THE PTERYLOGRAPHY OF THE PILEATED WOODPECKER (*CEOPHLOEUS PILEATUS*).

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A recent examination of a pair of Pileated Woodpeckers (*Ceophloeus pileatus*) from West Virginia showed that in several important particulars this species differs in its pterylosis from any of the plates which have been published hitherto, illustrating Picine pterylography. So far as I can learn the pterylosis of Ceophloeus has never been described, or at any rate figured, and so I venture to offer this contribution to a little known branch of ornithology. Nitzsch has figured, in his "System der Pterylographie," *Picus viridis*, and Dr. R. W. Shufeldt has figured and described (*Auk.*, April, 1888) *Dryobates V. harrisii* and *Sphyrapicus V. nuchalis;* but I have seen no other illustrations of the Pici. I have examined *Dryobates pubescens, Centurus caroliniensis* and *Colaptes auratus*, but Ceophloeus differs from all these in several ways. A comparison of Fig. 1 with the figure of *P. viridis* (Sys. Pter., Plate V, Fig. 14) shows two very important differences; one of these is on the chin and lower mandible, the other is at the opposite end of the body near the anus. The whole lower surface of the head in *P. viridis* seems to be fully feathered, while in Ceophloeus there are very distinct apteria along the

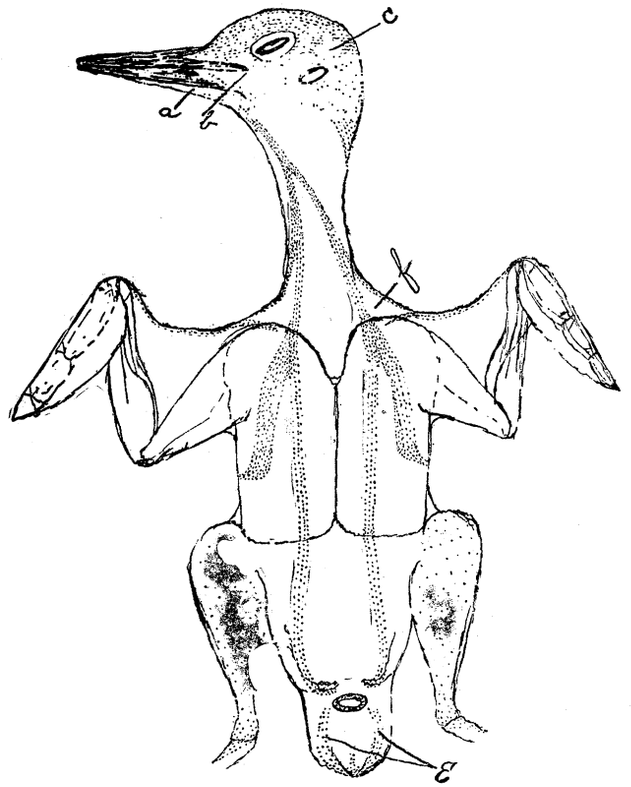

Fig. 1.—Ventral Surface of Pileated Woodpecker (Ceophloeus pileatus).

rami of the lower mandible and on the cheeks. These apteria are not shown in any of Dr. Shufeldt's figures, nor have I observed them in any other woodpecker; but they are very evident in both sexes of Ceophloeus. Fig. 3 shows them nearly natural size; *a*, the apteria of the rami, and *b*, the apteria of the cheeks; the same in Fig. 1, *a* and *b*. Nitzsch says, in regard to apteria on the head, after mentioning the temporal space (see Fig. 1, *c*) and the vertical space (Fig. 2, *d*), "Die übrige Kopfläche ist dicht befiedert," but he seems to have been wrong. According to the same writer, in *P. viridis*, the main branches of the pt. ventralis continue beyond the vent, including it, to the very base of the rectrices; but in Ceophloeus they curve abruptly inward and end just before reaching the anus, while behind the latter is a horse-shoe shaped tract (Fig. 1, *e*) which is also shown in Dr. Shufeldt's figure of *D. v. harrisii* and to which he gives the name of "post-ventral tract" (pt. postventralis). This tract is found in all the four genera of woodpeckers which I have examined, but Nitzsch does not speak of it, although he gives *P. auratus* and *P. carolinus* as among the species he studied. It seems to be wanting in Sphyrapicus, as it is not shown in Dr. Shufeldt's figure of that species. The remainder of the ventral

