

Bird-infesting Mallophaga of Japan (III).*

(Genus *Lipeurus*)

By

Seinosuke Uchida, *Jūgakushi*.

With 3 figures in text.

Genus **Lipeurus** Nitzsch.

Nitzsch, Germ. Mag. f. Insekt., III, 1818, p. 292; Denny, Monogr. Anopl. Brit., 1842, p. 164; Giebel, Insekta Epizoa, 1874, p. 206; Piaget, Les Pediculines, 1880, p. 284; Taschenberg, Die Mallophagen, 1882, p. 102; Kellogg, Mallophaga, Genera Insectorum, 1908, Fasc. 66, p. 36; Mjöberg, Arkiv för Zoologi, 1910, Bd. 6, p. 83 (Part.).

1. *Lipeurus densus* Kellogg.

Kellogg, New Mallophaga, I, 1896, p. 114, pl. VII, figs. 1 & 2, (female juv.); Kellogg, New Mallophaga III, 1899, p. 28, pl. III, fig. 2, (male).

One male, three females and eight young of the species were collected from two skins of Audubon's albatross, *Diomedea nigripes*, collected in the Bonin Is., 1892, and in Prov. Sagami, March 27, 1884. Further, a young specimen was obtained from a skin of Steller's albatross, *Diomedea albatrus*, taken in Prov. Awa, Feb. 19, 1888.

The females on hand do not quite agree with Kellogg's description and figure, probably owing to the fact that the specimen described by him was in the immature state.

Adult female.—Very similar to the male except in having much more slender but shorter antennæ which are gradually tapering distally; the first segment rather short and about equal to the third, the second longest and

* The two previous papers, treating of the genera *Physostomum*, *Goniodes* and *Goniocotes*, appeared in this volume of the "Annotations", pp. 67-72, 81-88.

as long as the last three segments taken together, the fifth shortest and equal to two-thirds the fourth in length. Hairs in the uncoloured elliptical space near the posterior angles of metathorax number five, as in the male.

Young individuals 4-4.5 mm. long and of the same stage of development as the female described by Kellogg, show three hairs at each of the posterior angles of metathorax, while still younger individuals of 2-2.7 mm. length have only a single hair at each of the same positions. In a specimen which was collected in the moulting condition, there are to be seen at that position three hairs in the exuvia, but five hairs in the emerging insect. Probably the number of the hairs increase at each moulting, there appearing five of them at the last ecdysis.

Measurements of adult females as follows :

Length of body... ..	mm. 5.78	mm. 6.17
Width of body	1.32	1.50
Length of head	1.25	1.28
Width of head	1.12	1.24
Length of thorax	1.58	1.60
Width of thorax	1.25	1.29
Antenna	0.68	0.70

2. *Lipeurus confidens* Kellogg.

Kellogg, New Mallophaga, III, 1899, p. 26, pl. III, fig. 1 (female only).

Four males and ten females of this species were taken from three skins of the Audubon's albatross, *Diomedea nigripes*, from the Sagami Bay (March 27, 1884), Bonin Is (1892) and Tiausu Id., Loo-choo (May, 1900). Further, one male, three females and two young specimens were obtained from a skin of the Steller's albatross, *Diomedea albatrus* from Prov. Awa (Feb. 19, 1888.)

Description of the male:—Smaller than female; body 3.3 mm. long, 0.78 mm. wide. Head somewhat slender, 0.77 mm. long, 0.61 mm. wide; temporal margins just behind eyes more rounded than in female, trabeculae wanting; first segment of antennæ very large, without appendage, but with



Fig. 1.
Lipeurus confians Kellogg, male. $\times 30$

a very slight elevation nearer to base than to distal end of the segment; second segment small, about one-third as long as the first; third segment smaller than the second, with a claw-like extremity; fourth and fifth segments cylindrical, the fifth longer than the fourth; tip of third segment light brown, rest of antennæ colourless.

Prothorax with sides more expanded than in the female. Abdomen relatively small, 1.65 mm. long (in the female 2.35 mm.); postero-lateral angles of each segment much protruded; genitalia indistinct, long and slender, reaching from fifth segment to the middle of eighth segment; markings of abdomen very different from those of female; ground colour whitish, with very narrow and clear lateral bands which send out expanding process inwards at the posterior end; lateral blackish blotches round in segment I, elongate in segments II-VI, again round but smaller in segments VII and VIII; the last segment conical, almost colourless, asymmetrical, the summit slightly turned to the right side and with three prickles on both sides.

3. *Lipeurus macilhennyi* Kellogg and Kuwana.

Kellogg and Kuwana, Proc. Acad. Nat. Sci., 1900, p. 155, pl. VII, fig. 3.

Five females and a young were collected from specimens of Audubon's albatross, *Diomedea nigripes* (Tiausu Id., Loo-choo, May 1900; Bonin Is., 1892; Prov. Awa, March 19, 1894.). One more female from a specimen of Steller's albatross, *Diomedea albatrus* (Prov. Awa, March 19, 1884).

4. *Lipeurus concinnus* Kellogg and Chapman.

Kellogg and Chapman, New Mallophaga, III, 1899, p. 97, pl. VII, fig. 2.

Two males and two females collected from *Diomedea albatrus* taken in Formosa, March, 1897; and a male and a female from *Diomedea nigripes* obtained in Tiausu Id., Loo-choo, May, 1900.

5. *Lipeurus ferox* Giebel.

Giebel, Insecta Epizoa, 1874, p. 235; Piaget Les Pediculines, 1880, p. 333; Kellogg, New Mallophaga, I, 1896, p. 127, pl. IX, figs. 1 & 2. *Lipeurus diomedæ*, Dufour, Ann. Soc. Ent. France, 1834, IV, p. 669, figs. 1 & 2; Giglioli, Quart. Journ. Micr. Sci., 1864, IV, n.s., p. 19, pl. I, figs. 1 & 2.

