the rivers Schuylkill and Delaware, and their tributary waters, they are in great abundance during the summer. This species is as remarkable for perpetually wagging the tail, as some others are for nodding the head; for whether running on the ground, or on the fences, along the rails, or in the water, this motion seems continual; even the young, as soon as they are freed from the shell, run about constantly wagging the tail. About the middle of May they resort to the adjoining corn fields to breed, where I have frequently found and examined their nests. One of these now before me, and which was built at the root of a hill of Indian corn, on high ground, is composed wholly of short pieces of dry straw. The eggs are four, of a pale clay or cream color, marked with large irregular spots of black, and more thinly with others of a paler tint. They are large in proportion to the size of the bird, measuring an inch and a quarter in length, very thick at the great end, and tapering suddenly to the other. The young run about with wonderful speed as soon as they leave the shell, and are then covered with down of a dull drab color, marked with a single streak of black down the middle of the back, and with another behind

Engraved from a drawing by G. Audin

- 1. Spotted Sandpiper
- 2. Barnswallow
- 3. Ring Plover
- 4. Sandpiper
- 5. Golden Plover
- 6. Killdeer

Engraved by G. S. Gardner



each ear. They have a weak, plaintive note. On the approach of any person the parents exhibit symptoms of great distress, counterfeiting lameness, and fluttering along the ground with seeming difficulty. On the appearance of a dog, this agitation is greatly increased; and it is very interesting to observe with what dexterity the female will lead him from her young, by throwing herself repeatedly before him, fluttering off, and keeping just without his reach, on a contrary direction from her helpless brood. My venerable friend, Mr. William Bartram, informs me, that he saw one of these birds defend her young for a considerable time from the repeated attacks of a ground squirrel. The scene of action was on the river shore. The parent had thrown herself, with her two young behind her, between them and the land; and at every attempt of the squirrel to seize them by a circuitous sweep, raised both her wings in an almost perpendicular position, assuming the most formidable appearance she was capable of, and rushed forwards on the squirrel, who, intimidated by her boldness and manner, instantly retreated; but presently returning, was met, as before, in front and on flank by the daring and affectionate bird, who with her wings and whole plumage bristling up, seemed swelled to twice her usual size. The young crowded together behind her, apparently sensible of their perilous situation, moving backwards and forwards as she advanced or retreated. This interesting scene lasted for at least ten minutes; the strength of the poor parent began evidently to flag, and the attacks of the squirrel became more daring and frequent, when my good friend, like one of those celestial agents who, in Homer's time, so often decided the palm of victory, stepped forward from his retreat, drove the assailant back to his hole, and rescued the innocent from destruction.

The flight of this bird is usually low, skimming along the surface of the water, its long wings making a considerable angle downwards from the body, while it utters a rapid cry of *weet weet weet* as it flutters along, seldom steering in a direct line up or

down the river, but making a long circuitous sweep, stretching a great way out, and gradually bending in again to the shore.

These birds are found occasionally along the sea marshes, as well as in the interior; and also breed in the corn fields there, frequenting the shore in search of food; but rarely associating with the other *Tringæ*. About the middle of October they leave us on their way to the south, and do not, to my knowledge, winter in any of the Atlantic states.

Mr. Pennant is of opinion that this same species is found in Britain; but neither his description, nor that of Mr. Bewick, will apply correctly to this. The following particulars, with the figure, will enable Europeans to determine this matter to their satisfaction.

Length of the Spotted Sandpiper seven inches and a half, extent thirteen inches; bill an inch long, straight, the tip and upper mandible dusky, lower orange; stripe over the eye, and lower eyelid, pure white; whole upper parts a glossy olive, with greenish reflections, each feather, marked with waving spots of dark brown; wing quills deep dusky; bastard wing bordered and tipped with white; a spot of white on the middle of the inner vane of each quill feather except the first; secondaries tipped with white; tail rounded, the six middle feathers greenish olive, the other three on each side white, barred with black; whole lower parts white, beautifully marked with roundish spots of black, small and thick on the throat and breast, larger and thinner as they descend to the tail; legs a yellow clay color; claws black.

The female is as thickly spotted below as the male; but the young birds of both sexes are pure white below, without any spots; they also want the orange on the bill. These circumstances I have verified on numerous individuals.

BARTRAM'S SANDPIPER.

TOTANUS BARTRAMIUS.

[Plate LIX.—Fig. 2.]

TEMMINCK, *Manuel d'Ornithologie*, p. 650.—PEALE'S *Museum*, No. 4040.

THIS bird being, as far as I can discover, a new species, undescribed by any former author, I have honored it with the name of my very worthy friend, near whose Botanic Gardens, on the banks of the river Schuylkill, I first found it. On the same meadows I have since shot several other individuals of the species, and have thereby had an opportunity of taking an accurate drawing as well as description of it.

Unlike most of their tribe, these birds appeared to prefer running about among the grass, feeding on beetles and other winged insects. There were three or four in company; they seemed extremely watchful, silent, and shy, so that it was always with extreme difficulty I could approach them.

These birds are occasionally seen there during the months of August and September, but whether they breed in the vicinity I have not been able to discover. Having never met with them on the sea shore, I am persuaded that their principal residence is in the interior, in meadows and such like places. They run with great rapidity, sometimes spreading their tail and dropping their wings, as birds do who wish to decoy you from their nest; when they alight they remain fixed, stand very erect, and have two or three sharp whistling notes as they mount to fly. They are remarkably plump birds, weighing upwards of three quarters of a pound; their flesh is superior, in point of delicacy, tenderness and flavour, to any other of the tribe with which I am acquainted.

This species is twelve inches long, and twenty-one in extent ; the bill is an inch and a half long, slightly bent downwards, and wrinkled at the base, the upper mandible black on its ridge, the lower, as well as the edge of the upper, of a fine yellow ; front, stripe over the eye, neck and breast, pale ferruginous, marked with small streaks of black, which, on the lower part of the breast, assume the form of arrow-heads ; crown black, the plumage slightly skirted with whitish ; chin, orbit of the eye, whole belly and vent pure white ; hind-head and neck above ferruginous, minutely streaked with black ; back and scapulars black, the former slightly skirted with ferruginous, the latter with white ; tertials black, bordered with white ; primaries plain black ; shaft of the exterior quill snowy, its inner vane elegantly pectinated with white ; secondaries pale brown, spotted on their outer vanes with black, and tipped with white ; greater coverts dusky, edged with pale ferruginous, and spotted with black ; lesser coverts pale ferruginous, each feather broadly bordered with white, within which is a concentric semicircle of black ; rump and tail-coverts deep brown black, slightly bordered with white ; tail *tapering*, of a pale brown orange color, beautifully spotted with black, the middle feathers centred with dusky ; legs yellow, tinged with green ; the outer toe joined to the middle by a membrane ; lining of the wings beautifully barred with black and white ; iris of the eye dark, or blue black, eye very large. The male and female are nearly alike.

RING PLOVER.

CHARADRIUS HIATICULA.

[Plate LIX.—Fig. 3.]

*Arct. Zool. p. 485, No. 401.—Le Pluvier à collier, BUFF. VIII, 90.—BEWICK, I, 326.—
Ind. Orn. p. 743, No. 8.—TEMME, Man. d'Orn. p. 539.—PEALE'S Museum, No. 4150.*

IN a preceding part of this work* a bird by this name has been figured and described, under the supposition that it was the Ring Plover, then in its summer dress; but which, notwithstanding its great resemblance to the present, I now suspect to be a different species. Fearful of perpetuating error, and anxious to retract, where this may inadvertently have been the case, I shall submit to the consideration of the reader the reasons on which my present suspicions are founded.

The present species, or true Ring Plover, and also the former, or light-colored bird, both arrive on the seacoast of New Jersey late in April. The present kind continues to be seen in flocks until late in May, when they disappear on their way farther north; the light-colored bird remains during the summer, forms its nest in the sand, and generally produces two brood in the season. Early in September the present species returns in flocks as before; soon after this, the light-colored kind go off to the south, but the former remain a full month later. European writers inform us, that the Ring Plover has a sharp twittering note, and this account agrees exactly with that of the present; the light-colored species, on the contrary, has a peculiarly soft and musical note, similar to the tone of a German flute, which it utters while running along

* See vol. V, plate xxxvii, fig. 3.

the sand with expanded tail and hanging wings, endeavouring to decoy you from its nest. The present species is never seen to breed here; and tho I have opened great numbers of them as late as the twentieth of May, the eggs were never larger than small bird-shot; while, at the same time, the light-colored kind had every where begun to lay in the little cavities which they had dug in the sand on the beach. These facts being considered, it seems difficult to reconcile such difference of habit in one and the same bird. The Ring Plover is common in England, and agrees exactly with the one now before us; but the light-colored species, as far as I can learn, is not found in Britain; specimens of it have indeed been taken to that country, where the most judicious of their ornithologists have concluded it to be still the Ring Plover, but to have changed from the effect of climate. Mr. Pennant, in speaking of the true Ring Plover, makes the following remarks: "Almost all which I have seen from the northern parts of North America have had the black marks extremely faint, and almost lost. The climate had almost destroyed the specific marks; yet in the bill and habit preserved sufficient to make the kind very easily ascertained." These traits agree exactly with the light-colored species described in our fifth volume. But this excellent naturalist was perhaps not aware that we have the true Ring Plover here in spring and autumn, agreeing in every respect with that of Britain, and at least in equal numbers; why, therefore, has not the climate equally affected the present and the former sort, if both are the same species? These inconsistencies cannot be reconciled but by supposing each to be a distinct species, which, tho approaching extremely near to each other in external appearance, have each their peculiar notes, color, and places of breeding.

The Ring Plover is seven inches long, and fourteen inches in extent; bill short, orange colored, tip with black; front and chin white, encircling the neck; upper part of the breast black; rest of

the lower parts pure white; fore part of the crown black; band from the upper mandible, covering the auriculars, also black; back, scapulars and wing-coverts of a brownish ash color; wing quills dusky black, marked with an oval spot of white about the middle of each; tail olive, deepening into black, and tipped with white; legs dull yellow; eye dark hazel, eyelids yellow.

This bird is said to make no nest, but to lay four eggs of a pale ash color spotted with black, which she deposits on the ground.* The eggs of the light-colored species formerly described, are of a pale cream color, marked with small round dots of black, as if done with a pen.

After writing the above I had an opportunity of examining, comparatively, two or three specimens of the European Ring Plover, which are in Mr. Peale's collection. These birds corresponded with the subject of this article, except in the feet, and here I found a difference which is worthy of note. The outer toes of both the European and the American birds, were united to the middle ones by a membrane of an equal size; but the inner toes of the latter were also united by a smaller web, while those of the former were *divided to their origin*. The naturalists of Europe state that the inner toes of their species are thus divided. Here then is a diversity, which, if constant, would constitute a specific difference. The bottoms of the toes of the present are broad as in the Sanderling.

The Plover given in our fifth volume, under the name of *hiaticula*, has its inner toes divided to their origin; and the web of the outer toes is much smaller than that of the present article. All my doubts on the subject of our two Plovers being now removed, I shall take the liberty of naming that of the fifth volume the Piping Plover, *Charadrius melodus*.

* Bewick.

SANDERLING.

CALIDRIS ARENARIA.

[Plate LIX.—Fig. 4.]

Tringa arenaria, GMEL. *Syst.* 680.—*Arct. Zool.* p. 486, No. 403.—*Le Sanderling*, BUFF. VII, 532.—BEWICK, II, 19.—LATH. *Syn.* 3, p. 197, No. 4.—*Ind. Orn.* p. 741, No. 4.—*Calidris grisea minor*, BRISS. 5, p. 236, pl. 20, fig. 2.—TEMME. *Man. d'Orn.* p. 524.—PEALE'S *Museum*, No. 4264.

IN this well known bird we have another proof of the imperfection of systematic arrangement, where no attention is paid to the general habits; but where one single circumstance is sometimes considered sufficient to determine the genus to which a species belongs. The genus Plover is characterized by several strong family traits, one of which is that of wanting the hind toe. The Sandpipers have also their peculiar external characters of bill, general form, &c., by which they are easily distinguished from the former. The present species, tho' possessing the bill, general figure, manners and voice of the Sandpipers, feeding in the same way, and associating with these in particular; yet, wanting the hind toe, has been classed by many with the Plovers, with whom, this single circumstance excepted, it has no one characteristic in common.

We had almost resolved to place this bird with the *Tringæ*, for the reasons above detailed; but, after due reflection, it seemed proper that the authority of so excellent a naturalist as Illiger should have its weight, especially as the species, according to the arrangement of Latham, presents an anomaly, which the present advanced state of natural science must reject. Hence we have taken the liberty of returning this bird to the niche which was

constructed expressly for it, and from which it has been, unsystematically, removed.

