

REPORT ON A COLLECTION OF MALLOPHAGA, LARGELY MEXICAN (PART I)

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This paper is the first of several dealing with a collection of Mallophaga in the Louisiana State University Museum of Zoology. These lice were taken mostly from birds collected in the state of San Luis Potosí, México, in 1946-1947, by various persons connected with that museum.

This report lists all species in the collection which can be identified and includes critical notes on the known forms and descriptions of those which appear to be new to science. The types of all new forms have been returned to the Louisiana State University Museum of Zoology, but paratypes, when available, have been retained in the author's collection, along with duplicates of other species when represented by sufficient series.

All measurements are in millimeters, and all drawings have been prepared by the author. The drawings have all been made as accurately as possible by the use of the eye-piece micrometer. Whenever there has been any doubt as to the accuracy of any detail, mention is made of this fact. Such doubts have sometimes arisen in the case of poorly prepared specimens or specimens with extraneous food matter within the body that obscures vision.

Superfamily AMBLYCERA

FAMILY MENOPONIDAE

GENUS *Actornithophilus* FERRIS

Actornithophilus hirsutus, n. sp.

(Figure 1)

Type female adult, from *Ereunetes pusillus* (Linn.), collected by D. S. Farner at Lawrence, Kansas, U. S. A., May 25, 1946.

DIAGNOSIS.—Does not resemble any of the known species of the genus thus far recorded from the sandpipers. The head is rather small, with narrow, rounded temples and with the manner of attachment of the head with the prothorax rather unusual and difficult to explain (see figure). The ocular blotches are small and rounded, with darker shading inward to the oval clear spot, in which is set a stout spine, and with shading also extending backward to the occiput. The gular plate is quadrangular, longer than wide, and does not fill the dorsal clear area above it; there are four setae

on each side of the gular plate, the two anterior ones short and the two posterior ones long.

The thoracic sternal plates are of the same general type as in the various species that I have seen from the Charadriiformes, but differ slightly in detail and chaetotaxy. The complete chaetotaxy of the metasternal plate is not visible. There is a clear line at the suture between the meso- and metathorax, with an unusual lateral constriction at this point, while the lateral dorsal band connecting the metathorax with the abdomen is strongly developed (see figure).

The pleurites are wider ventrally than dorsally and deeply colored but entirely devoid of darker markings. The tergites are rather deeply colored, entire across abdomen, but separated from the pleurites by a narrow clear space. The sternites are also rather heavily chitinized and are separated from the pleurites by a wide clear area on segments II to VIII. There is a small, oval, single sternite in the posterior portion of IX, with a single row of fine setae on posterior margin; the tip of segment IX is clear, with a dorsal fringe of fine setae. There is a line of strong hairs across posterior margin of tergites II to VII which reaches but little beyond the middle of the succeeding segment, and another line of 8 shorter, stout hairs across the middle of the same tergites. Segment VIII has but 8 marginal hairs and 6 in the middle. Sternites I to VIII have a scattering of very short, but coarse, setae set sparingly over their entire surface, with the usual patch of fine setae on III and a slight patch on IV. The species is represented only by the female holotype.

MEASUREMENTS OF THE TYPE:

	Length	Width
Body	2.02	—
Head .....	.37	.456
Prothorax .....	.174	.35
Mesothorax .....	.12	.39
Metathorax .....	.152	.49
Abdomen	1.30	.64

Actornithophilus albus Emerson, 1948

Ent. News, vol. 59, p. 178, figs. 1, 2. Host: *Crocethia alba* (Pallas). *Nom. nov.* for *Colpocephalum spinulosum minor* Kell. & Chap., 1899, preoccupied by *C. minus* Piaget, 1880.

One male and two females were taken on *Erolia fuscicollis* (Vieillot) at Lawrence, Kansas, by George H. Lowery, May 11, 1947. These specimens have been very carefully compared with Col. Emerson's redescription of the species and his figures, and with females from the type host in the author's collection; and they prove to be exactly the same. It is possible that there was some error in the labelling of the specimens from Kansas, or that they were stragglers from *Crocethia alba*, since I hardly think it probable that these two hosts would have the same species of *Actornithophilus* parasitic on them. Until additional authentic material from *Erolia fuscicollis* has verified this record, I prefer to leave the matter of the host as questionable.