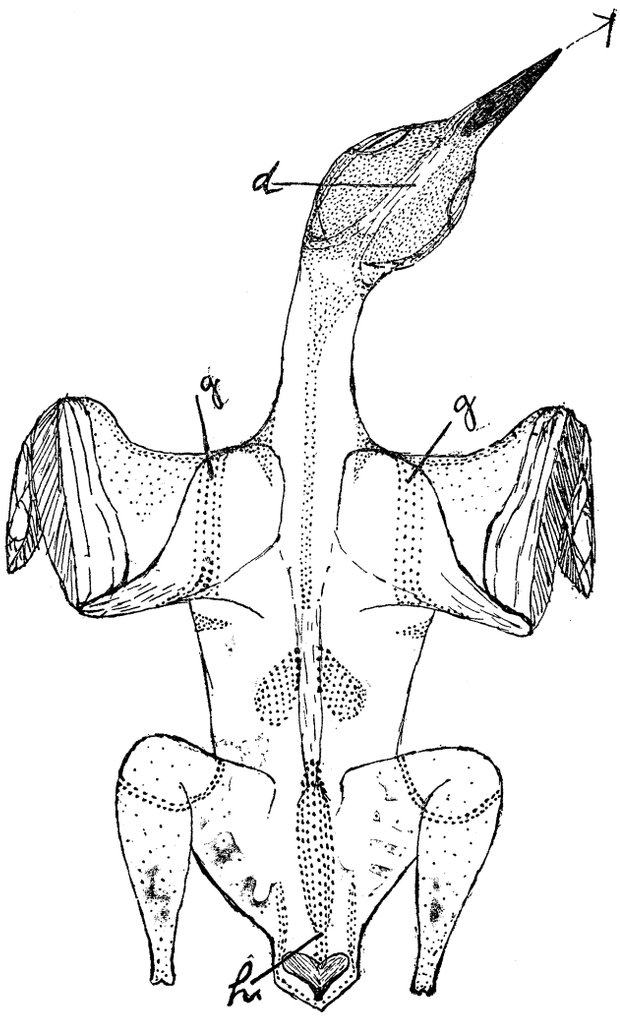

Fig. 2.—Dorsal Surface. Pileated Woodpecker (Ceophloeus pileatus).

surface of Ceophloeus agrees very well with that of *P. viridis*, especially in the connections of the pt. ventralis with the pt. humeralis and pt. alaris forming the triangular apterium shown at *f*, Fig. 1.

On the dorsal surface Ceophloeus agrees with *P. viridis* more nearly than with any other species. The only differences of note are in the humeral tracts and at the extreme end of the dorsal tract. According to Nitzsch's plate, the humeral tracts are much broader anteriorly, but in Ceophloeus (Fig. 2, *g*) they consist of four rows of contour feathers throughout, and so are of equal width at the ends. In *P. viridis* the dorsal tract is of greater width at its end on the oil-gland than it is further forward, while in Ceophloeus it is much narrower there (Fig. 2, *h*). The dorsal surface in Colaptes is on much the same plan, but the tracts are broader,

and there are some noticeable differences. The tail, as is usual in woodpeckers, consists of twelve rectrices, of which the middle pair are the longest, and the outer pair are not only very short, but they are inserted almost over the pair next to them, and are much less stiff and pointed than the others. On the wing I found ten primaries and eleven secondaries and four feathers in the alula. Of the secondaries the first seven are of

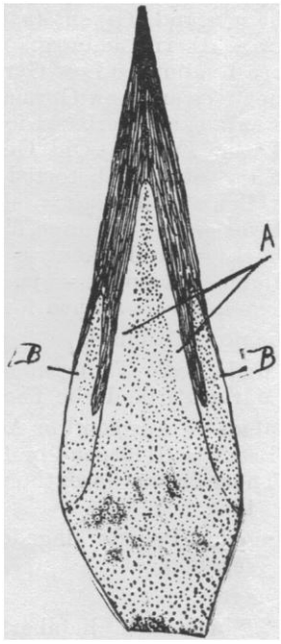

Fig. 3.—Chin and Throat. Pileated Woodpecker (Ceophloeus pileatus). To show the apteria on the lower mandible.

about equal length, and the rest decrease rapidly, the eleventh being the shortest, though it is interesting to note that it is longer than the first primary. No sexual differences were noted in the pterylosis until I examined the proportionate lengths of the primaries, when I was astonished to find a difference which seems well