The history of this species has little in it to excite our interest or attention. It makes its appearance on our seacoasts early in September; continues during the greater part of winter; and on the approach of spring, returns to the northern regions to breed. While here it seems perpetually busy running along the wave-worn strand, following the flux and reflux of the surf, eagerly picking up its food from the sand amid the roar of the ocean. It flies in numerous flocks, keeping a low meandering course along the ridges of the breakers. On alighting, the whole scatter about after the receding wave, busily picking up those minute bivalves already described. As the succeeding wave returns it bears the whole of them before it in one crowded line; then is the moment seized by the experienced gunner to sweep them in flank with his destructive shot. The flying survivors, after a few aerial meanders, again alight, and pursue their usual avocation as busily and unconcernedly as before. These birds are most numerous on extensive sandy beaches in front of the ocean. Among rocks, marshes, or stones covered with sea-weed, they seldom make their appearance.

The Sanderling is eight inches long, and fourteen inches in extent; the bill is black, an inch and a quarter in length, slender, straight, fluted along the upper mandible, and exactly formed like that of the Sandpiper; the head, neck above, back, scapulars and tertials are gray white; the shafts blackish, and the webs tinged with brownish ash; shoulder of the wing black; greater coverts broadly tipped with white; quills black, crossed with a transverse band of white; the tail extends a little beyond the wings, and is of a grayish ash color, edged with white, the two middle feathers being about half an inch longer than the others; eye dark hazel; whole lower parts of the plumage pure white; legs and naked part of the thighs black; feet three-toed, each divided to its origin and bordered with a narrow membrane.

Such are the most common markings of this bird, both of males and females, particularly during the winter ; but many others occur among them, early in the autumn, thickly marked or spotted with black on the crown, back, scapulars and tertials, so as to appear much mottled, having as much black as white on those parts. In many of these I have observed the plain gray plumage coming out about the middle of October ; so that, perhaps, the gray may be their winter, and the spotted their summer dress.

I have also met with many specimens of this bird, not only thickly speckled with white and black above, but also on the neck, and strongly tinged on both with ferruginous ; in which dress it has been mistaken by Mr. Pennant and others for a new species ; the description of his “ Ruddy Plover ” agreeing exactly with this.* A figure of the Sanderling in this state of plumage will be introduced in some part of the present work. This bird is the only species of its genus yet discovered.

* See Arct. Zool. p. 486, No. 404.

BLACK-BELLIED PLOVER.*

VANELLUS HELVETICUS.

[Plate LIX.—Fig. 5.]

THE bird figured in the plate was shot by the author of this work in the month of October, at Great Egg-Harbor; and was by him supposed to be the Golden Plover. So much does it resemble the latter, that there are few ornithologists who would not pronounce it to be this bird, at the first view. But the writer of this article, from a conviction of the many changes which the species before us undergoes, could not rest satisfied with an opinion derived from an examination of the figure, with its accompanying description, without referring to Mr. Wilson's book of memorandums, wherein he obtained some information which induced him to conclude that the subject of this chapter was a young male Black-bellied Plover, in its autumnal dress. The note-book states that several were shot, differing in their appearance; but they all had the small hind toe; and that that figured had the long feathers of the sides, at the junction of the wings, of a pale brown; these feathers of the remainder were black. The bill of the figure in the plate certainly has a greater resemblance to that of the Golden Plover than to the bill of the Black-bellied Plover of Plate LVII; but as the bird was drawn while the author was at Egg-Harbor, and of course had not much leisure for accuracy, the probability is that he failed in this particular.

This species visits the coasts of New York and New Jersey in spring and autumn; but it is most frequently met with in the

* Named in the plate Golden Plover.

months of September and October ; soon after which they disappear. Flocks of them, chiefly young birds, appear in the neighborhood of Philadelphia every autumn, on their passage to the south. Although these birds are occasionally found along our coast, from Georgia to Maine, yet they are nowhere numerous. Our mountains being generally covered with forests, and no species of heath having, as yet, been discovered within the boundaries of the United States, these birds are probably induced to seek the more remote arctic regions of the continent to breed and rear their young in, where the country is more open, and unincumbered with woods.

The bird which is figured in the plate measured ten inches and a half in length, and twenty-one inches in breadth ; bill and legs of a dusky slate color ; eye very large, blue black ; nostrils placed in a deep furrow, and half covered with a prominent membrane ; whole upper parts black, thickly marked with roundish spots of various tints of golden yellow ; wing-coverts, and hind part of the neck, pale brown, the latter streaked with yellowish ; front, broad line over the eye, chin and sides of the same, yellowish white, streaked with small pointed spots of brown olive ; breast gray, with olive and white ; sides under the wings marked thinly with transverse bars of pale olive ; the *long feathers of the sides*, at the junction of the wings, brown ; belly and vent white ; wing quills black, the middle of the shafts marked with white ; greater coverts black, tipped with white ; tail rounded, black, barred with triangular spots of golden yellow ; the outer toe connected as far as the first joint with the middle one ; hind toe very small. A male.

KILDEER PLOVER.

CHARADRIUS VOCIFERUS.

[Plate LIX.—Fig. 6.]

Noisy Plover, *Arct. Zool.* No. 400.—CATESBY, I, 71.—*Le Kildir*, BUFF. VIII, 96.—*Le Pluvier à collier de Virginie*, BRISS. 5, p. 68.—*Ind. Orn.* p. 742, No. 6.—PEALE'S *Museum*, No. 4174.

THIS restless and noisy bird is known to almost every inhabitant of the United States, being a common and pretty constant resident. During the severity of winter, when snow covers the ground, it retreats to the seashore, where it is found at all seasons; but no sooner have the rivers broke up, than its shrill note is again heard, either roaming about high in air, tracing the shore of the river, or running amidst the watery flats and meadows. As spring advances it resorts to the newly ploughed fields, or level plains bare of grass, interspersed with shallow pools; or, in the vicinity of the sea, dry bare sandy fields. In some such situation it generally chooses to breed, about the beginning of May. The nest is usually slight, a mere hollow, with such materials drawn in around it as happen to be near, such as bits of sticks, straw, pebbles or earth. In one instance I found the nest of this bird paved with fragments of clam and oyster shells, and very neatly surrounded with a mound or border of the same, placed in a very close and curious manner. In some cases there is no vestige whatever of a nest. The eggs are usually four, of a bright rich cream or yellowish clay color, thickly marked with blotches of black. They are large for the size of the bird, measuring more than an inch and a half in length, and a full inch in width, tapering to a narrow point at the great end.

KILDEER PLOVER.

Nothing can exceed the alarm and anxiety of these birds during the breeding season. Their cries of *Kildeer, kildeer*, as they winnow the air over head, dive and course around you, or run along the ground, counterfeiting lameness, are shrill and incessant. The moment they see a person approach, they fly or run to attack him with their harassing clamour, continuing it over so wide an extent of ground, that they puzzle the pursuer as to the particular spot where the nest or young are concealed; very much resembling, in this respect, the Lapwing of Europe. During the evening, and long after dusk, particularly in moonlight, their cries are frequently heard with equal violence, both in the spring and fall. From this circumstance, and their flying about both after dusk and before dawn, it appears probable that they see better at such times than most of their tribe. They are known to feed much on worms, and many of these rise to the surface during the night. The prowling of Owls, may also alarm their fears for their young at those hours; but whatever may be the cause, the facts are so.

The Kildeer is more abundant in the southern states in winter than in summer. Among the rice fields, and even around the planters' yards in South Carolina, I observed them very numerous in the months of February and March. There the negro boys frequently practise the barbarous mode of catching them with a line, at the extremity of which is a crooked pin with a worm on it. Their flight is something like that of the Tern, but more vigorous; and they sometimes rise to a great height in the air. They are fond of wading in pools of water; and frequently bathe themselves during the summer. They usually stand erect on their legs, and run or walk with the body in a stiff horizontal position; they run with great swiftness, and are also strong and vigorous in the wings. Their flesh is eaten by some, but is not in general esteem; tho others say, that in the fall, when they become very fat, it is excellent.

During the extreme droughts of summer, these birds resort to the gravelly channel of brooks and shallow streams, where they can wade about in search of aquatic insects. At the close of summer they generally descend to the seashore, in small flocks, seldom more than ten or twelve being seen together. They are then more serene and silent, as well as difficult to be approached.

The Kildeer is ten inches long, and twenty inches in extent; the bill is black; frontlet, chin and ring round the neck white; fore part of the crown, and auriculars from the bill backwards, blackish olive; eyelids bright scarlet; eye very large and of a full black; from the centre of the eye backwards a stripe of white; round the lower part of the neck is a broad band of black; below that a band of white, succeeded by another rounding band or crescent of black; rest of the lower parts pure white; crown and hind head light olive brown; back, scapulars and wing-coverts olive brown, skirted with brownish yellow; primary quills black, streaked across the middle with white; bastard wing tip with white; greater coverts broadly tipped with white; rump and tail-coverts orange; tail tapering, dull orange, crossed near the end with a broad bar of black, and tipped with orange, the two middle feathers near an inch longer than the adjoining ones; legs and feet a pale light clay color. The tertials, as usual in this tribe, are very long, reaching nearly to the tips of the primaries; exterior toe joined by a membrane to the middle one, as far as the first joint.

In the spring these birds feed on the marshes; they then become excessively fat, and are excellent eating. When lean, the flesh of the Kildeer is dark, dry and indifferent.

GREAT TERN.

STERNA HIRUNDO.

[Plate LX.—Fig. 1.]

Arct. Zool. p. 524, No. 448.—*Le Pierre garin, ou grande Hirondelle-de-mer*, BUFF. VIII, 331. *Pl. Enl.* 987.—BEWICK, II, 181.—*Ind. Orn.* p. 807, No. 15.—BRISS. 6, p. 203, pl. 19, fig. 1.—TEMM. *Man. d'Orn.* p. 740.—PEALE'S *Museum*, No. 3485.

THIS bird belongs to a tribe very generally dispersed over the shores of the ocean. Their generic characters are these:—Bill straight, sharp-pointed, a little compressed and strong; nostrils linear; tongue slender, pointed; legs short; feet webbed; hind-toe and its nail straight; wings long; tail generally forked. Turton enumerates twenty-five species of this genus, scattered over various quarters of the world; six of which, at least, are natives of the United States. From their long pointed wings they are generally known to seafaring people, and others residing near the seashore, by the name of *Sea-swallows*; tho some few, from their near resemblance, are confounded with the Gulls.

The present species, or Great Tern, is common to the shores of Europe, Asia and America. It arrives on the coast of New Jersey about the middle or twentieth of April, led no doubt by the multitudes of fish which at that season visit our shallow bays and inlets. By many it is called the Sheep's-head Gull, from arriving about the same time with the fish of that name.

About the middle or twentieth of May this bird commences laying. The preparation of a nest, which costs most other birds so much time and ingenuity, is here altogether dispensed with. The eggs, generally three in number, are placed on the surface of the dry drift grass, on the beach or salt marsh, and covered by the female only during the night, or in wet, raw or stormy wea-

Drawn from Nature by Wilson

- 1. Great Tern
- 2. Spotted
- 3. Short-tailed
- 4. Black-brown
- 5. Stormy
- 6. Stormy



Engraved by Leason

ther. At all other times the hatching of them is left to the heat of the sun. These eggs measure an inch and three quarters in length, by about an inch and two-tenths in width, and are of a yellowish dun color, sprinkled with dark brown and pale Indian ink. Notwithstanding they seem thus negligently abandoned during the day, it is very different in reality. One or both of the parents are generally fishing within view of the place, and on the near approach of any person instantly make their appearance over head; uttering a hoarse jarring kind of cry, and flying about with evident symptoms of great anxiety and consternation. The young are generally produced at intervals of a day or so from each other, and are regularly and abundantly fed for several weeks, before their wings are sufficiently grown to enable them to fly. At first the parents alight with the fish which they have brought in their mouth or in their bill, and tearing it in pieces distribute it in such portions as their young are able to swallow. Afterwards they frequently feed them without alighting, as they skim over the spot; and as the young become nearly ready to fly, they drop the fish among them where the strongest and most active has the best chance to gobble it up. In the mean time, the young themselves frequently search about the marshes, generally not far apart, for insects of various kinds; but so well acquainted are they with the peculiar language of their parents, that warns them of the approach of an enemy, that on hearing their cries they instantly squat, and remain motionless until the danger is over.

The flight of the Great Tern, and indeed of the whole tribe, is not in the sweeping shooting manner of the land Swallows, notwithstanding their name; the motions of their long wings are slower, and more in the manner of the Gull. They have, however, great powers of wing, and strength in the muscles of the neck, which enable them to make such sudden and violent plunges, and that from a considerable height too, headlong on their prey, which they never seize but with their bills. In the evening, I

have remarked, as they retired from the upper parts of the bays, rivers and inlets to the beach for repose, about breeding time, that each generally carried a small fish in his bill.