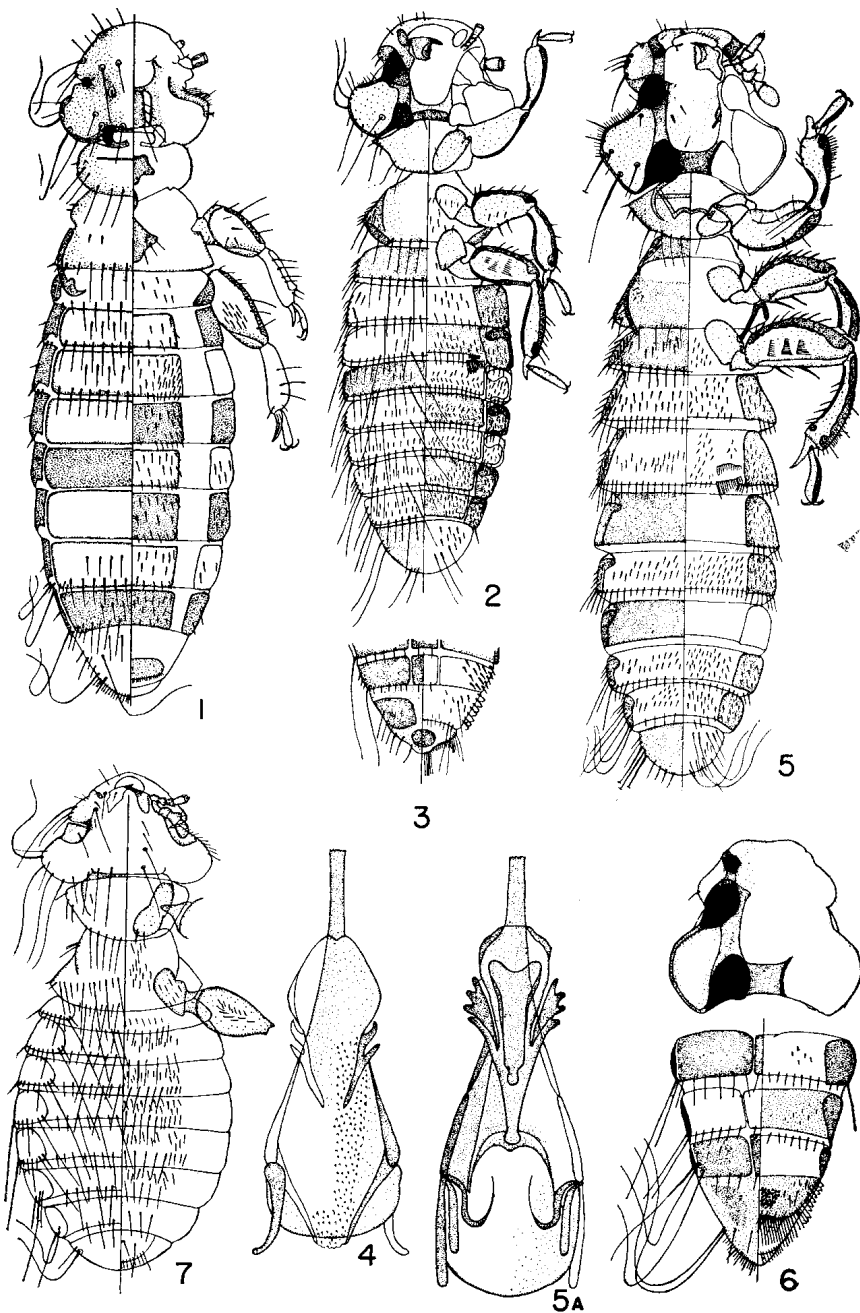


Fig. 1. *Actornithophilus hirsutus*, female
 Fig. 2. *Colpocephalum fusconigrum* Giebel, male
 Fig. 3. *C. fusconigrum*, female, tip of abdomen
 Fig. 4. *C. fusconigrum*, male, genitalia
 Fig. 5. *C. scalariforme* Rudow, male
 Fig. 5a. *C. scalariforme*, male, genitalia
 Fig. 6. *C. scalariforme*, female, head and tip of abdomen
 Fig. 7. *Plegadiphilus plegadis* (Dubinin), female

