

species I have examined: *H. flavipes*, *H. thoracicus*, *H. poicilotis*, and *H. pectoralis*. It would seem that this latiplantar, quasi-exaspidean condition is best interpreted as a modification of the oscine acutiplantar condition. An attempt to divide *Hylophilus* into two genera would necessitate setting arbitrary limits and would be impractical.

In this case, an attempt to use tarsal scutellation as a "key character" for classification fails and recalls that Ridgway also had trouble (1907. *U. S. Nat. Mus. Bull.*, 50:336) when attempting to use the variations in the tarsal envelope for arranging the members of the Tyrannidae. He wrote, "... they have disappointed me ... they seem of little value beyond the definition of genera (even sometimes failing here!) or minor supergeneric groups; indeed, it has been found that each of them is more or less variable within what appears to be proper generic limits."—A. L. RAND, *Chicago Natural History Museum, Chicago 5, Illinois, December 29, 1958.*

"Foot-paddling" feeding behavior in a Semi-palmated Sandpiper.—On August 5, 1958, I made the following observation on a mud flat in Newburyport Harbor, eastern Massachusetts. Together with several other species of shore birds, a number of Semi-palmated Sandpipers (*Ereunetes pusillus*) were feeding approximately 20 yards from my position on the edge of the flat. As the incoming tide slowly covered the mud, a number of small, shallow pools began to form, and the sandpipers were observed to probe in these pools as well as in the surrounding mud. I focussed my binoculars on one individual which had stopped momentarily to preen. Shortly afterward, this bird waded into a small pool about two feet in diameter, and began to "foot-paddle." With its body held horizontally, bill pointed down, the bird began alternately to lift and depress its legs very rapidly. The entire body of the bird moved rhythmically with the alternating motions of the feet and tarsi. The bird would paddle for about ten seconds, peer at the surface of the water for a moment, then stab rapidly. The movements of the bill were stabs, not probes in the mud. Three such stabs appeared to be successful in securing prey, since the bird made brief swallowing movements after each stab. The food secured by the use of "foot-paddling" was not identified. The entire behavior lasted three minutes, and it appeared to be terminated by the incoming tide flooding the temporary pool.

A cursory review of the literature revealed no mention of this behavior for the Semi-palmated Sandpiper, although similar feeding techniques have been observed in other species of sandpipers.—ANDREW J. MEYERRIECKS, *Hatheway School of Conservation Education, Drumlin Farm, South Lincoln, Massachusetts, September 25, 1958.*

Tarsal oiling by a banded Fox Sparrow.—On April 2, 1958, I observed a Fox Sparrow (*Passerella iliaca*) anoint its tarsi after manipulating its uropygial gland. Similar behavior of a Lark Sparrow (*Chondestes grammacus*) has been described by Whitaker (1957. *Wilson Bull.*, 69:179-180), apparently the only other published report of this behavior. My observations were made at the Drumlin Farm Sanctuary near Lincoln, Massachusetts, where I was studying the morphology and sequence of maintenance activities of emberizines upon release from banding. This Fox Sparrow was banded with one aluminum band, inspected for fat and molt, measured, weighed, and released at about 12:45 p.m. Maintenance activities, such as preening and shaking, are given quite readily after banding, and it is assumed that handling and ruffling the feathers during the process accentuate exteroceptive stimuli which release these motions.

Oiling was performed three times, once on each leg after manipulation of the uropygial gland, and once on the unbanded leg after preening the breast. The actual oiling movements were not elaborate. Having just manipulated the preen gland, the Fox

Sparrow rubbed the side of its bill down the tarsus from the tarsal joint to the toes, where the motion ended. This was repeated on the other leg except that the motion ended at the band. Whether or not the band was partially responsible for stimulating the oiling motions cannot be ascertained, but several other Fox Sparrows banded the same day did not anoint the tarsi while preening. During the motion, the bird did not raise its leg from the limb, but instead bent its head down to oil the tarsi. The second occurrence, where only one leg was oiled, took place after the bird had preened down the breast, and the two motions nearly blended. This motion also stopped at the toes.

Mrs. Whitaker (*op. cit.*) described carefully the manner in which her captive Lark Sparrow performed these motions, and also reported that Mrs. A. Nelson has seen tarsal oiling by a captive House Sparrow (*Passer domesticus*). The behavior of my banded Fox Sparrow was similar to that of the Lark Sparrow in several respects: both birds rubbed the tarsi only while preening, both species performed bill wiping and shaking movements before but not during the oiling, and the sequence of motions after tarsal oiling ("usually starting by pulling at mid-breast feathers and then stropping remiges of either wing," Whitaker, *op. cit.*) was similar for both. There are, however, some differences. The Lark Sparrow thrust one foot forward in order to rub it, whereas my Fox Sparrow oiled the leg while still grasping the perch with both feet. Also, the Fox Sparrow did not oil its toes as the Lark Sparrow sometimes did. Certain relationships in sequence of movements in the Lark Sparrow did not hold true in the Fox Sparrow. For instance, the Lark Sparrow always bathed before oiling, which was not true of the Fox Sparrow, although a slight rain that was falling may have provided similar stimulus to the latter bird. Furthermore, tarsus oiling always came before breast preening in the Lark Sparrow, whereas the order of the two was variable in my Fox Sparrow. Finally, once preening of feathers began, the Lark Sparrow neither used the oil gland again nor rubbed the tarsus again, whereas the Fox Sparrow did both.

The significance of species differences in morphology and sequence of oiling and other maintenance activities cannot be evaluated from such short observations as these. Problems concerning the biological function of tarsal oiling and its possible connection with molt of tarsal scales are discussed by Whitaker (*op. cit.*) and nothing new can be added here. It is suggested that bird-banders who inspect their birds in the hand and watch them after release can contribute valuable information about this rare behavior trait.

I am indebted to Carl W. Helms for his help in the banding experiments, and to Dr. William H. Drury, Jr., Director of the Hatheway School of Conservation Education at Drumlin Farm for the use of a wire recorder and banding equipment which were used in the experiments.—JACK P. HAILMAN, 4401 Gladwyne Drive, Bethesda 14, Maryland, January 16, 1959.

The taxonomy of the Robin in Mexico.—The taxonomic treatment accorded *Turdus migratorius* in the Mexican Check-List (Miller, *et al.*, 1957. *Pac. Coast Avifauna*, 33:1-436) was something of an innovation. However, no supporting data were presented. My own study generally confirms this arrangement and provides data. I studied 193 adult-plumaged Robins from Mexico, plus over 100 specimens of *T. m. propinquus* from western United States, and a few of each of the other races.

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