As soon as the young are able to fly, they lead them to the sandy shoals and ripples where fish are abundant; and while they occasionally feed them, teach them by their example to provide for themselves. They sometimes penetrate a great way inland, along the courses of rivers; and are occasionally seen about all our numerous ponds, lakes and rivers, most usually near the close of the summer.

This species inhabits Europe as high as Spitzbergen; is found on the arctic coasts of Siberia and Kamtschatka, and also on our own continent as far north as Hudson's bay. In New England it is called by some the Mackarel Gull. It retires from all these places, at the approach of winter, to more congenial seas and seasons.

The Great Tern is fifteen inches long, and thirty inches in extent; bill reddish yellow, sometimes brilliant crimson, slightly angular on the lower mandible, and tipped with black; whole upper part of the head black, extending to a point half way down the neck behind, and including the eyes; sides of the neck and whole lower parts pure white; wing quills hoary, as if bleached by the weather, long and pointed; whole back, scapulars and wing bluish white, or very pale lead color; rump and tail-coverts white; tail long and greatly forked, the exterior feathers being three inches longer than the adjoining ones, the rest shortening gradually for an inch and a half to the middle ones, the whole of a pale lead color; the outer edge of the exterior ones black; legs and webbed feet brilliant red lead; membranes of the feet deeply scalloped; claws large and black, middle one the largest. The primary quill feathers are generally dark on their inner edges. The female differs in having the two exterior feathers of the tail considerably shorter. The voice of these birds is like the harsh jarring of an

opening door, rusted on its hinges. The bone of the skull is remarkably thick and strong, as also the membrane that surrounds the brain; in this respect resembling the Woodpecker's. In both, this provision is doubtless intended to enable the birds to support, without injury, the violent concussions caused by the plunging of the one, and the chiseling of the other.

In the month of January I shot a female of this species, on the coast of Georgia, which measured fifteen inches in length; bill to the angle of the mouth two inches and a quarter, dark horn color, orange at base; back, tail and wings, pale blue ash; back part of the neck the same color, with a slight brownish tinge; eye surrounded with black, which extends an inch beyond it; upper part of the head, throat, lower parts and rump, pure white; fork of the tail four inches long; secondaries tipped with white; inside of the mouth, feet and legs, orange. This was evidently a young bird; and was killed in company with several having the perfect black cap.

LESSER TERN.

STERNA MINUTA.

[Plate LX.—Fig. 2.]

Arct. Zool. No. 449.—La petite Hirondelle de mer, BUFF. VIII, 337. Pl. Enl. 996.—BEWICK, II, 183.—Ind. Orn. p. 809, No. 19; S. metopoleucos, Ib. No. 22.—BRISS. 6, p. 206, pl. 19, fig. 2.—TEMM. Man. d'Orn. p. 752.—PEALE'S Museum, No. 3505.

THIS beautiful little species looks like the preceding in miniature, but surpasses it far in the rich glossy satin-like white plumage with which its throat, breast and whole lower parts are covered. Like the former, it is also a bird of passage, but is said not to extend its migrations to so high a northern latitude, being more delicate and susceptible of cold. It arrives on our coasts somewhat later than the other, but in equal, and perhaps greater, numbers; courses along the shores, and also over the pools in the salt marshes, in search of prawns, of which it is particularly fond; hovers, suspended in the air, for a few moments above its prey, exactly in the manner of some of our small Hawks, and dashes headlong down into the water after it, generally seizing it with its bill; mounts instantly again to the same height, and moves slowly along as before, eagerly examining the surface below. About the twenty-fifth of May, or beginning of June, the female begins to lay. The eggs are dropped on the dry and warm sand, the heat of which, during the day, is fully sufficient for the purpose of incubation. This heat is sometimes so great, that one can scarcely bear the hand in it for a few moments without inconvenience. The wonder would therefore be the greater should the bird sit on her eggs during the day, when her warmth is altogether unnecessary and perhaps injurious, than that she should cover them only during the damps of night, and in wet and stormy weather; and fur-

nishes another proof that the actions of birds are not the effect of mere blind impulse, but of volition, regulated by reason, depending on various incidental circumstances to which their parental cares are ever awake. I lately visited those parts of the beach on Cape May where this little bird breeds. The eggs, generally four in number, were placed on the flat sands, safe beyond the reach of the highest summer tide. They were of a yellowish brown color, blotched with rufous, and measured nearly an inch and three quarters in length. During my whole stay, these birds flew in crowds around me, and often within a few yards of my head, squeaking like so many young pigs, which noise their voice strikingly resembles. A Humming-bird, that had accidentally strayed to the place, appeared suddenly among this outrageous group, several of whom darted angrily at him; but he shot like an arrow from them, directing his flight straight towards the ocean. I have no doubt but the distressing cries of the Terns had drawn this little creature to the scene, having frequently witnessed his anxious curiosity on similar occasions in the woods.

The Lesser Tern feeds on beetles, crickets, spiders and other insects which it picks up from the marshes, as well as on small fish, on which it plunges at sea. Like the former, it also makes extensive incursions inland along the river courses, and has frequently been shot several hundred miles from the sea. It sometimes sits for hours together on the sands, as if resting after the fatigues of flight to which it is exposed.

The Lesser Tern is extremely tame and unsuspecting, often passing you in its flight, and within a few yards, as it traces the windings and indentations of the shore in search of its favorite prawns and skippers. Indeed at such times it appears either altogether heedless of man, or its eagerness for food overcomes its apprehensions for its own safety. We read in ancient authors that the fishermen used to float a cross of wood, in the middle of which was fastened a small fish for a bait, with limed twigs stuck to the

four corners, on which the bird darting was entangled by the wings. But this must have been for mere sport, or for its feathers, the value of the bird being scarcely worth the trouble, as they are generally lean, and the flesh savouring strongly of fish.

The Lesser Tern is met with in the south of Russia, and about the Black and Caspian sea ; also in Siberia about the Irtysh.* With the former, it inhabits the shores of England during the summer, where it breeds and migrates, as it does here, to the south as the cold of autumn approaches.

This species is nine and a half inches long, and twenty inches in extent ; bill bright reddish yellow ; nostril pervious ; lower mandible angular ; front white, reaching in two narrow points over the eye ; crown, band through the eye and hind head black, tapering to a point as it descends ; cheeks, sides of the neck and whole lower parts of the most rich and glossy white, like the brightest satin ; upper parts of the back and wings a pale glossy ash or light lead color ; the outer edges of the three exterior primaries black, their inner edges white ; tail pale ash, but darker than the back, and forked, the two outer feathers an inch longer, tapering to a point ; legs and feet reddish yellow ; webbed feet, claws and hind toe exactly formed like those of the preceding. The female nearly resembles the male, with the exception of having the two exterior tail feathers shorter.

* Pennant.

SHORT-TAILED TERN.

STERNA PLUMBEA.

[Plate LX.—Fig. 3.]

PEALE'S *Museum*, No. 3519.

A SPECIMEN of this bird was first sent me by Mr. Beasley of Cape May; but being in an imperfect state, I could form no correct notion of the species; sometimes supposing it might be a young bird of the preceding Tern. Since that time, however, I have had an opportunity of procuring a considerable number of this same kind, corresponding almost exactly with each other. I have ventured to introduce it in this place as a new species; and have taken pains to render the figure in the plate a correct likeness of the original.

On the sixth of September, 1812, after a violent north-east storm, which inundated the meadows of Schuylkill in many places, numerous flocks of this Tern all at once made their appearance, flying over those watery spaces, picking up grasshoppers, beetles, spiders and other insects that were floating on the surface. Some hundreds of them might be seen at the same time, and all seemingly of one sort. They were busy, silent and unsuspecting, darting down after their prey without hesitation, tho perpetually harassed by gunners whom the novelty of their appearance had drawn to the place. Several flocks of the Yellow-shanks Snipe, and a few Pures, appeared also in the meadows at the same time, driven thither doubtless by the violence of the storm.

I examined upwards of thirty individuals of this species by dissection, and found both sexes alike in color. Their stomachs contained grasshoppers, crickets, spiders, &c., but no fish. The

people on the seacoast have since informed me that this bird comes to them only in the fall, or towards the end of summer; and is more frequently seen about the mill-ponds and fresh water marshes than in the bays; and add, that it feeds on grasshoppers and other insects which it finds on the meadows and marshes, picking them from the grass, as well as from the surface of the water. They have never known it to associate with the Lesser Tern, and consider it altogether a different bird. This opinion seems confirmed by the above circumstances, and by the fact of its greater extent of wing, being full three inches wider than the Lesser Tern; and also making its appearance after the others have gone off.

The Short-tailed Tern measures eight inches and a half from the point of the bill to the tip of the tail, and twenty-three inches in extent; the bill is an inch and a quarter in length, sharp pointed, and of a deep black color; a patch of black covers the crown, auriculars, spot before the eye and hind head; the forehead, eyelids, sides of the neck, passing quite round below the hind head, and whole lower parts are pure white; the back is dark ash, each feather broadly tipped with brown; the wings a dark lead color, extending an inch and a half beyond the tail, which is also of the same tint, and slightly forked; shoulders of the wing brownish ash; legs and webbed feet tawny. It had a sharp shrill cry when wounded and taken.

This is probably the *Brown Tern* mentioned by Willoughby, of which so many imperfect accounts have already been given. The figure in the plate, like those which accompany it, is reduced to one half the size of life.

BLACK SKIMMER, OR SHEARWATER.

RHYNCHOPS NIGRA.

[Plate LX.—Fig. 4.]

Cut-water, Arct. Zool. No. 445.—CATESBY, I, 90.—*Le Bec-en-ciseaux*, BUFF. VIII, 454, tab. 36. *Pl. Enl. 357.*—*Ind. Orn. p. 802.*—*Ryghopsalia*, BRISS. 6, p. 223, pl. 21, fig. 2. —PEALE'S *Museum*, No. 3530.

THIS truly singular fowl is the only species of its tribe hitherto discovered. Like many others, it is a bird of passage in the United States; and makes its first appearance on the shores of New Jersey early in May. It resides there, as well as along the whole Atlantic coast, during the summer; and retires early in September. Its favorite haunts are low sand-bars, raised above the reach of the summer tides; and also dry flat sands on the beach, in front of the ocean. On such places it usually breeds along the shores of Cape May, in New Jersey. On account of the general coldness of the spring there, the Shearwater does not begin to lay until early in June, at which time these birds form themselves into small societies, fifteen or twenty pair frequently breeding within a few yards of each other. The nest is a mere hollow formed in the sand, without any materials. The female lays three eggs, almost exactly oval, of a clear white, marked with large round spots of brownish black, and intermixed with others of pale Indian ink. These eggs measure one inch and three quarters, by one inch and a quarter. Half a bushel and more of eggs has sometimes been collected from one sand-bar, within the compass of half an acre. These eggs have something of a fishy taste; but are eaten by many people on the coast. The female sits on them only during the night, or in wet and stormy weather. The young remain for several weeks before they are able to fly; are fed with great assiduity

by both parents ; and seem to delight in lying with loosened wings, flat on the sand, enjoying its invigorating warmth. They breed but once in the season.

The singular conformation of the bill of this bird has excited much surprise ; and some writers, measuring the divine proportions of nature by their own contracted standards of conception, in the plenitude of their vanity have pronounced it to be “an awkward and defective instrument.”* Such ignorant presumption, or rather impiety, ought to hide its head in the dust on a calm display of the peculiar construction of this singular bird ; and the wisdom by which it is so admirably adapted to the purposes or mode of existence for which it was intended. The Shearwater is formed for skimming, while on wing, the surface of the sea for its food, which consists of small fish, shrimps, young fry, &c., whose usual haunts are near the shore, and towards the surface. That the lower mandible, when dipt into and cleaving the water, might not retard the bird’s way, it is thinned and sharpened like the blade of a knife ; the upper mandible being at such times elevated above water is curtailed in its length, as being less necessary, but tapering gradually to a point, that, on shutting, it may offer less opposition. To prevent inconvenience from the rushing of the water, the mouth is confined to the mere opening of the gullet, which indeed prevents mastication taking place there ; but the stomach, or gizzard, to which this business is solely allotted, is of uncommon hardness, strength and muscularity, far surpassing in these respects any other water bird with which I am acquainted. To all these is added a vast expansion of wing, to enable the bird to sail with sufficient celerity while dipping in the water. The general proportion of the length of our swiftest Hawks and Swallows, to their breadth, is as one to two ; but in the present case, as there is not only the resistance of the air, but also that of the water to overcome, a still

* Vide Buffon.

greater volume of wing is given, the Shearwater measuring nineteen inches in length, and upwards of forty-four in extent. In short, whoever has attentively examined this curious apparatus, and observed the possessor with his ample wings, long bending neck, and lower mandible occasionally dipt into and ploughing the surface, and the facility with which he proeures his food, cannot but consider it a mere playful amusement when compared with the dashing immersions of the Tern, the Gull, or the Fish-Hawk, who, to the superficial observer, appear so superiorly accommodated.