Actornithophilus mexicanus Emerson, 1953¹

Host: *Himantopus mexicanus* (P. L. S. Müller).

There are two females in the collection. They were taken on the type host collected by Robert J. Newman at Tamuín, San Luis Potosí, México, November 17, 1946. These have been compared with the paratype female sent to me by Col. Emerson and with specimens taken by myself in Mexico in 1930 and are identical with them.

Actornithophilus flavipes (Giebel), 1874

Colpocephalum flavipes Giebel, *Insecta Epizoa*, p. 276. Host: *Squatarola squatarola* (Linn.).

A single female of this species was taken from the type host collected by Charles Shaw at Ebano, San Luis Potosí, November 1, 1946. I have compared this female with material in my own collection from the type host and find it to be identical.

Ciconiphilus femoratus (Piaget), 1885

Colpocephalum femoratum Piaget, *Pediculines Suppl.*, p. 124, pl. 13, fig. 7. Host: *Mycteria americana* (Linn.).

There are two males from the type host, taken at Tamuín, San Luis Potosí, November 17, 1946, by Charles Shaw. Hopkins & Clay (*Checklist of Mallophaga*, 1952) doubt the correctness of the host for this species. I have compared this male with Piaget's description and figure, and they seem to agree very well, and I see no reason to doubt the validity of the host. There is another species of this genus, *C. maculipes* (Giebel), listed as from *Mycteria americana*, but all the knowledge we have concerning it is a brief description by Giebel (without figure) and a translation of the same by Piaget (*Pediculines*, p. 488). According to these descriptions the present specimen cannot possibly be *C. maculipes* (Giebel).

Colpocephalum fusconigrum Giebel, 1874

(Figures 2, 3 and 4)

Insecta Epizoa, p. 274. Host: *Guara alba* (Linn.), *nec* Piaget, *Pediculines*, 1880, p. 555, pl. XLVI, fig. 4.

Two males and two females were taken on the type host, collected at Tamuín, San Luis Potosí, September 16, 1946, by Charles Shaw. These specimens agree fairly well with Giebel's description of the species, but not at all with that given by Piaget and his figure. Piaget gives as hosts for the species both "*Ibis*" *alba* and *I. melanocephala*, but there is nothing to indicate from which host the species was figured. He further says that Giebel's description, taken from a single male in poor condition, is incorrect.

There is no question as to the correctness of the host for the Mexican specimens, and the only explanation I can offer for the difference between

¹ A description of this species has been published, and I have not as yet received a copy of it, but Col. Emerson sent me a female paratype.

them and Piaget's figure and description is that he described and figured a specimen from "*Ibis*" *melanocephala* instead of from "*Ibis*" *alba*, which was most likely a different species.

I can find no note in literature by either Clay, Hopkins or Thompson regarding Piaget's type of this species. I herewith present a figure of one of the males which I have examined. A comparison of this with Piaget's figure will clearly show that they represent different species. I also give a figure of the apical abdominal segments of the female, which, as may be seen, are quite different from that given by Piaget.

Of course it is possible that there may be two distinct species of *Colpocephalum* parasitic on *Guara alba*, but this is hardly likely. I think that the real explanation of the difference between the two is that Piaget described and figured a different species whose host is *Guara melanocephala*. If this conjecture should prove to be correct, then Piaget's species is without a name.

The parasite here figured is a distinctive one and can be readily separated from closely related forms. The shape of the head, with its extensive pitchy brown markings, the shape of the thorax, and the general chaetotaxy are distinctive characters, as are also the features of the male genitalia.

