THE CAYENNE TERN.

†*STERNA CAYANA, Lath.*

PLATE CCCCXXIX.—MALE.

On reaching the entrance of the little port of St. Augustine in East Florida, I observed more Cayenne Terns together than I had ever before seen. I had afterwards good opportunities of watching them both during that season and the following, about the Keys. Their shyness surprised me not a little, especially as they are very seldom molested, and it was such that I could study their habits only with the aid of a good glass. I found them at first in great flocks, composed of several hundred individuals, along with Razor-billed Shearwaters, which also congregated there in great numbers. During low water, both species resorted to a large flat sand-bar in the middle of the channel, where they reposed until the return of the tide, sitting close together, in an easy posture, with their heads facing the breeze. They kept separate, however, placing themselves in parallel lines twenty or thirty paces asunder, and either lay flat on the sand, or stood up and plumed themselves. My attempts to procure some of them were always futile, for they flew off when I was yet several hundred yards distant, and moved directly towards the sea. It was pleasing to see the whole of these birds take to wing at the same moment, the jetty hue of the Shearwaters contrasting with the pale blue of the Terns, and the brilliantly-coloured bills of both species, their different modes of flight, and their various evolutions presenting a most agreeable sight. The Terns on these occasions constantly emitted their harsh loud cries, while the Shearwaters moved in perfect silence. After spending several days in unsuccessful endeavours to approach them, I employed several boats, which advanced towards the sands at several points, and we shot as many as we wished, for as the flocks passed over any of the boats, several individuals were brought down at once, on which the rest would assail the gunners, as if determined to rescue their brethren, and thus afford subjects for them on which to exercise their skill. We found it necessary to use large shot, the Cayenne Tern being a strong and tough bird, the largest of the genus met with on our Atlantic coasts. When wounded, however slightly, they disgorged in the manner of Vultures; and when brought to the water disabled, they at once endeavoured to make off from

W.H.

Euphonia Jerni

Male

Drawn from Nature by J. T. Audubon, F.R.S.E.S.

Libb. Printed & Sold by J. T. Bowen, Philadelphia

the shores, swimming with buoyancy and grace, though without making much progress. When seized they at once erected their beautiful crest, threw up the contents of their stomach, uttered loud cries, and bit severely. One that was merely touched in the wing, and brought ashore, through a high surf, by my Newfoundland dog, stuck fast to his nose until forced to relinquish its hold by having its throat squeezed, after which it disgorged seven partially digested fishes.

Although the Cayenne Tern often searches for food over the sea, and at times several miles from the shore, it gives a decided preference to the large inlets running parallel to the coast of the Floridas, within the high sandy embankments, as well as the rivers in the interior of the peninsula. They alight on the banks of racoon oysters, so abundant in the inlets, and are seen in company with the Semipalmated Snipe and the American Oystercatcher, searching for food like these birds, and devouring crabs and such fishes as are confined in small shallow pools. These they catch with considerable agility, in a manner not employed by any of our other Terns. While on the St. John's river, I saw them alight on stakes, in the manner of the Marsh Tern and the Noddy; and as I ascended that stream, I often saw them, at the distance of seventy miles from the sea, perched in the middle of the river, on the same sticks as the Florida Cormorants, and found them more easily approached in the dusk than during broad daylight. Until then I had supposed this species to be entirely oceanic, and averse from mingling with any other.

The flight of the Cayenne Tern is strong and well sustained, although less lively or graceful than that of the smaller species, excepting on particular occasions. They usually incline their bill downwards, as they search for their prey, like the other Terns, but keep at a much greater height, and plunge towards the waters with the speed of an arrow, to seize on small fishes, of which they appear to capture a great number, especially of the "mulletts," which we saw moving about in shoals, composed of individuals of different sizes. When travelling, these birds generally proceed in lines; and it requires the power of a strong gale to force them back, or even to impede their progress, for they beat to windward with remarkable vigour, rising, falling, and tacking to right and left, so as to seize every possible opportunity of making their way. In calm and pleasant weather, they pass at a great height, with strong unremitted flappings, uttering at intervals their cries, which so nearly resemble the shrieking notes of our little Parrakeet, that I have often for a moment thought I heard the latter, when in fact it was only the Tern. At times their cries resemble the syllables *kwee-reek*, repeated several times in succession, and so loudly as to be heard at the distance of half a mile or more, especially when they have been disturbed at

their breeding places, on which occasion they manifest all the characteristic violence of their tribe, although they are much more guarded than any other species with which I am acquainted, and generally keep at a considerable distance from their unwelcome visitors.