The Shearwater is most frequently seen skimming close along shore about the first of the flood, at which time the young fry, shrimp, &c., are most abundant in such places. There are also numerous inlets among the low islands between the sea beach and main land of Cape May, where I have observed the Shearwaters, eight or ten in company, passing and repassing, at highwater, particular estuaries of those creeks that run up into the salt marshes, dipping, with extended neck, their open bills into the water, with as much apparent ease as Swallows glean up flies from the surface. On examining the stomachs of several of these, shot at the time, they contained numbers of a small fish, usually called *silver-sides*, from a broad line of a glossy silver color that runs from the gills to the tail. The mouths of these inlets abound with this fry, or fish, probably feeding on the various matters washed down from the marshes.

The voice of the Shearwater is harsh and screaming, resembling that of the Tern, but stronger. It flies with a slowly-flapping flight, dipping occasionally, with steady expanded wings and bended neck, its lower mandible into the sea, and with open mouth receiving its food as it ploughs along the surface. It is rarely seen swimming on the water; but frequently rests in large parties on the sand-bars at low water. One of these birds which I wounded in the wing, and kept in the room beside me for several days, soon

became tame and even familiar. It generally stood with its legs erect, its body horizontal, and its neck rather extended. It frequently reposed on its belly, and stretching its neck, rested its long bill on the floor. It spent most of its time in this way, or in dressing and arranging its plumage with its long scissors-like bill, which it seemed to perform with great ease and dexterity. It refused every kind of food offered it, and I am persuaded never feeds but when on the wing. As to the reports of its frequenting oyster-beds, and feeding on these shell-fish, they are contradicted by all those persons with whom I have conversed, whose long residence on the coast where these birds are common, has given them the best opportunities of knowing.

The Shearwater is nineteen inches in length, from the point of the bill to the extremity of the tail; the tips of the wings, when shut, extend full four inches farther; breadth three feet eight inches; length of the lower mandible four inches and a half, of the upper three inches and a half, both of a scarlet red, tinged with orange, and ending in black; the lower extremely thin, the upper grooved so as to receive the edge of the lower; the nostril is large and pervious, placed in a hollow near the base and edge of the upper mandible, where it projects greatly over the lower; upper part of the head, neck, back and scapulars deep black; wings the same, except the secondaries, which are white on the inner vanes, and also tipped with white; tail forked, consisting of twelve feathers, the two middle ones about an inch and a half shorter than the exterior ones, all black, broadly edged on both sides with white; tail-coverts white on the outer sides, black in the middle; front, passing down the neck below the eye, throat, breast and whole lower parts pure white; legs and webbed feet bright scarlet, formed almost exactly like those of the Tern. Weight twelve ounces avoirdupois. The female weighed nine ounces, and measured only sixteen inches in length, and three feet three inches in extent; the colors and markings were the same as those of the male, with the excep-

tion of the tail, which was white, shafted and broadly centred with black.

The birds from which these descriptions were taken were shot on the twenty-fifth of May, before they had begun to breed. The female contained a great number of eggs, the largest of which were about the size of duck-shot; the stomach, in both, was an oblong pouch, ending in a remarkably hard gizzard, curiously puckered or plaited, containing the half dissolved fragments of the small silver-sides, pieces of shrimps, small crabs, and skippers or sand fleas.

On some particular parts of the coast of Virginia these birds are seen, on low sand-bars, in flocks of several hundreds together. There more than twenty nests have been found within the space of a square rod. The young are at first so exactly of a color with the sand on which they sit, as to be with difficulty discovered, unless after a close search.

The Shearwater leaves our shores soon after his young are fit for the journey. He is found on various coasts of Asia, as well as America, residing principally near the tropics; and migrating into the temperate regions of the globe only for the purpose of rearing his young. He is rarely or never seen far out at sea; and must not be mistaken for another bird of the same name, a species of Petrel,* which is met with on every part of the ocean, skimming with bended wings along the summits, declivities and hollows of the waves. This species winters on the southern coasts of the United States.

* *Procellaria Puffinus*, the Shearwater Petrel.

atmosphere before it has become sensible to his grosser feelings ; and thus, in a certain degree, contribute to his security. And why should not those who navigate the ocean contemplate the appearance of this unoffending little bird in like manner, instead of eyeing it with hatred and execration ? As well might they curse the midnight light-house, that, star-like, guides them on their watery way, or the buoy, that warns them of the sunken rocks below, as this harmless wanderer, whose manner informs them of the approach of the storm, and thereby enables them to prepare for it.

The Stormy Petrels breed in great numbers on the rocky shores of the Bahama and the Bermuda islands, and in some places on the coast of East Florida and Cuba. They breed in communities like the Bank-swallows, making their nests in the holes and cavities of the rocks above the sea, returning to feed their young only during the night, with the superabundant oily food from their stomachs. At these times they may be heard making a continued clattering sound, like frogs, during the whole night. In the day they are silent, and wander widely over the ocean. This easily accounts for the vast distance they are sometimes seen from land, even in the breeding season. The rapidity of their flight is at least equal to the fleetness of our Swallows. Calculating this at the rate of one mile per minute, twelve hours would be sufficient to waft them a distance of seven hundred and twenty miles ; but it is probable that the far greater part confine themselves much nearer land during that interesting period.

In the month of July, while on a voyage from New Orleans to New York, I saw few or none of these birds in the gulf of Mexico, although our ship was detained there by calms for twenty days, and carried by currents as far south as cape Antonio, the westernmost extremity of Cuba. On entering the gulf stream, and passing along the coasts of Florida and the Carolinas, these birds made their appearance in great numbers, and in all weathers ; contributing much by their sprightly evolutions of wing to enliven the

scene ; and affording me every day several hours of amusement. It is indeed an interesting sight to observe these little birds in a gale, coursing over the waves, down the declivities, up the ascents of the foaming surf that threatens to burst over their heads ; sweeping along the hollow troughs of the sea as in a sheltered valley, and again mounting with the rising billow, and just above its surface, occasionally dropping their feet, which, striking the water, throw them up again with additional force ; sometimes leaping, with both legs parallel, on the surface of the roughest waves for several yards at a time. Meanwhile they continue coursing from side to side of the ship's wake, making excursions far and wide, to the right and to the left, now a great way ahead, and now shooting astern for several hundred yards, returning again to the ship as if she were all the while stationary, tho perhaps running at the rate of ten knots an hour ! But the most singular peculiarity of this bird is its faculty of standing, and even running, on the surface of the water, which it performs with apparent facility. When any greasy matter is thrown overboard, these birds instantly collect around it ; and facing to windward, with their long wings expanded, and their webbed feet patting the water, the lightness of their bodies, and the action of the wind on their wings, enable them to do this with ease. In calm weather they perform the same manœuvre by keeping their wings just so much in action as to prevent their feet from sinking below the surface. According to Buffon,* it is from this singular habit that the whole genus have obtained the name Petrel, from the apostle Peter, who, as Scripture informs us, also walked on the water.

As these birds often come up immediately under the stern, one can examine their form and plumage with nearly as much accuracy as if they were in the hand. They fly with the wings forming an almost straight horizontal line with the body, the legs extended

* Tome xxiii, p. 299.

behind, and the feet partly seen stretching beyond the tail. Their common note of "*weet, weet,*" is scarcely louder than that of a young Duck of a week old, and much resembling it. During the whole of a dark, wet and boisterous night which I spent on deck, they flew about the after rigging, making a singular hoarse chattering, which in sound resembled the syllables *patrét tu cuk cuk tu tu*, laying the accent strongly on the second syllable *tret*. Now and then I conjectured that they alighted on the rigging, making then a lower curring noise.

Notwithstanding the superstitious fears of the seamen, who dreaded the vengeance of the survivors, I shot fourteen of these birds one calm day in lat. 33°, eighty or ninety miles off the coast of Carolina, and had the boat lowered to pick them up. These I examined with considerable attention, and found the most perfect specimens as follows:

Length six inches and three quarters, extent thirteen inches and a half; bill black, five eighths of an inch long; nasal tube turned upwards, the upper mandible grooved thence, and overhanging the lower like that of a bird of prey; head, back and lower parts brown sooty black; greater wing-coverts pale brown, minutely tipped with white; sides of the vent and whole tail-coverts pure white; wings and tail deep black, the latter nearly even at the tip, or very slightly forked; in some specimens two or three of the exterior tail feathers were white for an inch or so at the root; legs and naked part of the thighs black; hind toe very small; the membrane of the foot is marked with a large oblong spot of straw yellow, and finely serrated along the edges; eyes black; length of the tarsus nearly one inch and a half. Male and female differing nothing in color.

On opening these I found the first stomach large, containing numerous round semitransparent substances of an amber color, which I at first suspected to be the spawn of some fish; but on a more close and careful inspection, they proved to be a vegetable

substance, evidently the seeds of some marine plant, and about as large as mustard seed. The stomach of one contained a fish, half digested, so large that I should have supposed it too bulky for the bird to swallow; another was filled with the tallow which I had thrown overboard; and all had quantities of the seeds already mentioned both in their stomachs and gizzards; in the latter were also numerous minute pieces of barnacle shells. On a comparison of the seeds above mentioned with those of the *gulf-weed*, so common and abundant in this part of the ocean, they were found to be the same. Thus it appears, that these seeds, floating perhaps a little below the surface, and the barnacles with which ships' bottoms usually abound,* being both occasionally thrown up to the surface by the action of the vessel through the water in blowing weather, entice these birds to follow in the ship's wake at such times, and not, as some have imagined, merely to seek shelter from the storm, the greatest violence of which they seem to disregard. There are also the greasy dish washings, and other oily substances, thrown over by the cook, on which they feed with avidity; but with great good nature, their manners being so gentle, that I never observed the slightest appearance of quarrelling or dispute among them.

One circumstance is worthy of being noticed, and shows the vast range they take over the ocean. In firing at these birds a quill feather was broken in each wing of an individual, and hung fluttering in the wind, which rendered it so conspicuous among the rest as to be known to all on board. This bird, notwithstanding its inconvenience, continued with us for nearly a week, during which we sailed a distance of more than four hundred miles to the north. Flocks continued to follow us until near Sandy Hook.

The length of time these birds remain on the wing is no less surprising. As soon as it was light enough in the morning to perceive them, they were found roaming about as usual; and I have

* That is, those vessels the bottoms of which are not coppered.

often sat in the evening, in the boat which was suspended at the ship's stern, watching their movements, until it was so dark that the eye could no longer follow them, tho I could still hear their low note of *weet weet*, as they approached near to the vessel below me.

When this work was published, its author was not aware that those birds observed by navigators in almost every quarter of the globe, and known under the name of Stormy Petrels, formed several distinct species; consequently, relying on the labors of his predecessors, he did not hesitate to name the subject of this chapter the *Pelagica*, believing it to be identical with that of Europe. But the investigations of later ornithologists having resulted in the conviction that Europe possessed at least two species of these birds, it became a question whether or not those which are common on the coasts of the United States would form a third species; and an inquiry has established the fact that the American Stormy Petrel, hitherto supposed to be the true *Pelagica*, is an entirely distinct species. For this discovery we are indebted to the labors of Mr. Charles Bonaparte, from whose interesting paper on the subject, published in the Journal of the Academy of Natural Sciences of Philadelphia, we shall take the liberty of making an extract. The author of the paper in question first describes and figures the true *Pelagica* of the systems; secondly, the *Leachii*, a species described by Temminck, and restricted to the vicinity of the island of St. Kilda, but which the former found diffused over a great part of the Atlantic, east of the Banks of Newfoundland; and thirdly, the species of our coasts. He also indicates a fourth, which inhabits the Pacific ocean; but whether or not this last be in reality a species different from those named, has not yet been determined.

“When I first procured this species,” says Mr. Bonaparte, “I considered it a nondescript, and noted it as such; the citation of Wilson's *pelagica*, among the synonymes of the true *pelagica*, by the most eminent ornithologist of the age, M. Temminck, not

permitting a doubt of their identity. But having an opportunity of inspecting the very individual from which Wilson took his figure, and drew up his description, I was undeceived, by proving the unity of my specimens with that of Wilson, and the discrepancy of these with that of Temminck. The latter had certainly never seen an individual from America, otherwise the difference between the two species would not have eluded the accurate eye of this naturalist. I propose for this species the name of *Wilsonii*, as a small testimony of respect to the memory of the author of the American Ornithology, whose loss science and America will long deplore. The yellow spot upon the membrane of the feet distinguishes this species, at first sight, from the others; and this character remains permanent in the dried specimens."

