

Genus *TETTIGONIA*, Fabricius.*TETTIGONIA ELVINA*, n. sp.

Head, thorax, and scutellum above dull blue-black; abdomen purplish brown above; anal segments and sides orange; tegmina subhyaline; basal two thirds divided abruptly and longitudinally into two areas, the anterior one testaceous, terminating on costal margin in a crimson-edged triangular white spot, the posterior one chocolate-brown; an oblique brown stria from middle of costal margin to centre of limitation of the testaceous area; terminal third bright orange, its outer margin blackish, its inner margin whitish hyaline; a rounded black subapical spot, partially edged internally with white; a larger blackish spot at external angle, and a small dot on inner margin; wings pale brown; body below testaceous; face whitish. Length of body $5\frac{1}{2}$ millims.; exp. tegm. 17.

Hab. St. Paulo, Amazons (*Bates*).

B.M.

Genus *LEDROPSIS*, White.*LEDROPSIS COCCINEA*, n. sp.

Body above, tegmina, and veins of wings scarlet; ground of wings hyaline white; below bright stramineous, with the front and sides of cephalic process, the sides of thorax, and the upperside of the tibiae and tarsi of legs scarlet. Length 10 millims.; exp. tegm. 14.

Hab. N. Australia. From Mr. Saunders's collection. B.M.

Form of *L. naso* of Walker.

3. Further Note on the Mechanism of the "Show-off" in Bustards. By A. H. GARROD, B.A., F.Z.S., Fellow of St. John's College, Cambridge, Prosector to the Society.

[Received November 24, 1874.]

It is the uncertainty with which my material comes to hand which must be my excuse for having so soon to present a further note on the "show-off" in the Bustards.

A young male specimen of the Great Bustard (*Otis tarda*) has recently died in the Society's Gardens; and one or two observations which I was able to make on its gular arrangements have done much to clear up, in my mind, the difficulties connected with that somewhat involved subject. My previous communication on this point (P. Z. S. 1874, p. 471) contains a drawing of the œsophagus, trachea, and gular pouch of a Spanish specimen of *Otis tarda*, kindly given me by Lord Lilford. In the description appended to the woodcut it is remarked that the crop is peculiar, in that it springs from the posterior instead of the anterior wall of the œsophagus; and I may mention that it is further peculiar in not being quite median, as would have been expected.

I do not know the age of the young male bird above referred to, which I have recently examined. It seemed of nearly full size, had

been in the possession of the Society between three and four months, had never shown off, and had no lateral tuft of feathers from the sides of the lower jaw.

In it the œsophagus was uniformly cylindrical, with no trace of a crop, and there was no gular pouch. On looking under the tongue, however, it was evident that the arrangement of the sublingual structures was quite peculiar. In the male of *Eupodotis australis*, as I have previously remarked*, the *frenum linguæ* is well developed in the normal manner as a median vertical fold; and, what is more, it is situated as far forward as in most animals, not behind the level of the basihyal apparatus. In the young and pouchless male of *Otis tarda* the condition is very different. In it the *frenum linguæ* does not exist as such, but as two slight lateral vertical folds, with a median interval between them, a quarter of an inch across; so that the pouchless sublingual region of the young male *Otis tarda* is very like the excellent drawing of that of the pouched adult male in Dr. Murie's paper on the bird (P. Z. S. 1869, p. 141), except that what is there represented as an aperture to a pouch must be considered for the time being as only a slight depression. The tongue is also free for a considerably further distance along its under surface than in *Eupodotis australis*.

In a specimen of the head of *Otis tarda* in the Museum of the College of Surgeons† the *frenum linguæ* is median and normal in all respects. The sex is not mentioned; but from the fact of its differing so much from that of my young male specimen, I cannot help inferring that it is that of a female. If such is the case, until more examples are obtainable, the certainty as to the correctness of my surmise is not absolute.

The two sublingual frena, with a membrane between them, make it seem almost certain to me that in the adolescent male bird, and not in the female, there is every opportunity for the development of a pouch, and that the habit of inflating the air-passages during the sexual season distends the membrane between the frena linguæ, it being comparatively weak, and causes it to develop into a pouch from continued stretching. In favour of the here assumed existence of considerable pressure is the existence of the abnormally situated diverticulum in the specimen figured in my previous paper on the subject; for, from the absence of any trace of a crop in the young bird, it may be inferred that such an organ does not pertain to the species; therefore it must be the result of some superadded force, brought into action in the adult, the distention of the pharynx during the "show-off" being quite sufficient to account for it.

The specimens figured in my earlier communication and that described in the present may all be seen in the Museum of the College of Surgeons.

* P. Z. S. 1874, p. 472.

† No. 772 Q.



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