MEASUREMENTS:

	Male		Female	
	Length	Width	Length	Width
Body	1.69	—	1.90	—
Head {				
<i>frons</i>	—	.32	—	.347
temples .....	.36	.51	.38	.52
occiput .....	.31	—	.326	—
Prothorax .....	.16	.355	.185	.347
Pterothorax .....	.24	.40	.27	.48
Abdomen	1.01	.52	1.19	.60
Basal Plate .....	.58	.097		
Paramers .....	.066	.097		
Endomera .....	.12	.066		

Colpocephalum ajajae Ewing

Proc. Biol. Soc. Washington, vol. 43, p. 126. Host: *Ajaja ajaja* (Linn.)

There is a single female of this species taken on the type host collected by Charles Shaw at Pujal, San Luis Potosí, October 30, 1946.

Emerson has published a note on the identity of this species, giving good figures of it (Bull. Brooklyn Ent. Soc., October 1948, p. 130). In my own collection there are 3 males and 1 female, also from the type host, collected in Costa Rica. They agree perfectly with Col. Emerson's figures and with the single Mexican specimen here listed.

Colpocephalum scalariforme Rudow, 1866

(Figures 5, 5a and 6)

Zeit. ges. NatWiss., vol. 27, p. 471. Host: *Mycteria americana* Linn.

There are one adult and two juvenile females of this species that were taken from the type host collected by Charles Shaw at Tamuín, San Luis Potosí, October 17, 1946. The specimens were compared with a good series of the species in my own collection, taken on the type host in Colombia, and were found to be the same. The only published information extant concerning this species is the very brief, very bad description by Rudow and the pungent remarks by Piaget concerning the same. There is, however, no doubt but that these specimens and my own series represent the species described by Rudow from this host.

The species is a large, very strikingly colored one, a typical *Colpocephalum*, with very large pitch-black ocular and occipital blotches, the latter connected by a wide band of dark brown, and the two black blotches connected also by a paler, brown band (see figure). The sexes are rather strongly dimorphic in the shape of the head, the shape of apical abdominal segments, and in the chaetotaxy of the whole abdomen. The pleurites, tergites, and sternites of the male are thickly set with short, thick bristles (see figure), which are almost wanting in the female. The tergites are deeply colored and continuous across the abdomen in the male, but in the female they are broken medially in V to VIII.

The chaetotaxy on the apical abdominal segment of the female is characteristic of the genus (see figure). The male genitalia seem to be unique. The basal plate is very long and very narrow (as in *fuscigrum*), with the paramers *straight*, and the endomeral plate of a curious design, also somewhat similar to that of *fuscigrum*.

MEASUREMENTS:

	Male		Female	
	Length	Width	Length	Width
Body	2.28	—	2.62	—
Head { <i>frons</i>	—	.434	—	.423
temples .....	.50	.575	.53	.586
occiput .....	.44	—	.47	—
Prothorax .....	.21	.39	.22	.40
Pterothorax .....	.28	.48	.28	.52
Abdomen	1.35	.564	1.70	.716
Basal plate .....	.79	.102	(at base)	
Paramers .....	.08	.102		
Endomera .....	.153	.071		

Colpocephalum unciferum Kellogg, 1896

Proc. California Acad. Sci., (2), vol. 6, p. 140, pl. 12, figs. 1-3. Host: *Pelecanus occidentalis californicus* Ridgway and *P. erythrorhynchos* Gmelin.

Two males were taken on *Pelecanus erythrorhynchos*, collected by Charles Shaw at Ajinche, San Luis Potosí, November 10, 1946. I have not been able to compare these specimens with material from the type host but have done so with a series of both sexes from *P. o. occidentalis*, collected by me in Colombia, and they are the same thing. Since the same parasite has been recorded from both *P. o. californicus* and *P. erythrorhynchos*, there is little doubt but that my specimens from *P. o. occidentalis* are all *C. unciferum* Kellogg.