These birds are sometimes driven by violent storms to a considerable distance inland. One was shot some years ago on the river Schuylkill, near Philadelphia; and I once found a leg of one of this species, in a forest, at least twenty miles from the coast of New Jersey, the owner of it, probably, having been carried thither by a Hawk, or some other bird of prey.

GREEN HERON.

ARDEA VIRESCENS.

[Plate LXI.—Fig. 1.]

Arct. Zool. No. 349, 350.—CATESBY, I, 80.—*Le Crabier verd*, BUFF. VII, 404.—LATH. *Syn. v. 3, p. 68*; *Louisiane Heron, Idem, p. 81.*—*A. virescens, No. 31*; *A. Ludoviciana, No. 51, Ind. Orn.*—*Crabier de la Louisiane, Plan. Enl. 909*; *Crabier de Cayenne, Id. 908*; *Crabier tacheté de la Martinique, Id. 912, young?*—PEALE'S *Museum, No. 3797.*

THIS common and familiar species owes little to the liberality of public opinion, whose prejudices have stigmatized it with a very vulgar and indelicate nickname; and treat it on all occasions as worthless and contemptible. Yet few birds are more independent of man than this; for it fares best, and is always most numerous, where cultivation is least known or attended to; its favorite residence being the watery solitudes of swamps, pools and morasses, where millions of frogs and lizards “tune their nocturnal notes” in full chorus, undisturbed by the lords of creation.

The Green Bittern makes its first appearance in Pennsylvania early in April, soon after the marshes are completely thawed. There, among the stagnant ditches with which they are intersected, and amidst the bogs and quagmires, he hunts with great cunning and dexterity. Frogs and small fish are his principal game, whose caution, and facility of escape, require nice address, and rapidity of attack. When on the look-out for small fish, he stands in the water, by the side of the ditch, silent and motionless as a statue; his neck drawn in over his breast, ready for action. The instant a fry or minnow comes within the range of his bill, by a stroke quick and sure as that of the rattle-snake, he seizes his prey, and swallows it in an instant. He searches for



Drawn from Nature by A. Wilson

Engraved by J. W. Warneke

1. Green Heron. 2. Night H. 3. Young. 4. Great White H.



small crabs, and for the various worms and larvæ, particularly those of the dragon-fly, which lurk in the mud, with equal adroitness. But the capturing of frogs requires much nicer management. These wary reptiles shrink into the mire on the least alarm, and do not raise up their heads again to the surface without the most cautious circumspection. The Bittern, fixing his penetrating eye on the spot where they disappeared, approaches with slow stealing step, laying his feet so gently and silently on the ground as not to be heard or felt; and when arrived within reach stands fixed, and bending forwards, until the first glimpse of the frog's head makes its appearance, when, with a stroke instantaneous as lightning, he seizes it in his bill, beats it to death, and feasts on it at his leisure.

This mode of life, requiring little fatigue where game is so plenty, as is generally the case in all our marshes, must be particularly pleasing to the bird; and also very interesting, from the continual exercise of cunning and ingenuity necessary to circumvent its prey. Some of the naturalists of Europe, however, in their superior wisdom, think very differently; and one can scarcely refrain from smiling at the absurdity of those writers, who declare, that the lives of this whole class of birds are rendered miserable by toil and hunger; their very appearance, according to Buffon, presenting the image of suffering anxiety and indigence.*

When alarmed, the Green Bittern rises with a hollow guttural scream; does not fly far, but usually alights on some old stump, tree or fence adjoining, and looks about with extended neck; the sometimes this is drawn in so that his head seems to rest on his breast. As he walks along a fence, or stands gazing at you with outstretched neck, he has the habit of frequently wagging the tail. He sometimes flies high, with doubled neck, and legs extended behind, flapping the wings smartly, and travelling with great expedition. He is the least shy of all our Herons; and perhaps the

* Hist. Nat. des Oiseaux, tome xxii, p. 343.

most numerous and generally dispersed ; being found far in the interior, as well as along our salt marshes ; and every where about the muddy shores of our mill-ponds, creeks and large rivers.

The Green Bittern begins to build about the twentieth of April ; sometimes in single pairs in swampy woods ; often in companies ; and not unfrequently in a kind of association with the *Qua-birds*, or Night Herons. The nest is fixed among the branches of the trees ; is constructed wholly of small sticks, lined with finer twigs, and is of considerable size, tho loosely put together. The female lays four eggs, of the common oblong form, and of a pale light blue color. The young do not leave the nest until able to fly ; and for the first season, at least, are destitute of the long-pointed plumage on the back ; the lower parts are also lighter, and the white on the throat broader. During the whole summer, and until late in autumn, these birds are seen in our meadows and marshes, but never remain during winter in any part of the United States.

The Green Bittern is eighteen inches long, and twenty-five inches in extent ; bill black, lighter below, and yellow at the base ; chin and narrow streak down the throat yellowish white ; neck dark vinaceous red ; back covered with very long tapering pointed feathers, of a hoary green shafted with white, on a dark green ground ; the hind part of the neck is destitute of plumage, that it may be the more conveniently drawn in over the breast, but is covered with the long feathers of the throat and sides of the neck that enclose it behind ; wings and tail dark glossy green, tip and bordered with yellowish white ; legs and feet yellow, tinged before with green, the skin of these thick and moveable ; belly ashy brown ; irides bright orange ; crested head very dark glossy green. The female, as I have particularly observed in numerous instances, differs in nothing as to color from the male ; neither of them receive the long feathers on the back during the first season.

There is one circumstance attending this bird which, I recollect, at first surprised me. On shooting and wounding one, I carried it some distance by the legs, which were at first yellow; but on reaching home, I perceived, to my surprise, that they were red. On letting the bird remain some time undisturbed, they again became yellow, and I then discovered that the action of the hand had brought a flow of blood into them, and produced the change of color. I have remarked the same in those of the Night Heron.

NIGHT HERON, OR QUA-BIRD.

ARDEA NYCTICORAX.[Plate LXI.—Fig. 2.—Fig. 3, *Young*]

Arct. Zool. No. 356.—*Le Bihoreau*, BUFF. VII, 435, 439, tab. 22; *L'Etoilé*, *Id.* 428. *Pl. Enl.* 758, 759, 939.—LATH. *Syn. v.* 3, p. 52, No. 13; p. 53, *Young*, called there the *Female*; p. 70, No. 31; p. 71, No. 32; p. 73, No. 37; p. 70, No. 30, var. *B.*—*Ind. Orn. nycticorax*, p. 678, No. 13; *Gardeni*, p. 685, No. 32; *badia*, p. 686, No. 37.—TEMME. *Man. d'Orn.* p. 577.—*Le Butor tacheté d'Amérique*, BRISS. 5, p. 464.—*Brown Bittern*, CATESBY, I, pl. 78, *Young*.—PEALE'S *Museum*, No. 3728; *Young*, No. 3729.

THIS species, tho common to both continents, and known in Europe for many centuries, has been so erroneously described by all the European naturalists whose works I have examined, as to require more than common notice in this place. For this purpose, an accurate figure of the male is given, and also another of what has till now been universally considered the female; with a detail of so much of their history as I am personally acquainted with.

The Night Heron arrives in Pennsylvania early in April, and immediately takes possession of his former breeding place, which is usually the most solitary and deeply shaded part of a cedar swamp. Groves of swamp-oak, in retired and inundated places, are also sometimes chosen; and the males not unfrequently select tall woods, on the banks of a river, to roost in during the day. These last regularly direct their course, about the beginning of evening twilight, towards the marshes, uttering in a hoarse and hollow tone the sound *Qua*, which by some has been compared to that produced by the retchings of a person attempting to vomit. At this hour also all the nurseries in the swamps are emptied of

their inhabitants, who disperse about the marshes, and along the ditches and river shore, in quest of food. Some of these breeding places have been occupied every spring and summer for time immemorial, by from eighty to one hundred pair of Qua-birds. In places where the cedars have been cut down for sale, the birds have merely removed to another quarter of the swamp; but when personally attacked, long teased and plundered, they have been known to remove from an ancient breeding place, in a body, no one knew where. Such was the case with one on the Delaware, near Thompson's point, ten or twelve miles below Philadelphia; which having been repeatedly attacked and plundered by a body of Crows, after many severe rencounters the Herons finally abandoned the place. Several of these breeding places occur among the red cedars on the seabeach of Cape May, intermixed with those of the Little White Heron, Green Bittern, and Blue Heron. The nests are built entirely of sticks, in considerable quantities, with frequently three and four nests on the same tree. The eggs are generally four in number, measuring two inches and a quarter in length, by one and three quarters in thickness, and of a very pale light blue color. The ground or marsh below is bespattered with their excrements lying all around like whitewash, with feathers, broken eggshells, old nests, and frequently small fish, which they have dropped by accident and neglected to pick up.

On entering the swamp in the neighborhood of one of these breeding places, the noise of the old and the young would almost induce one to suppose that two or three hundred Indians were choking or throttling each other. The instant an intruder is discovered, the whole rise in the air in silence, and remove to the tops of the trees in another part of the woods; while parties of from eight to ten make occasional circuits over the spot to see what is going on. When the young are able they climb to the highest part of the trees; but, knowing their inability, do not attempt to fly. Tho it is probable that these nocturnal birds do not see well during the

day, yet their faculty of hearing must be exquisite, as it is almost impossible, with all the precautions one can use, to penetrate near their residence without being discovered. Several species of Hawks hover around, making an occasional sweep among the young; and the Bald Eagle himself has been seen reconnoitring near the spot, probably with the same design.

Contrary to the generally received opinion, the males and females of these birds are so alike in color as scarcely to be distinguished from each other; both have also the long slender plumes that flow from the head. These facts I have exhibited by dissection on several subjects, to different literary gentlemen of my acquaintance, particularly to my venerable friend Mr. William Bartram, to whom I have also often shown the young, represented at fig. 3. One of these last, which was kept for some time in the botanic garden of that gentleman, by its voice instantly betrayed its origin, to the satisfaction of all who examined it. These young certainly receive their full-colored plumage before the succeeding spring, as on their first arrival no birds are to be seen in the dress of fig. 3, but soon after they have bred these become more numerous than the others. Early in October they migrate to the south. According to Buffon, these birds also inhabit Cayenne; and are found widely dispersed over Europe, Asia, and America. The European species, however, is certainly much smaller than the American; tho, in other respects, corresponding exactly to it. Among a great number which I examined with attention, the following description was carefully taken from a common sized full grown male.

Length of the Night Heron two feet four inches, extent four feet; bill black, four inches and a quarter long from the corners of the mouth to the tip; lores, or space between the eye and bill, a bare bluish white skin; eyelids also large and bare, of a deep purple blue; eye three quarters of an inch in diameter, the iris of a brilliant blood red, pupil black; crested crown and hind head deep

dark blue, glossed with green; front and line over the eye white; from the hind-head proceed three very narrow white tapering feathers, between eight and nine inches in length: the vanes of these are concave below, the upper one enclosing the next, and that again the lower; tho separated by the hand, if the plumage be again shook several times, these long flowing plumes gradually enclose each other, appearing as one; these the bird has the habit of erecting when angry or alarmed: the cheeks, neck and whole lower parts are white, tintured with yellowish cream, and under the wings with very pale ash; back and scapulars of the same deep dark blue, glossed with green, as that of the crown; rump and tail coverts, as well as the whole wings and tail, very pale ash; legs and feet a pale yellow cream color; inside of the middle claw serrated.

The female differed in nothing as to plumage from the male, but in the wings being of rather a deeper ash; having not only the dark deep green-blue crown and back, but also the long pendent white plumes from the hind-head. Each of the females contained a large cluster of eggs of various sizes.

The young (fig. 3.) was shot soon after it had left the nest, and differed very little from those which had been taken from the trees, except in being somewhat larger. This measured twenty-one inches in length, and three feet in extent; the general color above a very deep brown, streaked with reddish white, the spots of white on the back and wings being triangular, from the centre of the feather to the tip; quills deep dusky, marked on the tips with a spot of white; eye vivid orange; belly white, streaked with dusky, the feathers being pale dusky, streaked down their centres with white; legs and feet light green; body and wings exceedingly thin and limber; the down still stuck in slight tufts to the tips of some of the feathers.

These birds also breed in great numbers in the neighborhood of New Orleans; for being in that city in the month of June,

I frequently observed the Indians sitting in market with the dead and living young birds for sale ; also numbers of Gray Owls (*Strix nebulosa*), and the White Ibis (*Tantalus albus*), for which dainties I observed they generally found purchasers.

The food of the Night Heron, or Qua-bird, is chiefly composed of small fish, which it takes by night. Those that I opened had a large expansion of the gullet immediately under the bill, that narrowed thence to the stomach, which is a large oblong pouch, and was filled with fish. The teeth of the pectinated elaw were thirty-five or forty in number, and as they contained particles of the down of the bird, showed evidently from this circumstance that they act the part of a comb, to rid the bird of vermin in those parts which it cannot reach with its bill.

