

not requiring a muscular stomach for its digestion. In consequence we have a degeneration of the ventriculus into a thin membranous band and a straightening of the stomach to facilitate the passage of food no cardiac or pyloric constriction being necessary to hold matter in the ventriculus for digestion as the process of conversion is carried on wholly by the secretions of the alimentary canal.

ANATOMICAL NOTES ON TROCHALOPTERON AND SICALIS.

BY HUBERT LYMAN CLARK.

THROUGH the kindness of Mr. Outram Bangs, I have recently had the opportunity of examining freshly-killed specimens of the 'Chinese Thrush' (*Trochalopteron canorum*) and the 'South American Yellow Finch' (*Sicalis flaveola*). There is no other reason for associating these two species in this brief paper than that they happened to come into my hands at about the same time. So far as I can ascertain no species of either genus has ever been examined with reference to either its pterylosis or internal anatomy. This is my warrant for publishing these meagre notes.

TROCHALOPTERON.

When the plucked carcass of this bird (*T. canorum*) is compared with that of a Robin (*Planesticus migratorius*), the most striking difference is in the width of the feather-tracts. The body of *Planesticus* is about one fourth longer than that of *Trochalopteron* and proportionately heavier but the feather-tracts are two to four times as wide. Thus in *Trochalopteron*, the upper cervical tract where narrowest is 2 mm. wide, the dorsal diamond-shaped tract is 13 mm., the dorsal tract posterior to the diamond is 3 mm. and the sternal tract, where widest, is 5 mm. across. In *Planesticus*,

the corresponding measurements are 5 mm., 25 mm., 12 mm. and 11 mm. So far as the shape and position of the tracts is concerned there is no noteworthy difference, except perhaps the posterior dorsal tract, which contrasts with the dorsal "diamond" much less in the Robin than in the Chinese bird. The differences in the wings of the two birds are so well known, they need not be dwelt on here but it is at least interesting to note that in *Planesticus* the relative lengths of the primaries run thus: 78695432110. In *Trochalopteron* the arrangement is 54632178910 or the seventh primary may slightly exceed the second and first. The important point is that in the robin the wing is pointed by the outer primaries (6-9) while in *Trochalopteron* it is the inner primaries (3-6) which give the point. This is certainly a striking and perhaps an important phylogenetic difference. In both genera there are 9 secondaries and 12 rectrices as usual in passerine birds.

In their internal anatomy I failed to find any point of difference, between the two genera, which could be considered significant. In both, the manubrium of the sternum is notably long and large with a deep fork. In *Trochalopteron*, it is 6 mm. long, the arms of the fork are 5 mm. apart at the tip and the fork is 2.5 mm. deep. These measurements are in the fresh specimen. Of course, on a dried skeleton they would be much less.

The nostrils of *Trochalopteron* are very different from those of the robin but unfortunately this difference is not nearly so well shown in skins. In the Robin the nostril is a nearly horizontal slit, largely concealed by a bare membrane, when looked down on from above; the slit is widest posteriorly where its height is about one fourth of its length. In *Trochalopteron*, the nostril is somewhat kidney-shaped, oblique and quite unprotected by any membrane; its length is somewhat more than twice the width. Judging from a hasty examination of a number of skins, I think the character of the nasal openings is more or less altered in drying. In no other way can I account for the statement in the British Museum 'Catalogue' (Vol. VII, p. 326) that they are "longitudinal, with a large operculum." Certainly that description does not apply at all to the nasal openings in an alcoholic or freshly-killed *Trochalopteron canorum*.

SICALIS.

The carcass of this finch has been carefully compared with one of our American Goldfinch (*Astragalinus tristis*) without revealing any differences whatever in the pterylosis. The primary formula is 87 (or 78) 9654321 and the tail is a trifle less emarginate than in the goldfinch. The nostril is exposed and nearly circular. Nothing in the internal anatomy is noticeably different from what is found in *Astragalinus*. The tongue is possibly a trifle less fleshy. The tomia are markedly deflexed, a notable difference from the nearly straight tomia of the goldfinch. On the roof of the mouth in *Sicalis*, at the posterior end of the upper mandible is a conspicuous tubercle, back of which on each side is a minute pit. This tubercle may be seen in dry skins, as well as in alcoholic specimens, if the bill is opened. There is nothing like it in *Astragalinus*. It is also quite lacking in *Serinus*, an interesting confirmation of Mr. Ridgway's view that that genus is not a close ally of *Sicalis*. Perhaps it may be proper to add that my observations on the nostrils and the tomia of *Sicalis* and *Serinus* entirely confirm Mr. Ridgway's statements regarding those genera (*Birds of North and Middle America*, Vol. I, p. 522).

EARLY RECORDS OF THE WILD TURKEY. II.

BY ALBERT HAZEN WRIGHT.

THE HUNTING AND TRAPPING OF THE WILD TURKEY.

The hunting and trapping of this wary bird has furnished the literature of out-of-door magazines many an interesting column in the last forty years, a period following the range (250 years) of the subsequent notes. These represent most of the present-day methods of capture and cover a wide stretch of country as well as range of time. Of the general wariness of the species (Michaux, l. c., pp. 216, 217) writes as follows: "The wild turkies, which begin