

exertion, still very many species must have escaped me. However that may be, I am unaware of such a large number of marine species having been collected anywhere in such a short period.

As far as possible the foregoing fish have, when a doubt has arisen, been examined with the specimens at the British Museum, for facilities of doing which, and also for personal assistance, I have to express my obligations to Dr. Günther.

I have placed a considerable number of duplicates in the British Museum, retaining, however, my own large collection intact in this country until such time as I again return from India, when I trust I shall bring with me further additions to it.

## 2. Note on the Habits of the Pampas Woodpecker (*Colaptes campestris*). By CHARLES DARWIN, F.R.S.

In the last of Mr. Hudson's valuable articles on the Ornithology of Buenos Ayres\*, he remarks, with respect to my observations on the *Colaptes campestris*, that it is not possible for a naturalist "to know much of a species from seeing perhaps one or two individuals in the course of a rapid ride across the Pampas." My observations were made in Banda Oriental, on the northern bank of the Plata, where, thirty-seven years ago, this bird was common; and during my successive visits, especially near Maldonado, I repeatedly saw many specimens living on the open and undulating plains, at the distance of many miles from a tree. I was confirmed in my belief, that these birds do not frequent trees, by the beaks of some which I shot being muddy, by their tails being but little abraded, and by their alighting on posts or branches of trees (where such grew) horizontally and crosswise, in the manner of ordinary birds, though, as I have stated, they sometimes alighted vertically. When I wrote these notes, I knew nothing of the works of Azara, who lived for many years in Paraguay, and is generally esteemed as an accurate observer. Now Azara calls this bird the Woodpecker of the plains, and remarks that the name is highly appropriate; for, as he asserts, it never visits woods, or climbs up trees, or searches for insects under the bark†. He describes its manner of feeding on the open ground, and of alighting, sometimes horizontally and sometimes vertically, on trunks, rocks, &c., exactly as I have done. He states that the legs are longer than those of other species of Woodpeckers. The beak, however, is not so straight and strong, nor the tail-feathers so stiff, as in the typical members of the group. Therefore this species appears to have been to a slight extent modified, in accordance with its less arboreal habits. Azara further states that it builds its nest in holes, excavated in old mud walls or in the banks of streams. I may add that the *Colaptes pitius*, which in Chile represents the Pampas species, likewise frequents dry stony hills, where only a few bushes or trees grow, and may be continually seen feeding on the ground. According to Molina, this *Colaptes* also builds its nest in holes in banks.

\* P. Z. S. 1870, p. 168.

† Asmt. ii. p. 311 (1802).

Not Scudder's (Comp. p. 78) but the species confused with *Picus* with *Ceryle*.

Mr. Hudson, on the other hand, states that near Buenos Ayres, where there are some woods, the *Colaptes campestris* climbs trees and bores into the bark like other Woodpeckers. He says, "it is sometimes found several miles distant from any trees. This, however, is rare, and it is on such occasions always apparently on its way to some tree in the distance. It here builds its nest in holes in trees." I have not the least doubt that Mr. Hudson's account is perfectly accurate, and that I have committed an error in stating that this species never climbs trees. But is it not possible that this bird may have somewhat different habits in different districts, and that I may not be quite so inaccurate as Mr. Hudson supposes? I cannot doubt, from what I saw in Banda Oriental, that this species there habitually frequents the open plains, and lives exclusively on the food thus obtained. Still less can I doubt the account given by Azara of its general habits of life, and of its manner of nidification. Finally, I trust that Mr. Hudson is mistaken when he says that any one acquainted with the habits of this bird might be induced to believe that I "had purposely wrested the truth in order to prove" my theory. He exonerates me from this charge; but I should be loath to think that there are many naturalists who, without any evidence, would accuse a fellow worker of telling a deliberate falsehood to prove his theory.

### 3. Notes on three Species of Tortoises living in the Society's Gardens. By Dr. J. E. GRAY, F.R.S. &c.

(Plates XL. & XLI.)

There are at present living in the Society's Gardens two species of Land-Tortoises and one of the more terrestrial Terrapins, which Mr. Bartlett assures me came direct from Chili. They are very interesting as containing at least one species of *Testudo* not as yet recorded in the catalogue. The other *Testudo* appears to be *T. elephantopus*, or the "Elephant-Tortoise of the Galapagos" of Mr. Harlan, which has hitherto been confounded with *T. indica*.

The more terrestrial Terrapin is *Rhinochelymys annulata*, described in the Proc. Zool. Soc. 1860, p. 231, t. 29 (*Geochelymys annulata*), as coming from Ecuador; so it must extend over a large part of South America. The animal has not been before described. It is black. The fore legs are covered with very large, convex, unequal scales; scales black, tipped with white, forming an interrupted band; toes very short, scarcely produced, covered with two or three convex band-like scales above; claws short, thick, black, white at the tip; hind feet with short, thick, black claws; scales of the soles of the feet large, convex, black, varied with white.

The others are:—

#### 1. TESTUDO (GOPHER) CHILENSIS. (Plate XL.) B.M.

*Testudo sulcata*, D'Orbigny, Voy. dans l'Amér. Mér. Rept. 6; Burmeister, Reise durch die La Plata-Staaten, ii. 521.