In those specimens which the editor has procured in the breeding season, he has observed the lores and orbits to be of a bluish white ; but in a female individual which he shot in East Florida, in the month of March, these parts were of a delicate violet color.

The Brown Bittern of Catesby, (vol I, pl. 78.) which has not a little confounded ornithologists, is undoubtedly the young of the Night Heron. Dr. Latham says of the former, " We believe it to be a female of the Green Heron.—They certainly differ," continues he, " as Brisson has described them ; but by comparison no one can fail of being of the opinion here advanced." Had the worthy naturalist had the same opportunities of comparing the two birds in question as we have, he would have been as confident that they are not the same as we are.

GREAT EGRET HERON.*

ARDEA EGRETTA.

[Plate LXI.—Fig. 4.]

Ardea Egretta, GMEL. *Syst.* 1, p. 629; *A. alba*, *Id.* p. 639.—*Great Egret*, LATH. *Syn.* vol. 3, p. 89, No. 58; *Great White Heron*, *Id.* p. 91, No. 60.—*Plan. Enl.* 925, 886.—*Le Héron blanc du Brésil*, BRISS. *Orn.* tome 5, p. 434.—TEMME. *Man. d'Orn.* p. 572.—PEALE'S *Museum*, No. 3754; *Young*, 3755.

THIS tall and elegant bird, tho often seen, during the summer, in our low marshes and inundated meadows; yet, on account of its extreme vigilance and watchful timidity, is very difficult to be procured. Its principal residence is in the regions of the south, being found from Guiana, and probably beyond the line, to New York. It enters the territories of the United States late in February; this I conjecture from having first met with it in the southern parts of Georgia about that time. The high inland parts of the country it rarely or never visits; its favorite haunts are vast inundated swamps, rice fields, the low marshy shores of rivers, and such like places; where, from its size and color, it is very conspicuous even at a great distance.

The appearance of this bird, during the first season, when it is entirely destitute of the long flowing plumes of the back, is so different from the same bird in its perfect plumage, which it obtains in the third year, that naturalists and others very generally consider them as two distinct species. The opportunities which I have fortunately had, of observing them with the train in various stages of its progress, from its first appearance to its full growth,

* Named in the plate Great White Heron.

satisfy me that the Great Egret Heron with, and that without the long plumes, are one and the same species, in different periods of age. In the museum of my friend Mr. Peale, there is a specimen of this bird, in which the train is wanting; but on a closer examination, its rudiments are plainly to be perceived, extending several inches beyond the common plumage.

The Great Egret Heron breeds in several of the extensive cedar swamps in the lower parts of New Jersey. Their nests are built on the trees, in societies; the structure and materials exactly similar to those of the Little White Heron, but larger. The eggs are usually four, of a pale blue color. In the months of July and August the young make their first appearance in the meadows and marshes, in parties of twenty or thirty together. The large ditches with which the extensive meadows below Philadelphia are intersected, are regularly, about that season, visited by flocks of these birds; these are frequently shot; but the old ones are too sagacious to be easily approached. Their food consists of frogs, lizards, small fish, insects, seeds of the splatter doek (a species of nymphæ) and small water snakes. They will also devour mice and moles, the remains of such having been at different times found in their stomachs.

The long plumes of these birds have at various periods been in great request, on the continent of Europe, particularly in France and Italy, for the purpose of ornamenting the female head-dress. When dyed of various colors, and tastefully fashioned, they form a light and elegant duster and moseheto brush. The Indians prize them for ornamenting their hair, or top-knot; and I have occasionally observed these people wandering through the market-place of New Orleans with bunches of those feathers for sale.

The Great Egret Heron measures five feet from the extremities of the wings, and three feet six inches from the tip of the bill to the end of the tail; the train extends seven or eight inches farther. This train is composed of a great number of long, thick,

tapering shafts, arising from the lower part of the shoulders, and thinly furnished on each side with fine flowing hair-like threads, of several inches in length, covering the lower part of the back, and falling gracefully over the tail, which it entirely conceals. The whole plumage is of a snowy whiteness, except the train, which is slightly tinged with yellow. The bill is nearly six inches in length, of a rich orange yellow, tipped with black; irides a paler orange, pupil small, giving the bird a sharp and piercing aspect; the legs are long, stout, and of a black color, as is the bare space of four inches above the knee; the span of the foot measures upwards of six inches; the inner edge of the middle claw is pectinated; the exterior and middle toes are united at the base for about half an inch, by a membrane.

The articulations of the vertebræ are remarkably long; the intestines measure upwards of eight feet, and are very narrow. The male and female are alike in plumage; both, when of full age, having the train equally long.

Naturalists represent the Great White Heron of Europe as having a slight hanging crest on the head. The present species is destitute of an occipital crest; and, in the adult state, has black legs. It should seem, therefore, that the American bird is a species distinct from that of Europe.

VIRGINIAN RAIL.

RALLUS VIRGINIANUS.

[Plate LXII.—Fig. 1.]

Arct. Zool. No. 408.—EDW. 279.—LATH. *Syn. v. 3, p. 228, No. 1; var. A.*—*Rallus Virginianus*, LINN. *Syst. 1, p. 263, No. 12.*—*R. Pensilvanicus*, BRISS. *Sup. p. 138.*—PEALE'S *Museum, No. 4426.*

THIS species very much resembles the European Water Rail, (*Rallus aquatius*) but is smaller, and has none of the slate or lead color on the breast which marks that of the old continent; its toes are also more than proportionably shorter, which, with a few other peculiarities, distinguish the species. It is far less numerous in this part of the United States than our common Rail, and, as I apprehend, inhabits more remote northern regions. It is frequently seen along the borders of our salt marshes, which the other rarely visits; and also breeds there, as well as among the meadows that border our large rivers. It spreads over the interior as far west as the Ohio, having myself shot it in the barrens of Kentucky, early in May. The people there observe them in wet places, in the groves, only in spring. It feeds less on vegetable and more on animal food than the common Rail. During the months of September and October, when the reeds and wild oats swarm with the latter species, feeding on their nutritious seeds, a few of the present kind are occasionally found; but not one for five hundred of the others. The food of the present species consists of small snail shells, worms, and the larvæ of insects, which it extracts from the mud; hence the cause of its greater length of bill, to enable it the more readily to reach its food. On this account also, its flesh is much inferior to that of the other. In most of its habits, its thin



Engraved from nature by Wilson

1. Great Egret

2. Clapper Gull

3. White Heron

4. Yellow Cuckoo

Engraved by J.G. Heidebrecht

compressed form of body, its aversion to take wing, and the dexterity with which it runs or conceals itself among the grass and sedge, it is exactly similar to the common Rail, from which genus, notwithstanding the difference of its bill, it ought not to be separated.

This bird is known to some of the inhabitants along the sea coast of New Jersey, by the name of the Fresh-water *Mud-hen*, this last being the common appellation of the Clapper Rail, which the present species resembles in every thing but size. The epithet Fresh-water, is given it because of its frequenting those parts of the marsh only where fresh water springs rise through the bogs into the salt marshes. In these places it usually constructs its nest, one of which, through the active exertions of my friend Mr. Ord, while traversing with me the salt marshes of Cape May, we had the good fortune to discover. It was built in the bottom of a tuft of grass, in the midst of an almost impenetrable quagmire, and was composed altogether of old wet grass and rushes. The eggs had been floated out of the nest by an extraordinary rise of the tide in a violent north-east storm, and lay scattered about among the drift weed. The female, however, still lingered near the spot, to which she was so attached as to suffer herself to be taken by hand. She doubtless intended to repair her nest, and commence laying anew; as during the few hours that she was in our possession she laid one egg, corresponding in all respects with the others. On examining those floated out of the nest they contained young, perfectly formed, but dead. The usual number of eggs is from six to ten. They are shaped like those of the domestic hen, measuring one inch and two-tenths long, by very nearly half an inch in width; and are of a dirty white or pale cream color, sprinkled with specks of reddish and pale purple, most numerous near the great end. They commence laying early in May, and probably raise two brood in the season. I suspect this from the circumstance of Mr. Ord having, late in the month of July, brought me

several young ones of only a few days old, which were caught among the grass near the border of the Delaware, below the Navy-yard. The parent Rail showed great solieitude for their safety. They were wholly blaek, except a white spot on the bill; were covered with a fine down; and had a soft piping note.

The Virginian Rail is migratory, never wintering in the northern or middle states. It makes its first appearanee in Pennsylvania early in May; and leaves the country on the first smart frosts, generally in November. They winter in the marshes of the southern states, and in the Floridas.

This species is ten inches long, and fourteen inches in extent; bill dusky red; cheeks and stripe over the eye ash, over the lores and at the lower eyelid white; iris of the eye red; crown and whole upper parts blaek, streaked with brown, the centre of each feather being blaek; wing-coverts hazel brown, inclining to chesnut; quills plain deep dusky; chin white; throat, breast and belly orange brown; sides and vent blaek, tipped with white; legs and feet dull red brown; edge of the bend of the wing white.

The female is about half an inch shorter, and differs from the male in having the breast much paler, not of so bright a reddish brown; there is also more white on the chin and throat.

When seen, which is very rarely, these birds stand or run with the tail erect, which they frequently jerk upwards. They fly with the legs hanging, generally but a short distance; and the moment they alight run off with great speed.

I have been informed that the nests of this species are found, every year, by the mowers, in the vicinity of Philadelphia. They are generally constructed on tussocks. The female, in the breeding season, is very timorous; on being disturbed, she will fly but a few yards from the spot, and immediately conceal herself under the first covert at hand, where she will lie like a terrified mouse, and may be caught without difficulty.

CLAPPER RAIL.

RALLUS CREPITANS.

[Plate LXII.—Fig. 2.]

Arct. Zool. No. 407.—LATH. *Syn. v. 3, p. 229, No. 2.*—*Ind. Orn. p. 756, No. 2.*—PEALE'S
Museum, No. 4400.

THIS is a very numerous and well known species, inhabiting our whole Atlantic coast from New England to Florida. It is designated by different names, such as the Mud-hen, Clapper Rail, Meadow-clapper, Big Rail, &c. Tho' occasionally found along the swampy shores and tide waters of our large rivers, its principal residence is in the salt marshes. It is a bird of passage, arriving on the coast of New Jersey about the twentieth of April, and retiring again late in September. I suspect that they winter in the marshes of Georgia and Florida, having heard them very numerous at the mouth of Savannah river, in the month of February. Coast-ers and fishermen often hear them while on their migrations, in spring, generally a little before daybreak. The shores of New Jersey, within the beach, consisting of an immense extent of flat marsh, covered with a coarse reedy grass, and occasionally overflowed by the sea, by which it is also cut up into innumerable islands by narrow inlets, seem to be the favorite breeding places for these birds, as they are there acknowledged to be more than double in number to all other marsh fowl.

The Clapper Rail, or, as it is generally called, the Mud-hen, soon announces its arrival in the salt marshes, by its loud, harsh and incessant cackling, which very much resembles that of a Guinea-fowl. This noise is most general during the night; and is said to be always greatest before a storm. About the twentieth

of May they generally commence laying and building at the same time; the first egg being usually dropped in a slight cavity, lined with a little dry grass pulled for the purpose, which, as the number of the eggs increases to their usual complement *ten*, is gradually added to, until it rises to the height of twelve inches or more, doubtless to secure it from the rising of the tides. Over this the long salt grass is artfully arched, and knit at top, to conceal it from the view above; but this very circumstance enables the experienced egg-hunter to distinguish the spot at the distance of thirty or forty yards, tho' impereceptible to a common eye. The eggs are of a pale clay color, sprinkled with small spots of dark red, and measure somewhat more than an inch and a half in length, by one inch in breadth, being rather obtuse at the small end. These eggs are exquisite eating, far surpassing those of the domestic hen. The height of laying is about the first of June, when the people of the neighborhood go off to the marshes *an egging*, as it is called. So abundant are the nests of this species, and so dexterous some persons at finding them, that one hundred dozen of eggs have been collected by one man in a day. At this time the Crows, the foxes and the minxes, come in for their share; but not content with the eggs, these last often seize and devour the parents also. The bones, feathers, wings, &c. of the poor Mud-hen lie in heaps near the hole of the minx; by which circumstance, however, he himself is often detected and destroyed.

These birds are also subject to another calamity of a more extensive kind. After the greater part of the eggs are laid, there sometimes happen violent north-east tempests, that drive a great sea into the bay, covering the whole marshes; so that at such times the Rail may be seen in groups, floating over them in great distress; many escape to the main land; and vast numbers perish. On an occasion of this kind I have seen, at one view, hundreds in a single meadow, walking about exposed and bewildered, while the dead bodies of the females who had perished on or near their

nests, were strewed along the shore. This last circumstance proves how strong the ties of maternal affection is in these birds; for of the great numbers which I picked up and opened, not one male was to be found among them: all were females! Such as had not yet begun to sit probably escaped. These disasters do not prevent the survivors from recommencing the work of laying and building anew; and instances have occurred where their eggs have been twice destroyed by the sea; and yet in two weeks the eggs and nests seemed as numerous as ever.