On the 11th of May, 1832, I found the Cayenne Terns breeding on one of the Tortugas. There they had dropped their eggs on the bare sand, a few yards above high-water mark, and none of the birds paid much attention to them during the heat of the day. You may judge of my surprise when, on meeting with this Tern breeding on the coast of Labrador, on the 18th of June, 1833, I found it sitting on two eggs deposited in a nest neatly formed of moss and placed on the rocks, and this on a small island, in a bay more than twelve miles from our harbour, which itself was at some distance from the open Gulf. On another equally sequestered islet, some were found amidst a number of nests of our Common Gull; and, during my stay in that country, I observed that this Tern rarely went to the vicinity of the outer coast, for the purpose of procuring food, probably because there was an extreme abundance of small fishes of several kinds in every creek or bay. Until that period I was not aware that any Tern could master the *Lestris Pomarinus*, to which, however, I there saw the Cayenne Tern give chase, driving it away from the islands on which it had its eggs. On such occasions, I observed that the Tern's power of flight greatly exceeded that of the Jager; but the appearance of the Great Black-backed Gull never failed to fill it with dismay, for although of quicker flight, none of the Terns dared to encounter that bird, any more than they would venture to attack the Frigate Pelican in the Floridas.

The Cayenne Tern usually lays two eggs; in a few instances I found only one, and I concluded that no more had been laid, as it contained a chick, which would not have been there had the Great Gull ever visited the nest. The eggs measure two inches and six-eighths in length, by one inch and six and a half eighths in breadth, and are rather sharp at the smaller end. They have a pale yellowish ground colour, irregularly spotted with dark umber and faint purplish marks, dispersed all over but not close. The eggs, like those of the other species, afford good eating.

I never saw the young of this bird while small, and cannot speak of the changes which they undergo from their first state until autumn. Then, however, they greatly resemble the young of the Sandwich Tern, their colour being on the upper parts of a dark greyish-brown, transversely marked with umber, and on the lower dull white. While in this plumage, they keep by themselves, in flocks of fifty or more individuals, and remain separated from the old birds until spring, when they have acquired the full beauty of their plumage, although they appear rather inferior in size.

My surprise at finding this species breeding in Labrador was increased by the circumstance of its being of rare occurrence at any season along the coasts of our Middle and Eastern Districts. Nor does it become abundant until you reach the shores of North Carolina, beyond which it increases the farther south you proceed. It winters in the Floridas, and along the shores of the Mexican Gulf; but I never saw it far up the Mississippi. While on the coast of Newfoundland, on the 14th of August, I saw several individuals on their way southward, flying very high, and keeping up their remarkable cries.

The flesh of every species of Tern is oily, like that of the Gulls and Jagers, and the smallest hole made by shot affords an exit to the grease, which is apt to destroy the beauty of their elastic plumage, so that it is very difficult to preserve them, both on account of this circumstance, and of the quantity of oil that flows from their bill. In no species have I found this to be more remarkably the case than in the Cayenne Tern.

The figure of the *crab* in the plate was introduced on account of its singularly bright red colour, which, when the animal is boiled, changes to pale yellow. It is rather common along the rocky shores of some of the Florida Keys, and is excellent eating.

STERNA CAYANA, Bonap. Syn., vol. ii. p. 353.

CAYENNE TERN, Nutt. Man., vol. ii. p. 208.

CAYENNE TERN, *Sterna cayana*, Aud. Orn. Biog., vol. iii. p. 505; vol. v. p. 639.

Male, 19, 44.

From Texas, in spring, to the Floridas, where it breeds on the Tortugas. Labrador, but not observed in the intermediate parts of the Atlantic coast. Abundant. Migratory.

Adult Male in spring.

Bill longer than the head, stout, nearly straight, compressed, very acute. Upper mandible with the dorsal line slightly arched, the ridge broad and convex at the base, narrowed towards the end, the sides convex, the edges sharp and direct, the tip acute. Nasal groove short; nostrils basal, lateral, linear, direct, pervious. Lower mandible with the angle very narrow, acute, extending to the middle, the dorsal line straight, the sides slightly convex, nearly erect, the sharp edges inflected, the tip very acute.

Head rather large, oblong; neck of moderate length and thick; body rather slender; feet short, stout. Tibia bare for a considerable space; tarsus short, roundish, covered all round with small scales; first toe very small, third longest, fourth a little shorter, the anterior connected by reticulated webs having an incurved margin; claws slightly curved, compressed, acute,

that of hind toe smallest, of middle toe by much the largest, and having the inner edge thin and dilated.

Plumage soft, close, blended, very short on the fore part of the head, elongated behind, rather compact on the back and wings. Wings extremely long, narrow, and pointed; primary quills tapering but rounded, the first longest, the rest rapidly graduated; secondary short, rather narrow, tapering, rounded. Tail long, deeply forked, of twelve feathers, of which the outer taper to a rounded point.

