

TWO NEW MALLOPHAGA FROM TWO CLOSELY RELATED SHOREBIRDS.

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There are described herein two new species of Mallophaga collected from two species of shorebirds: Lesser yellowlegs, *Totanus flavipes* (Gmelin) and greater yellowlegs, *Totanus melanoleucus* (Gmelin), both common during migrations in the United States. These two sandpipers (Order Charadriiformes, Family Scolopacidae) are almost indistinguishable in coloration but the greater yellowlegs is about one-third larger in size than the lesser yellowlegs. The two new species of Mallophaga are easily separated by the different male genitalia; in other characters they closely resemble each other; the larger louse is found on the larger bird.

Degeeriella falcigera, new species.

DESCRIPTION OF MALE.—*Head* of Philopterus type, rather elongate conical in shape, being one and three-fifths times as long as broad and twice as broad across the temples as at anterior border of clypeus. Clypeus with a slightly convex and expanded hyaline margin; signatural plate somewhat shield-shaped; distinct clypeal suture; trabeculae distinct and uncolored, almost as long as first antennal segment, but not moveable. Antennae with second segment longest, fifth longer than third or fourth, which are equal, pale with fifth segment darkest. Eyes clear, with a long and a short ocular seta. Three short lateral setae on clypeus; two before trabeculae; two long and two short setae on rounded temples. Posterior edge of head slightly concave and bare. Color golden brown; with dark brown antennal bands interrupted at clypeal suture; temples margined with dark brown; mandibles, esophageal sclerite, narrow occipital bands, and triangular gular signature medium brown.

Thorax about two-thirds as long as head, golden brown with dark brown lateral margins. Prothorax trapezoidal, sides slightly diverging, with a short seta in latero-posterior angle. Pterothorax as wide as head and one and two-thirds times as long as prothorax, trapezoidal with diverging and slightly concave sides, and posterior edge slightly angled. A group of three pustulated setae in latero-posterior rounded angle and two pustulated setae nearer the middle on the posterior border. Legs all about equal in length, with femora rather robust, coxae situated near lateral edges of thorax.

Abdomen of nine segments, elongate, golden brown with dark brown lateral margins, each segment with somewhat indistinct darker transverse markings, sutures lighter, segments 2 to 5 each having a narrow median uncolored line extending from the suture to middle of each segment. First segment short, slightly converging posteriorly; segments 2 to 6 about equal in length; fourth segment widest; segments 7, 8, and 9 rapidly narrowing posteriorly; segment 9 half the width of segment 6 and broadly rounded with about twelve small setæ projecting posteriorly. Pleurites long, pointed, projecting into preceding segment, and dark brown; the dark brown color extending toward the center in anterior half of segments, the spiracles on segments 2 to 7 in lateral light brown area just posterior to middle of segment. On dorsal surface segment 1 has two setæ on posterior border; segment 2 has four setæ; segments 3 to 5 have six setæ. Some setæ in lateral angles and on ventral surface. Genitalia very distinctive. Basal plate consisting of two rods extending to the fifth abdominal segment. Parameres long, curved, and pointed; endomeres with peculiar sharp lateral projection and divided into a dorsal and a ventral projection at their anterior end. (Fig. 1).

DESCRIPTION OF FEMALE.—The same as the male except that it is somewhat broader and longer; the ninth abdominal segment is bilobed; and the eighth segment has a number of setæ on the lateral and posterior margins.

AVERAGE MEASUREMENTS IN MILLIMETERS.

	MALE		FEMALE	
	Length	Width	Length	Width
Head.....	0.404	0.253	0.423	0.267
Prothorax.....	.106	.188	.110	.195
Pterothorax.....	.174	.257	.195	.268
Abdomen.....	1.000	.363	1.146	.392
Total.....	1.684		1.874	

Type Host: Lesser yellowlegs, *Totanus flavipes* (Gmelin).

Type locality: Sandusky, Ohio.

Type (holotype and allotype): Cat. No. 43514 U. S. N. M.

The holotype male and allotype female were collected from the type host at the type locality on September 12, 1925, by myself. The paratypes are in the collection of the Bureau of Entomology and in my personal collection.