The young of the Clapper Rail very much resemble those of the Virginian Rail, except in being larger. On the tenth of August I examined one of these young Clapper Rails, caught among the reeds in the Delaware, and apparently about three weeks old; it was covered with black down, with the exception of a spot of white on the auriculars, and a streak of the same along the side of the breast, belly, and fore part of the thigh; the legs were of a blackish slate color; and the bill was marked with a spot of white near the point, and round the nostril. These run with great facility among the grass and reeds, and are taken with extreme difficulty.

The whole defence of this species seems to be in the nervous vigour of its limbs, and thin compressed form of its body, by which it is enabled to pass between the stalks of grass and reeds with great rapidity. There are also every where among the salt marshes covered ways under the flat and matted grass, through which the Rail makes its way like a rat, without a possibility of being seen. There is generally one or more of these from its nest to the water edge, by which it may escape unseen; and sometimes, if closely pressed, it will dive to the other side of the pond, gut, or inlet, rising and disappearing again with the silence and celerity of thought. In smooth water it swims tolerably well, but not fast; sitting high in the water, with its neck erect, and striking with great rapidity. When on shore, it runs with the neck extended, the tail

ereet, and frequently flirled up. On fair ground they run nearly as fast as a man ; having myself, with great difficulty, eaught some that were wing broken. They have also the faulty of remaining under water for some time, elinging elose, head downwards, by the roots of the grass. In a long stretch they fly with great velocity, very much in the manner of a Duck, with extended neek, and generally low ; but such is their aversion to take wing, that you may traverse the marshes where there are hundreds of these birds, without seeing one of them ; nor will they flush until they have led the dog through numerous labyrinths, and he is on the very point of seizing them.

The food of the Clapper Rail consists of small shell fish, particularly those of the snail form, so abundant in the marshes ; they also eat small crabs. Their flesh is dry, tastes sedgy, and will bear no comparison with that of the common Rail. Early in October they move off to the south ; and tho, even in winter, a solitary instanee of one may sometimes be seen, yet these are generally such as have been weak or wounded, and unable to perform the journey.

The Clapper Rail measures fourteen inches in length, and eighteen in extent ; the bill is two inches and a quarter long, slightly bent, pointed, grooved, and of a reddish brown color ; iris of the eye dark red ; nostril oblong, pervious ; erown, neek and back blaek, streaked with dingy brown ; chin and line over the eye brownish white ; aurieulars dusky ; neek before, and whole breast, of the same red brown as that of the preceeding species ; wing coverts dark chestrnut ; quill feathers plain dusky ; legs reddish brown ; flanks and vent blaek, tipt or barred with white. The males and females are nearly alike.

The young birds of the first year have the upper parts of an olive brown, streaked with pale slate ; wings pale brown olive ; ehin and part of the throat white ; breast ash color, tinged with brown ; legs and feet a pale horn color. Mr. Pennant and several

other naturalists appear to have taken their descriptions from these imperfect specimens, the Clapper Rail being altogether unknown in Europe.

I have never met with any of these birds in the interior at a distance from lakes or rivers. I have also made diligent inquiry for them along the shores of lakes Champlain and Ontario, but without success.

The Editor had an opportunity of verifying the conjecture of the author, as to the winter retreat of these birds; he having found them to be extremely numerous in the marshes of the coast of Georgia, in the month of January. In such multitudes were they along the borders of the streams or passages which separate the sea-islands from the main, that their loud and incessant noise became quite as disgusting as the monotonous caekle of that intolerable nuisance the Guinea-fowl.

BLUE HERON.

ARDEA CÆRULEA.

[Plate LXII.—Fig. 3.]

Arct. Zool. No. 351.—CATESBY, I, 76.—*Le Crabier bleu*, BUFF. VII, 398.—SLOAN. *Jam.* II, 315.—LATH. *Syn. v. 3, p. 78, No. 45; p. 79, var. A.*—*Ardea cyanopus*, *Ind. Orn.* 685, No. 33; *A. cærulea*, *Id. p. 689, No. 48; A. cæruleseens*, *Id. p. 690, No. 49.*—*Héron bleuâtre de Cayenne*, *Plan. Ent. 349.*—PEALE'S *Museum*, No. 3782.

IN mentioning this species in his translation of the *Systema Naturæ*, Turton has introduced what he calls two *varieties*, one from New Zealand, the other from Brasil; both of which, if we may judge by their size and color, appear to be entirely different and distinct species; the first being green, with yellow legs, the last nearly one half less than the present. By this loose mode of discrimination, the precision of science being altogether dispensed with, the whole tribe of Cranes, Herons and Bitterns may be styled mere *varieties* of the genus *Ardea*. The same writer has still farther increased this confusion, by designating as a different species his *Bluish Heron* (*A. cæruleseens*), which agrees almost exactly with the present. Some of these mistakes may probably have originated from the figure of this bird given by Catesby, which appears to have been drawn and colored, not from nature, but from the glimmering recollections of memory, and is extremely erroneous. These remarks are due to truth, and necessary to the elucidation of the history of this species, which seems to be but imperfectly known in Europe.

The Blue Heron is properly a native of the warmer climates of the United States, migrating thence, at the approach of winter, to the tropical regions; being found in Cayenne, Jamaica, and Mexico. On the muddy shores of the Mississippi, from Baton

Rouge downwards to New Orleans, these birds are frequently met with. In spring they extend their migrations as far north as New England, chiefly in the vicinity of the sea; becoming more rare as they advance to the north. On the seabeach of Cape May I found a few of them breeding among the cedars, in company with the Little White Heron, Night Heron, and Green Bittern. The figure and description of the present were taken from two of these, shot in the month of May, while in complete plumage. Their nests were composed of small sticks, built in the tops of the red cedars, and contained five eggs of a light blue color, and of somewhat a deeper tint than those of the Night Heron. Little or no difference could be perceived between the colors and markings of the male and female. This remark is applicable to almost the whole genus; tho from the circumstance of many of the yearling birds differing in plumage, they have been mistaken for females.

The Blue Heron, tho in the northern states it is found chiefly in the neighborhood of the ocean, probably on account of the greater temperature of the climate, is yet particularly fond of fresh-water bogs, on the edges of the salt marsh. These it often frequents, wading about in search of tadpoles, lizards, various larvæ of winged insects, and mud worms. It moves actively about in search of these, sometimes making a run at its prey; and is often seen in company with the Little White Heron, figured in the same plate. Like this last, it is also very silent and watchful.

The genus *Ardea* is, perhaps, the most numerous of all the wading tribes, there being no less than ninety-six different species enumerated by late writers. These are again subdivided into particular families, each distinguished by a certain peculiarity. The Cranes, by having the head bald; the Storks, with the orbits naked; and the Herons, with the middle claw pectinated. To this last belong the Bitterns. Several of these are nocturnal birds, feeding only as the evening twilight commences, and reposing either among the long grass and reeds, or on tall trees, in sequestered places, during

the day. What is very remarkable, these night wanderers often associate, during the breeding season, with the others; building their nests on the branches of the same tree; and, tho differing so little in external form, feeding on nearly the same food, living and lodging in the same place; yet preserve their race, language and manners as perfectly distinct from those of their neighbours, as if each inhabited a separate quarter of the globe.

The Blue Heron is twenty-three inches in length, and three feet in extent; the bill is black, but from the nostril to the eye, in both mandibles, is of a rich light purplish blue; iris of the eye gray, in some specimens pale yellow, pupil black, surrounded by a narrow silvery ring; eyelid light blue; the whole head, and greater part of the neck, is of a deep purplish brown; from the crested hind-head shoot three narrow pointed feathers that reach nearly six inches beyond the eye; lower part of the neck, breast, belly and whole body, a deep slate color, with lighter reflections; the back is covered with long, flat and narrow feathers, some of which are ten inches long, and extend four inches beyond the tail; the breast is also ornamented with a number of these long slender feathers; legs blackish green; inner side of the middle claw pectinated. The breast and sides of the rump, under the plumage, are clothed with a mass of yellowish white unelastic cottony down, similar to that in most of the tribe, the uses of which are not altogether understood. Male and female alike in color.

The young birds of the first year are destitute of the purple plumage on the head and neck. In this state we may refer this species to the *A. cyanopus* or Cinereous Heron of Dr. Latham.

LITTLE WHITE HERON.*

ARDEA CAROLINENSIS.

[Plate LXII.—Fig. 4.]

Little White Heron, CATESBY, I, p. 77.—LATH. *Sup.* v. 1, p. 236.—*Ardea Carolinensis candida*, *Le Héron blanc de la Caroline*, BRISS. *Orn.* tome 5, p. 435, *young?* *Plan. Enlum.* 901.—PEALE'S *Museum*, No. 3748; *Young*, No. 3749.

THIS elegant species inhabits the seacoast of North America from the isthmus of Darien to the gulf of St. Lawrence, and is, in the United States, a bird of passage; arriving from the south early in April, and leaving the middle states again in October. Its general appearance, resembling so much that of the Little Egret of Europe, has, I doubt not, imposed on some of the naturalists of that country, as, I confess, it did on me.† From a more careful comparison, however, of both birds, I am satisfied that they are two entirely different and distinct species. These differences consist in the large flowing crest, yellow feet, and singularly curled plumes of the back of the present; it is also larger than the European species.

The Little White Heron seems particularly fond of the salt marshes during summer; seldom penetrating far inland. Its white plumage renders it a very conspicuous object, either while on wing, or while wading the meadows or marshes. Its food consists of those small crabs usually called *fiddlers*, mud worms, snails, frogs and lizards. It also feeds on the seeds of some species of nymphæ, and of several other aquatic plants.

* Named in the plate, by mistake, the Little Egret.

† "On the American continent the Little Egret is met with at New York and Long Island." Lath. v. III, p. 90.

On the nineteenth of May I visited an extensive *breeding place* of the Little White Heron, among the red cedars of Sommers's beach, on the coast of Cape May. The situation was very sequestered, bounded on the land side by a fresh water marsh or pond, and sheltered from the Atlantic by ranges of sand-hills. The cedars, tho not high, were so closely crowded together as to render it difficult to penetrate through among them. Some trees contained three, others four nests, built wholly of stieks. Each had in it three eggs of a pale greenish blue color, and measuring an inch and three quarters in length, by an inch and a quarter in thickness. Forty or fifty of these eggs were cooked, and found to be well tasted; the white was of a bluish tint, and almost transparent, tho boiled for a considerable time; the yolk very small in quantity. The birds rose in vast numbers, but without clamour, alighting on the tops of the trees around, and watching the result in silent anxiety. Among them were numbers of the Night Heron, and two or three Purple-headed Herons.* Great quantities of eggshells lay scattered under the trees, occasioned by the depredations of the Crows, who were continually hovering about the place. On one of the nests I found the dead body of the bird itself, half devoured by the Hawks, or Crows. She had probably perished in defence of her eggs.

The Little White Heron is seen at all times during summer among the salt marshes, watching and searching for food; or passing, sometimes in flocks, from one part of a bay to another. They often make excursions up rivers and inlets; but return regularly in the evening to the red cedars on the beach to roost. I found these birds on the Mississippi, early in June, as far up as Fort Adams, roaming about among the creeks and inundated woods. The young of this species are generally very fat, and esteemed by some people as excellent eating.

* *A. cærulea*.

The length of this species, when full grown, is two feet one inch; extent three feet two inches; the bill is four inches and a quarter long, and grooved; the space from the nostril to the eye orange yellow, the rest of the bill black; irides vivid orange; the whole plumage is of a snowy whiteness; the head is largely crested with loose unwebbed feathers, nearly four inches in length; another tuft of the same covers the breast; but the most distinguished ornament of this bird is a bunch of long silky plumes, proceeding from the shoulders, covering the whole back, and extending beyond the tail: the shafts of these are six or seven inches long, extremely elastic, tapering to the extremities, and thinly set with long slender bending threads or fibres, easily agitated by the slightest motion of the air—these shafts eurl upwards at the ends. When the bird is irritated, and erects these airy plumes, they have a very elegant appearance; the legs and naked part of the thighs are black; the feet bright yellow; claws black, the middle one pectinated.

The female can scarcely be distinguished by her plumage, having not only the crest, but all the ornaments of the male, tho not quite so long and flowing.