Bill bright carmine, the tips paler. Iris dark brown. Feet black. The top of the head and occiput is greenish-black; the back and wings light greyish-blue; the primary quills bluish-grey on their outer webs, darker on the outer part of the inner, their inner part white, as are the ends and inner webs of the secondaries; upper tail-coverts and tail greyish-white; all the other parts are pure white.

Length to end of tail 19 inches, to end of wings $20\frac{1}{4}$; extent of wings 44; wing from flexure 15; tail 7; bill along the back $2\frac{3}{4}$, along the edge of lower mandible $1\frac{1}{2}$; tarsus $3\frac{2}{12}$; middle toe 1, its claw $\frac{1}{2}$. Weight $14\frac{1}{2}$ oz.

The width of the mouth is $1\frac{1}{4}$ inches; the palate flat, with 2 prominent papillate ridges, the anterior part with five faint elevated lines; the posterior aperture of the nares linear, $1\frac{1}{4}$ inches long, margined with papillæ. Tongue 1 inch 11 twelfths long, narrow, fleshy above, horny beneath, channelled, and tapering to a slit horny point. Œsophagus 9 inches long, at its commencement 1 inch 9 twelfths wide, presently after $1\frac{1}{2}$ inches, then contracting to $1\frac{1}{4}$ inches, and within the thorax enlarging to $1\frac{1}{2}$ inches. In its form and structure it is exactly similar to that of the Gulls. The stomach is of moderate size, 2 inches long, 1 inch 9 twelfths broad; its lateral muscles rather thin; the epithelium thin but very dense, longitudinally rugous, and of a bright red colour. The proventricular glands, which are very numerous and small, form a belt only 7 twelfths in breadth. The lobes of the liver are unequal, the right $2\frac{1}{2}$ twelfths, the left $2\frac{1}{4}$ twelfths in length; the gall-bladder 8 twelfths long, $4\frac{1}{2}$ twelfths broad. The intestine measures 34 inches in length, 6 twelfths in width at the upper part, contracting to 3 twelfths. Cæca $4\frac{1}{4}$ twelfths long, 2 twelfths wide; their distance from the extremity only $2\frac{1}{4}$ inches; rectum 4 twelfths wide, but enlarging into a globular cloaca 10 twelfths in diameter.

The trachea is $6\frac{1}{4}$ inches long, very wide at the top, where it measures 6 twelfths, gradually diminishing to 3 twelfths; its rings unossified, very feeble, contracted before and behind, in the middle being 112 in number. Bronchi large, one with 28, the other with 30 half rings. The muscles exactly as in the Gulls.

In the œsophagus, stomach, and intestine, this bird, as well as the other

Terns, is precisely similar to the smaller Gulls, as it is also in the form, structure, and muscles of the trachea. In these respects, the Terns also resemble the Shearwater. The bill of the Cayenne Tern evidently indicates an affinity to the Phaetons, and in a less degree to the Gannets, as does the head, which is very large in proportion to the bird. On the other hand, as regards the bill, the affinity is to the larger Gulls and the Shearwater. The feet resemble those of the Gulls, but are proportionally smaller, these birds being more volatorial, and the Gulls combining that character with an affinity to the *wading* birds, while the Shearwater exhibits the abbreviated feet of the purely *flying* birds in a still greater degree.

MARSH OR GULL-BILLED TERN.

†STERNA ANGLICA, *Montagu*.

PLATE CCCCXXX.—MALE.

Having taken six specimens of the Marsh Tern of America to the British Museum, and minutely compared them in all their details with the specimens of the Gull-billed Tern which formed part of the collection of Colonel MONTAGU, and were procured in the south of England, I found them to agree so perfectly that no doubt remained with me of the identity of the bird loosely described by WILSON with that first distinguished by the English ornithologist.

I have shot several Marsh Terns out of the same flock, in the early part of spring, when the youngest must therefore have been nearly a year old, and found them all equally perfect and beautiful in their plumage, but differing considerably in the length of their bills, tarsi, toes, and wings, inso-much that a person bent on forming new species might easily gratify his inclination by founding "specific characters" on differences, which, however, would be merely those of males and females of different ages. With me the habits of birds, when minutely and faithfully described, go much farther to establish the identity of individuals found in the different parts of the globe, than the best and closest descriptions of prepared skins. Colonel MONTAGU informs us that the Gull-billed Tern, *Sterna anglica*, resorts by

W.H.

Euphonia L.

M.H.

Audubon, John James. 1844. "The Cayenne Tern, *Sterna cayana*, Lath. [Pl. 429]." *The birds of America : from drawings made in the United States and their territories* 7, 76–81. <https://doi.org/10.5962/p.319541>.

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