

along the New Jersey coast, even as far south as the Cape May region, but I do not know that it has ever been found breeding on Long Island. There would seem to be little doubt, however, that it has recently nested there at Long Beach. At that place, on May 25, 1917, I watched a pair of these owls, evidently, from the disparity in their size, a male and female, repeatedly attacking a single Crow. The birds were flying about over a tract of dunes and thickets flanking a salt marsh inaccessible to me across a broad creek. The Crow, perhaps to escape the Owls, perhaps intent on depredation of their nest, several times swept down to the ground about a certain spot, the Owls pursuing it or awaiting its return into the air when attack and counter-attack were renewed. The following year at the same place a pair were observed on February 22, attacking a Marsh Hawk, one was seen on April 12, a pair on May 17, and again a single one on August 9. — EUGENE P. BICKNELL, *New York City*.

Early Occurrence of the Snowy Owl and the Pine Grosbeak in Monroe County, New York.— On November 3, 1918, while riding on a trolley car toward the lake, my attention was called by the motorman, to a large Snowy Owl (*Nyctea nyctea*) which was sitting on the top of a wooden pole in a gravel bed and about 150 feet from the tracks.

He also informed me that the bird had been in the same place while on a previous trip an hour and a half before. Later it was seen to fly into a nearby vineyard. The locality was in the town of Irondequoit, a mile and a half from Lake Ontario. On the same afternoon at 3.30 o'clock, while walking along the border of the woods at Durand-Eastman Park, near the lake, I observed three Pine Grosbeaks (*Pinicola enucleator leucura*). There were two females and one male, they were feeding in some bushes close to the roadway and were very tame, allowing me to approach within ten feet of them, when they would fly into the nearby bushes. This is the earliest record that I can find of their occurrence in Monroe County.— LUCIUS H. PAUL, *Rochester, N. Y.*

The Deep Plantar Tendons in the Puff-birds, Jacamars and their Allies.— One of the most distinct and peculiar types of the deep plantar tendons in birds is that known as the *antiopelmous*, characterizing certain zygodactyl groups such as the Woodpeckers, Toucans and their allies. In this arrangement of the simple *flexor perforans digitorum* runs to the third toe, while the trifurcate *flexor longus hallucis* supplies the first, second and fourth toes. The two tendons are connected by a vinculum which runs from the *flexor longus* to the *flexor perforans*.

The nature of these tendons in the Puff-birds (*Bucconidæ*) and Jacamars (*Galbulidæ*) is of special importance in determining the systematic position of these families. Both are commonly given as antiopelmous, perhaps on the sole authority of Garrod (cf. P. Z. S., 1875, p. 345; also Sclater's Monograph of the Jacamars and Puff-birds, p. XXVIII). The following species were examined by Garrod: *Galbula rufoviridis*, *G. albirostris*, and

Urogalba paradisea of the Galbulidæ, and *Monasa flavirostris*, *Malacoptila fusca* and *Bucco maculatus* of the Bucconidæ. Of allied groups the following were determined: *Ramphastos ariel* (Ramphastidæ), *Megalæma asiatica* (Capitonidæ), *Gecinus viridis* and *Tiga javanensis* (Picidæ).

Descriptions of the plantar tendons in other groups have so often proven erroneous that the verification of all such statements is desirable. This is my excuse for the present note which merely confirms the observations of Garrod; however the species, with one exception, and three of the genera are different and I am able to point out one or two minor variations.

I have made careful dissections of specimens of *Monasa grandior* and *Malacoptila inornata* (Bucconidæ), *Galbula melanogenia* (Galbulidæ), *Ramphastos ariel* (Ramphastidæ), *Chloronerpes yucatanensis*, *Dryobates villosus* and *Campephilus malherbii* (Picidæ). The essential antiopelמוש arrangement is the same in all, but several variations occur that are worthy of note.

In *Chloronerpes*, *Megalaima*, *Ramphastos*, *Malacoptila* and probably *Monasa*, the distance between the first and second bifurcations of the *flexor longus* is much greater than in *Dryobates* and *Galbula*; in *Campephilus*, on the other hand, the three slips spring from practically the same point. The position of the vinculum is somewhat variable. In *Ramphastos*, *Megalæma* (Garrod), *Dryobates*, and *Campephilus* the vinculum leaves the *flexor longus* decidedly above the primary bifurcation of the latter; in *Malacoptila*, *Galbula* and *Chloronerpes* at the extreme lower end of the main tendon, just as it divides, while in *Monasa* (as recorded by Garrod also) it originates from the upper ends of the two branches.

Stejneger states (on what authority I do not know) that the Honey Guides (Indicatoridæ) are antiopelמוש. There is every reason to believe this statement correct and also to assume that the Wrynecks (Jyngidæ) and Piculets (Picumnidæ) have the same arrangement.

This close agreement in the deep plantar tendons is, as remarked by Dr. Stejneger, strong evidence of the mutual relationships of the families possessing this unique arrangement. As this character is not neutralized or overbalanced by any of equal or greater value we may regard these families as forming a natural group, an order or suborder, characterized essentially by their antiopelמוש, zygodactyl feet. In other zygodactyl birds, the Parrots and Cuckoos, the tendons are of the wholly different desmopelמוש type, and moreover the ambiens muscle, absent in the antiopelמוש group, is here present.— W. DEW. MILLER, *American Museum of Natural History, New York City.*

The Status of the Genus *Hypocentor* Cabanis.— The genus *Hypocentor* was originally instituted by Cabanis (Mus. Hein, I, 1851, p. 131) for three species of Buntings, *Emberiza aureola* Pallas, *Emberiza fucata* Pallas, and *Emberiza rustica* Pallas. Its type was soon afterward designated by Gray (Cat. Gen. and Subgen. Birds Brit. Mus., 1855, p. 79) as *Emberiza aureola* Pallas. Modern authors have commonly synonymized