The young birds of the first season are entirely destitute of the long plumes of the breast and back; but, as all those that were examined in spring were found crested and ornamented as above, they doubtless receive their full dress on the first moulting. Those shot in October measured twenty-two inches in length, by thirty-four in extent; the crest was beginning to form; the legs yellowish green, daubed with black; the feet greenish yellow; the lower mandible of the bill white at the base; the wings, when shut, nearly of a length with the tail, which is even at the end.

NOTE *by the Editor.*

CATESBY represents the bill of his bird as red, and this error has been perpetuated by all succeeding ornithologists. The fact is, that the bills of young Herons are apt to assume a reddish tint after death, and this was evidently mistaken by Catesby for a permanent living color; and represented as such by an exaggeration common to almost all colorers of plates of Natural history. We have no hesitation in asserting that a Heron such as that figured by the author in question does not exist in the United States. That his Heron is identical with ours there can be no doubt; and we are equally satisfied that his specimen was a bird of the first year. So common did we find this species along the coasts of the Carolinas, Georgia and East Florida, during the winter, that they were to be seen every hour of the day, and were almost as tame as domestic fowls. A specimen shot in East Florida was twenty-one inches in length; the upper mandible, and tip of the lower, were black, base of the latter flesh colored, the remainder of bill yellow.

ROSEATE SPOONBILL.

PLATALEA AJAJA.

[Plate LXIII.—Fig. 1.]

Arct. Zool. No. 338.—LATH. *Syn. v. 3, p. 16, No. 2.*—*La Spatule couleur de Rose*, BRISS. *Orn. V, p. 356, 2, pl. 30*; *La Spatule rouge*, *Id. 359, 3.*—BUFF. VII, 456. *Pl. Enl. 165.*—*Ind. Orn. p. 668, No. 2.*—PEALE'S *Museum, No. 3553.*

THIS stately and elegant bird inhabits the seashores of America from Brasil to Georgia. It also appears to wander up the Mississippi sometimes in summer, the specimen from which the figure in the plate was drawn having been sent me from the neighborhood of Natchez, in excellent order; for which favour I am indebted to the family of my late benevolent and scientific friend, William Dunbar, esq., of that territory. It is now deposited in Mr. Peale's museum.

This species, however, is rarely seen to the northward of the Alatomaha river; and even along the peninsula of Florida is a scarce bird. In Jamaica, several other of the West India islands, Mexico and Guiana, it is more common, but confines itself chiefly to the seashore and the mouths of rivers. Captain Henderson says, it is frequently seen at Honduras. It wades about in quest of shellfish, marine insects, small crabs and fish. In pursuit of these it occasionally swims and dives.

There are few facts on record relative to this very singular bird. It is said that the young are of a blackish chestnut the first year; of the roseate color of the present the second year; and of a deep scarlet the third.*

* Latham.

Having never been so fortunate as to meet with them in their native wilds, I regret my present inability to throw any farther light on their history and manners. These, it is probable, may resemble in many respects those of the European species, the *White Spoonbill*, once so common in Holland.* To atone for this deficiency, I have endeavoured faithfully to delineate the figure of this American species, and may perhaps resume the subject in some future part of the present work.

The Roseate Spoonbill, now before us, measured two feet six inches in length, and near four feet in extent; the bill was six inches and a half long from the corner of the mouth, seven from its upper base, two inches over at its greatest width, and three quarters of an inch where narrowest; of a black color for half its length, and covered with hard scaly protuberances, like the edges of oyster shells; these are of a whitish tint, stained with red; the nostrils are oblong, and placed in the centre of the upper mandible; from the lower end of each there runs a deep groove along each side of the mandible, and about a quarter of an inch from its edge; whole crown and chin bare of plumage and covered with a greenish skin; that below the under mandible dilatible like those of the genus *Pelicanus*; space round the eye orange; irides blood red; cheeks and hind-head a bare black skin; neck long, covered with short white feathers, some of which on the upper part of the neck are tipped with crimson; breast white, the sides of which are tinged with a brown burnt color; from the upper part of the breast proceeds a long tuft of fine hair-like plumage, of a pale rose color; back white, slightly tinged with brownish; wings a pale wild-rose

* The European species breeds on trees, by the seaside; lays three or four white eggs, powdered with a few pale red spots, and about the size of those of a hen; are very noisy during breeding time; feed on fish, muscles, &c., which, like the Bald Eagle, they frequently take from other birds, frightening them by clattering their bill; they are also said to eat grass, weeds, and roots of reeds: they are migratory; their flesh reported to savour that of a goose; the young are reckoned good food.

color, the shafts lake; the shoulders of the wings are covered with long hairy plumage of a deep and splendid carmine; upper and lower tail-coverts the same rich red; belly rosy; rump paler; tail equal at the end, consisting of twelve feathers of a bright brownish orange, the shafts reddish; legs and naked part of the thighs dark dirty red; feet half-webbed; toes very long, particularly the hind one. The upper part of the neck had the plumage partly worn away, as if occasioned by resting it on the back, in the manner of the Ibis. The skin on the crown is a little wrinkled; the inside of the wing a much richer red than the outer.

B. M. FURNIVANT

West Chester, Pa.

1880

Not to be loaned out of the Cabinet

AMERICAN AVOSET.

RECURVIROSTRA AMERICANA.

[Plate LXIII.—Fig. 2.]

Arct. Zool. No. 421.—LATH. *Syn. v. 3, p. 295, No. 2.*—*Ind. Orn. p. 787, No. 2.*—PEALE'S
Museum, No. 4250.

THIS species, from its perpetual clamour and flippancy of tongue, is called, by the inhabitants of Cape May, the Lawyer; the comparison, however, reaches no farther; for our Lawyer is simple, timid, and perfectly inoffensive.

In describing the American Stilt of this volume, the similarity between that and the present was taken notice of. I found both these birds associated together on the salt marshes of New Jersey, on the twentieth of May. They were then breeding. Individuals of the present species were few in respect to the other. They flew around the shallow pools exactly in the manner of the Stilt, uttering the like sharp note of *click click click*, alighting on the marsh or in the water indiscriminately, fluttering their loose wings, and shaking their half bent legs, as if ready to tumble over, keeping up a continual yelping note. They were, however, rather more shy, and kept at a greater distance. One which I wounded attempted repeatedly to dive; but the water was too shallow to permit him to do this with facility. The nest was built among the thick tufts of grass, at a small distance from one of these pools. It was composed of small twigs of a sea-side shrub, dry grass, seaweed, &c., raised to the height of several inches. The eggs were four, of a dull olive color, marked with large irregular blotches of black, and with others of a fainter tint.

This species arrives on the coast of Cape May late in April; rears its young, and departs again to the south early in October. While here it almost constantly frequents the shallow pools in the salt marshes; wading about, often to the belly, in search of food, *viz.* marine worms, snails, and various insects that abound among the soft muddy bottoms of the pools.

The male of this species is eighteen inches and a half long, and two feet and a half in extent; the bill is black, four inches in length, flat above, the general curvature upwards, except at the extremity, where it bends slightly down, ending in an extremely fine point; irides reddish hazel; whole head, neck and breast, a light sorrel color; round the eye, and on the chin, nearly white; upper part of the back and wings black; scapulars and almost the whole back white, tho generally concealed by the black of the upper parts; belly, vent and thighs, pure white; tail equal at the end, white, very slightly tinged with cinereous; tertials dusky brown; greater coverts tipped with white; secondaries white on their outer edges, and whole inner vanes; rest of the wing deep black; naked part of the thighs two and a half inches; legs four inches, both of a very pale light blue, exactly formed, thinned and netted, like those of the Stilt; feet half-webbed, the outer membrane somewhat the broadest; there is a very slight hind-toe, which, claw and all, does not exceed a quarter of an inch in length.

A female which I obtained was two inches shorter than the above described, and three less in extent; the head and neck a much paler rufous, fading almost to white on the breast, and separated from the black of the back by a broader band of white; the bill was three inches and a half long; the leg half an inch shorter; in every other respect marked as the male. She contained a great number of eggs, some of them nearly ready for exclusion. The stomach was filled with small snails, periwinkle shellfish, some kind of mossy vegetable food, and a number of aquatic insects. The intestines were infested with tape-worms, and a num-

ber of smaller bot-like worms, some of which wallowed in the cavity of the abdomen.

In Mr. Peale's collection there is a bird of this genus, said to have been brought from New Holland, differing little in the markings of its plumage from the present species. The red brown on the neck does not descend so far, scarcely occupying any of the breast; it is also somewhat less.*

In every stuffed and dried specimen of these birds which I have examined, the true form and flexure of the bill is altogether deranged; being naturally of a very tender and delicate substance.

It is remarkable, that in the Atlantic states this species invariably affects the neighborhood of the ocean; we never having known an instance of its having been seen in the interior; and yet Captain Lewis met with this bird at the ponds in the vicinity of the Falls of the Missouri. That it was our species I had ocular evidence by a skin brought by Captain Lewis himself, and presented, among other specimens of Natural History, to the Philadelphia Museum. See *History of Lewis and Clark's Expedition*, vol. II, p. 343.

* This is the *Recurvirostra rubricollis* of Temminck, Manuel d'Ornithologie, p. 592.

SANDERLING.

CALIDRIS ARENARIA.

[Plate LXIII.—Fig. 3.]

Ruddy Plover, *Arct. Zool. No.* 404.—LATH. *Syn.* v. 3, p. 195, No. 2.—*Charadrius rubidus*,
Ind. Orn. p. 740, No. 2.

THIS bird, which has hitherto been named the Ruddy Plover, and thought a distinct species, is frequently found in company with the Sanderling, which, except in color, it exactly resembles. It is generally seen on the seacoast of New Jersey in May and October, on its way to and from its breeding place in the north. It runs with great activity, along the edge of the flowing or retreating waves, on the sands, picking up the small bivalve shell-fish, which supply so many multitudes of the Plover and Sandpiper tribes.

I am now satisfied that this bird is the Sanderling itself, in a different dress. Of many scores which I examined scarcely two were alike; in some the plumage of the back was almost plain; in others the black plumage was just shooting out. This was in the month of October. In the month of May, on Egg-Harbor beach, I observed large flocks of Sanderlings; some of them light-colored above; many with the black and red, feathers black, tip white, and edged red. One male specimen was very light-colored, but on separating the plumage, the young feathers were observed coming out thickly, and all these last were black, tip white, and edged with red chalk. Naturalists, however, have considered this as a separate species; but have given us no further particulars than that "in Hudson's bay it is known by the name of Mistchaychekiskaweshish:"* a piece of information certainly very instructive.

* Latham.

The Sanderling in its summer dress has the sides of the neck, and whole upper parts, speckled largely with white, black and ferruginous, the feathers being centred with black, tip with white, and edged with ferruginous, giving the bird a very motley appearance; belly and vent pure white; wing quills black, crossed with a band of white; lesser coverts whitish, centred with pale olive, the first two or three rows black; two middle tail feathers black; the rest pale cinereous, edged with white; legs and feet black. Both males and females varied in their colors and markings.

In Brisson's account of the Sanderling, which he calls *La petite Maubêche grise*, (*Calidris grisea minor*) he represents the outer toe joined to the middle one by a membrane as far as the first articulation. This we take to be an error in the description, as all those we examined had their toes divided to their origin. Latham's Ruddy Plover is said to have its toes thus divided.

SEMIPALMATED SANDPIPER.

TRINGA SEMIPALMATA.

[Plate LXIII.—Fig. 4.]

PEALE'S *Museum*, No. 4023.

THIS is one of the smallest of its tribe; and seems to have been entirely overlooked, or confounded with another which it much resembles, (*Tringa pusilla*), and with whom it is often found associated.

Its half-webbed feet, however, are sufficient marks of distinction between the two. It arrives and departs with the preceding species; flies in flocks with the Stints, Purres, and a few others; and is sometimes seen at a considerable distance from the sea, on the sandy shores of our fresh water lakes. On the twenty-third of September I met with a small flock of these birds in Burlington bay, on lake Champlain. They are numerous along the seashores of New Jersey; but retire to the south on the approach of cold weather.

This species is six inches long, and twelve in extent; the bill is black, an inch long, and very slightly bent; crown and body above dusky brown, the plumage edged with ferruginous, and tipped with white; tail and wings nearly of a length; sides of the rump white; rump and tail-coverts black; wing quills dusky black, shafted and banded with white, much in the manner of the Least Snipe; over the eye a line of white; lesser coverts tipped with white; legs and feet blackish ash, the latter half-webbed. Males and females alike in color.

These birds varied greatly in their size, some being scarcely five inches and a half in length, and the bill not more than three quarters; others measured nearly seven inches in the whole length, and the bill upwards of an inch. In their general appearance they greatly resemble the Stints or Least Snipe; but unless we allow that the same species may sometimes have the toes half-webbed, and sometimes divided to the origin, and this not in one or two solitary instances, but in whole flocks, which would be extraordinary indeed, we cannot avoid classing this as a new and distinct species.

END OF THE SEVENTH VOLUME.