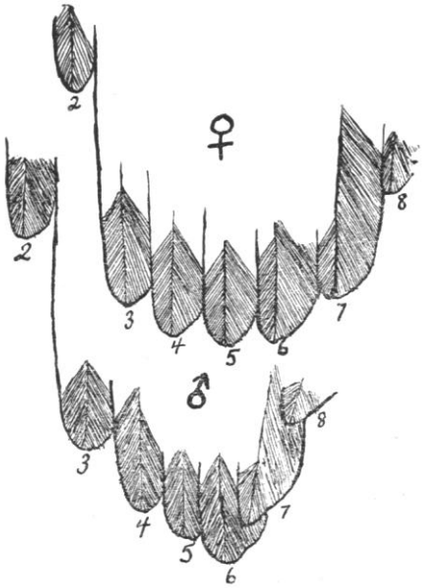

Fig. 4.—Wings of Male and Female.

worthy of note. Of course it must be remembered that I examined only one specimen of each sex, and so this difference may be only an individual variation, but it is so great as to warrant its illustration. In Fig. 4 will be seen the tips of the wings as they appeared in each sex, and the difference in shape will be at once remarked. In both the first primary is very short, only one-quarter the length of the sixth; the second is considerably longer, reaching, in the male, to within two and one-fourth inches of the tip, and in the female to within one and three-fourths inches; the third is next in both sexes, but is three-fourths of an inch shorter than the sixth in the male and less than one-fourth of an inch in the female; the fourth is almost equal to the fifth and sixth in the female, but in the male is shorter than the seventh; the latter in the female is much shorter than the third; in the male the eighth, ninth and tenth are all longer than the second, while in the female the latter is longer than the ninth and tenth. Thus we see that the wing formula in the two sexes is as follows:

Male, - 6 5 7 4 3 8 9 10 2 1
Female, - 5 6 4 3 7 8 2 9 10 1

It is hardly necessary to state that both wings showed these same differences, which Fig. 4 will make clear.

Aftershafts are present on all the contour feathers, and are of fairly good size though rather weak. The oil-gland is ornamented with a large tuft of white feathers in marked contrast to the surrounding black. Down-feathers seem to be wanting, though "half-down," as Nitzsch calls it, is present on most of the spaces. Filoplumes are plenty on all the tracts.

Figs. 3 and 4 are drawn three-fourths natural size, and Figs. 1 and 2 are not quite one-half.

SECRET LANGUAGE OF CHILDREN.

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We adults are rather apt to rate children's powers too low. This, no doubt, comes from a lack of study of these powers, and, perhaps, from a wrong comparison of the child with the adult. In the power of originating it may be that the child is the superior of the adult. This is well illustrated in the forming of languages. In this field the child seems to be perfectly at home, as may be shown to any one who will make a study of such; or if he will look back into his own childhood he will find left in memory traces of such languages, or if one will keep his ears open among children he will be very sure to find such languages here and there. Only on the other Sunday afternoon, while, with my wife and little girl, stopping at a small depot on a railroad in South Worcester to rest from a walk, a number of pretty tough-looking boys came along and stopped to play. At first, from their language, I thought they were foreigners, but I soon found out that they were using a language of their own. I did not have the opportunity at this time to make inquiries about their language, for which I am truly sorry.

The editor of "Am Ur-Quell,"* a German Folk-Lore paper, gives over 150 specimens of Secret Languages collected during the past three years. To be sure, quite a number of these are not languages of children, as some are of thieves, peasants, secret societies, etc., but who knows but that many of these may have their foundation in child-languages?[1]

*I am indebted to Dr. A. F. Chamberlain, Lecturer in Anthropology, Clark University, for having my attention called to these languages in Am Ur-Quell, and also for the privilege of using his numbers of this journal.

[1] I am indebted to Mr. L. N. Wilson, Clerk of Clark University, for his having called my attention to the following: " . . . . . he went on to mention the one sole accomplishment which his sons had imported from Winchester. This was the Ziph language. . . . . Repeat the vowel or diphthong of every syllable, prefixing to the vowel so repeated the letter G. Thus, for example: Shall we go away in an hour? This in Ziph becomes: 'Shagall wege gogo agawagay igin agan hougour?' "—"The Collected Writings of Thomas de Quincey, New and Unabridged Edition," by David Mason. Edinburgh, 1889, vol. I., p. 202.