Described from seventy specimens all collected from lesser yellowlegs as follows: Two males and three females from Washington D. C., September 24, 1919, by E. A. Chapin

(in National Museum collection); four males and three females from Columbus, Ohio, May 6, 1925, by myself; four males and six females from North Eastham, Mass., September 10, 1925, by O. L. Austin, Jr.; eleven males and fifteen females from Sandusky, Ohio, September 12, 1925, by myself; one female from Sandusky, Ohio, October 14, 1925, by M. B. Trautman; one female from Columbus, Ohio, April 13, 1926, by R. W. Franks; one female from Columbus, Ohio, April 30,

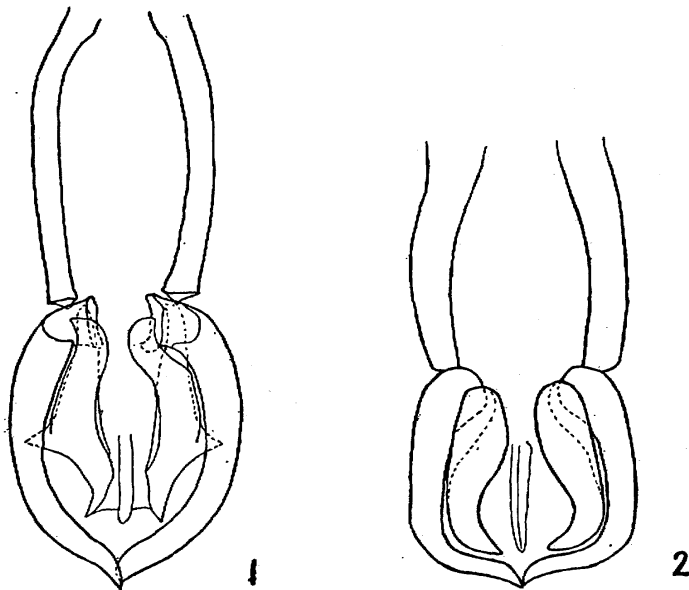


Fig. 1. *D. falcigera* n. sp., male genitalia, $\times 200$.

Fig. 2. *D. austini* n. sp., male genitalia, $\times 200$.

1926, by myself; one male and one female from Chincoteague, Virginia, March 26, 1927, by myself; one male and three females from Munuscong Bay, Michigan, August 19, 1927, by C. F. Walker; and eight males and five females from South Caicos Island, Bahama Islands, July 29, 1930, by myself (Bish. No. 15186). Dr. E. A. Chapin, of the National Museum, suggested the name *falcigera* for this species.

***Degeeriella austini*, new species.**

DESCRIPTION OF MALE.—Broader and longer than *D. falcigera*, with latero-posterior angles of pterothorax having two long and three shorter setæ, and three setæ nearer the middle along the posterior border; the pleurites more narrow. Genitalia distinctive. The two rods of the basal plate are shorter than those of *D. falcigera*, extending

into the sixth abdominal segment; the parameres and endomeres are sharply elbowed and pointed; the endomeres are folded at their anterior end. (Fig. 2).

DESCRIPTION OF FEMALE.—Almost identical with the female of *D. falcigera*, but somewhat broader and longer.

AVERAGE MEASUREMENTS IN MILLIMETERS.

	MALE		FEMALE	
	Length	Width	Length	Width
Head.....	0.493	0.316	0.501	0.321
Prothorax.....	.126	.240	.124	.240
Pterothorax.....	.210	.320	.217	.319
Abdomen.....	1.118	.468	1.250	.479
Total.....	1.947		2.092	

Type host: Greater yellowlegs, *Totanus melanoleucus* (Gmelin).

Type locality: Windy Tickle, Labrador.

Type (holotype and allotype): Cat. No. 43515 U. S. N. M.

The holotype male and allotype female were collected from the type host at the type locality on August 23, 1926, by O. L. Austin, Jr. The paratypes are in the collection of the Bureau of Entomology and in my personal collection.

Described from nine specimens, all collected from greater yellowlegs by O. L. Austin, Jr., as follows: Three females from North Eastham, Mass., September 14, 1925; and five males and one female from Windy Tickle, Labrador, August 23, 1926. Named in honor of Dr. O. L. Austin, Jr., who has sent the writer many interesting Mallophaga from birds he has collected.

D. falcigera and *D. austini* are not very close to any described species of Mallophaga. *D. boephila* (Kellogg), described from a killdeer, *Oxyechus vociferus* (Linn.), is somewhat similar but is much narrower and easily distinguished by the markings and genitalia.