

The Polynesian Tattler on St. Lawrence Island.¹—The United States National Museum has recently received seven specimens of shore-birds from St. Lawrence Island, all collected in June and July, 1932, by Paul Silook, an Eskimo resident of the island. Among them is a fine specimen of the Polynesian Tattler, *Heteroscelus brevipes* (Vieillot), taken in July (no exact date given on the label). The bird, which is unfortunately unsexed, is in quite fresh plumage. This species has been recorded hitherto from only one locality in North America, St. Paul Island, Pribilof Islands, where three specimens have been taken, each at a different time, but all in the months of September and October.—HERBERT FRIEDMANN, *United States National Museum, Washington, D. C., December 15, 1932.*

The Inner Abdominal Feather Region in Brooding Woodpeckers.—In his paper on the pterylography of woodpeckers, Burt (Univ. Calif. Publ. Zool., 30, 1929, p. 435) described a row of feathers lying on either side of the midventral line medial to the principal abdominal tract. This row he named the inner abdominal region in contradistinction to the main or outer abdominal region. While occupied with the preparation of study skins of Hairy Woodpeckers, *Dryobates villosus*, at Ochoco Ranger Station, Crook County, Oregon, in June, 1932, I noticed that breeding adults had lost the feathers of this inner abdominal region in conjunction with the development of a brooding area on the belly. The entire area between the two outer abdominal regions was highly vascularized and entirely nude. Since it is not usual for birds to drop contour feathers to provide a specialized brood patch, I was led to study more closely the nature of the feathers of this inner region.

Burt described the feathers of the region in question as downy in character. Ordinarily, typical down feathers are not represented with any great completeness in pterylographic drawings, since they usually are indefinite in their arrangements, at least in Picidae and Passeriformes. The marked regularity of the downy inner abdominal feathers was evidently the factor that led, justifiably, to the recognition of the row as a distinct region. Closer examination of these feathers shows that they are intermediate between typical downs and contour feathers. Samples plucked from an alcoholic specimen of an Arctic Three-toed Woodpecker, *Picooides arcticus*, possess a definite shaft extending through the proximal half of the feather, well beyond the superior umbilicus; the distal barbs form a loose vane resembling in coloration and texture the contour feathers of the outer abdominal region. In their incomplete shaft and in their abundance of non-cohesive barbs basally they are similar to downs. True downs from this part of the belly of a representative passerine species such as the Oregon Junco, *Junco oreganus*, are essentially without a rachis, have very short quills, and show no cohesion of the distal barbs. Not uncommonly in the juncos, and in some other sparrows, I have observed that the downs tend to form an irregular longitudinal row that is extremely suggestive of the more definite row of larger feathers in the woodpeckers. The downs of the bellies of passerines are, of course, lost in the development of a brood patch.

In two Hairy Woodpeckers, numbers 61360 and 61361, Mus. Vert. Zool., taken June 21, 1932, at Ochoco Ranger Station, new feathers of the inner abdominal row were growing coincident with the replacement of the innermost primaries. No other feathers of the body, wing or tail were molting at this time. Similar coincidence of appearance of new inner abdominal feathers with the earliest phase of the annual molt was noted in Lewis Woodpeckers (*Asyndesmus lewisi*) and Arctic Three-toed Woodpeckers during July, 1932. Since in these woodpeckers both sexes develop brood patches, the method of replacement in the two sexes was the same. Juncos, for example, do not grow downs on the old brood patch until the ensuing annual molt is well advanced and adjacent contour feathers are partly molted. Germs of the inner abdominal feathers of woodpeckers, then, after a prolonged dormancy following the shedding at the time of brooding, begin growth of new feathers with the first surge of molting activity that follows the nesting season. The woodpeckers that were growing new inner abdominal feathers were in most cases still feeding young outside the nest.

To summarize, the inner abdominal region is composed of a row of feathers intermediate structurally between typical downs and contour feathers. In the definite

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