Dennyus dubius (Kellogg), 1896

Nitzschia dubius Kellogg, Proc. California Acad. Sci., vol. 6, p. 540, pl. 73, fig. 6. Host: *Chaetura pelagica* (Linn.).

Two males and a female of this species were taken from the type host, collected by Charles Shaw at Xilitla, San Luis Potosí, April 18, 1947. This species has been fully discussed, in connection with others of the genus, in a paper by the author now in press at the U. S. National Museum, so that no further remarks are necessary.

Piagetiella peralis (Leidy), 1878

Menopon peralis Leidy, Proc. Acad. Nat. Sci., Philadelphia, 1878, p. 100. Host: *Pelecanus erythrorhynchos* Gmelin.

A series of 18 males and females was taken from the type host collected by Charles Shaw at Ebano, San Luis Potosí, November 10, 1946. This is a large, strikingly marked species and one easily recognized and well known. They are found attached to the lining of the throat pouch and feed either on the mucous lining of the pouch or on blood secured by piercing the membrane with their slender, sharp-pointed mandibles. The genus is also found in the throat pouches of various species of cormorants, as well as pelicans.

Plegadiphilus plegadis (Dubinín), 1938

(Figure 7)

Menopon plegadis Dubinín, Trav. Réserve Etat Astrakhan, vol. 2, p. 178, fig. Host: *Plegadis (f.) falcinellus* (Linn.).

One adult female and one nymph were taken on *Plegadis (falcinellus?) chihi* (Vieillot) collected by Charles Shaw at Tamuín, San Luis Potosí, September 27, 1946. I have not had access to the original description and figure of this species, but I have compared the material with specimens of both *P. mammilatus* (Piaget) (from *Theristicus caudatus*) and with *P. threskiornis* Bedford (from *Threskiornis aethiopicus*), the only other known species of the genus.

Since the host on which these parasites were taken is now considered to be conspecific with *P. f. falcinellus* (Linn.), there is no reason to assume that the lice of *P. f. chihi* would be different from those on *falcinellus*. The present species is without doubt a *Plegadiphilus*, and although I have not been able to compare it with the description of *P. plegadis*, I assume from analogy that they are that species.

Since this is an interesting, little known form, the description of which is not easily available, I herewith present a figure of it, together with its measurements.

The single adult (?) female is not in the best of condition, being either recently moulted or cleared too much. The structure and chaetotaxy are clearly visible, but the markings, if any, are only faintly indicated. As may be seen from the figure, the pre-ocular slit is deep and well marked, while the dorsal integument of the head covers completely the antennary fossae. The pre-antennary portion of the head is wider than in the genotype, but the chaetotaxy of the head and body in general is very similiar. It is unfortunate that no male was taken, for the genitalia of this genus are unique.

MEASUREMENTS OF THE FEMALE:

	Length	Width
Body	1.52	—
Head { <i>frons</i>	—	.358
{ temples .....	.347	.52
{ occiput .....	.31	—
Prothorax .....	.206	.38
Pterothorax .....	.25	.467
Abdomen .....	.836	.66

Myrsidea interrupta (Osborn), 1896

Menopon interruptus Osborn, Bull. U. S. Bureau Ent. (n. s.), 5, p. 245, plate II, fig. h. Host: *Corvus corone brachyrhynchus* Brehm.

A male and two females of this species were taken on the type host collected by R. Baker at Altair, Texas, December 11, 1938. I have compared these specimens with material collected by myself on the type host in Nebraska and find them to be identical.

Amyrsidea spicula spicula Carriker, 1950

Rev. Acad. Colombia Sci., vol. 7, p. 506, figs. 54 and 55a. Host: *Ortalis v. vetula* (Wagler).

A single male of this species was taken on a specimen of *Ortalis vetula mcalli* (Baird), collected at Xilitla by Robert J. Newman on February 13, 1947.

A careful comparison of this male with the type of *spicula* shows no differences worthy of mention and hence may safely be regarded as that species.

(To be continued)