Two males and three females of this species were obtained from the skins of *Diomedea nigripes* (Bonin Is., 1892; Formosa, Feb. 1897; and Tiausu Id., Loo-choo, May 1900).

6. *Lipeurus annuliventris* sp. nov.

This new species is founded on a single male specimen which was obtained from a skin of the grey fork-tailed petrel, *Oceanodroma furcata* (Misaki, Prov. Sagami, March 1907).

It is allied to **Lipeurus clypeatus* Giebel from *Pachyptila co. rufa*, but is distinguished from it by the smaller size, narrower head, being especially narrow at the temples, by the shape and chaetotaxy of the thorax and by the shape of the last abdominal segment.

Description of the male:—Body 2.17 mm. long, 0.36 mm. wide; ground colour of head and thorax clear brownish, with reddish brown markings; abdomen brownish with lateral dark brown bands.

Head 0.55 mm. long, 0.30 mm. wide; elongate conical; front narrowly parabolic, with three marginal hairs near suture and three prickles behind it; clypeal region colourless, expanded in front of the suture, trabeculae

* Giebel, Insecta Epizoa, 1874, p. 236; Taschenberg, Die Mallophagen, 1882, p. 154, Taf. V, Fig. 2, 2a, 2b.

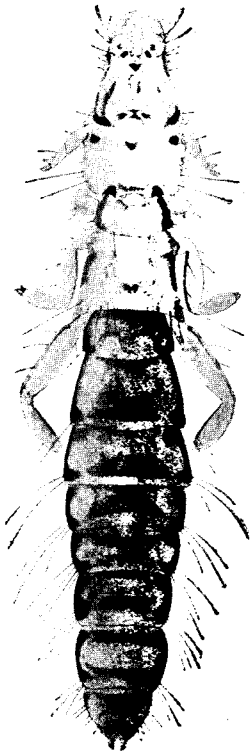


Fig. 2.
Lippeurus annulicentris
n. sp., male. $\times 45$.

very small, a short hair in front of each; antennæ with the first segment longest, the second about three-fourths as long; the third short, with a dorsal angular projection at distal end, the fourth shortest; and the fifth slightly longer than the fourth. Eyes clear, with a short prickle at the posterior margin of each; temporal margin rounded, with two long hairs and two prickles; occipital margin sinuous. Signature shield-shaped, anteriorly pale-coloured, posteriorly sharp-angled, with a median clear suture and one dark-coloured blotch at posterior margin on each side. Antennal bands reddish brown, bending inwards in front of the base of antennæ; round ocular blotches reddish brown; occipital blotches blackish brown.

Prothorax 0.13 mm. long, 0.24 mm. wide, hexagonal; anterior lateral angles obtuse; each posterior lateral angle with a protuberance and a hair; posterior angles each with a stout hair; posterior margin truncate in the middle part. Colour clear brownish, with reddish brown lateral borders which posteriorly extend on each side along the postero-lateral angles and a short way inwards and in the anterior third of their length send out a branch.

Metathorax 0.23 mm. long, 0.31 mm. wide, quadrilateral; sides nearly straight, diverging posteriorly, each with a long stout hair near the posterior angle; anterior lateral angles slightly extended, each forming a pointed protuberance; posterior lateral angles posteriorly prolonged, rather acute at end; posterior margin nearly straight with five hairs along each lateral third of its length, middle parts of lateral margin edged with reddish brown. Legs paler than body, dorsally dark edged.

Abdomen slender, elongate; the first segment much narrower than

thorax at the articulation ; I-III segments widening posteriorly, the remaining segments gradually growing narrower to the last segment; lateral margins nearly straight in segments I-III, convex in segments IV-VIII ; segments IV-V shorter than any other ; posterior angle of segments I-VII with one to four hairs ; segment VIII with several short hairs on lateral margin and four short hairs on posterior margin ; segment IX small, conical and deeply emarginate behind.

Ground colour of abdomen darker than either head or thorax ; lateral band of segments dark brown, with rounded posterior end ; transverse bands complete, smoky brown, narrower on segments IV-VI ; stigmatal spots paler than the band.

7. *Lipeurus exiguus* Kellogg and Kuwana.

Kellogg and Kuwana, Proc. Wash. Acad. Sci., IV, 1902, p. 479, pl. XXX, fig. 2, (female).

Six males, three females and several young were taken from the skins of Siebold's shearwater, *Puffinus leucomelas* (Tiausu Id., Loo-choo, May 9, 1900 ; River Sai, Prov. Shinano, Nov. 13, 1915); and further two males from a skin of the Japanese petrel, *Oestrelata longirostris* (from Prov. Mutsu). The male of this species was hitherto unknown.

Measurements :

	♂	♂	♂	♂	♂	♂	♂	♀	♀	♀
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Length of body ...	2.48	2.54	2.54	2.54	2.45	2.45	2.65	2.75	2.79	2.70
Width of body ...	.31	.32	.32	.32	.31	.29	.32	.33	.35	.34
Length of head ...	.56	.59	.59	.59	.57	.57	.59	.63	.64	.61
Width of head ...	.29	.31	.32	.32	.31	.31	.31	.33	.34	.33
Length of thorax ...	.47	.48	.47	.47	.45	.44	.49	.50	.50	.49
Width of thorax ...	.26	.28	.29	.30	.29	.28	.30	.31	.32	.31

Description of the male.—Very similar to female, differing only in the smaller but slightly thicker antennæ which have the I segment longest, the

II-IV segments successively shorter than the one preceding, the V segment longer than the IV and about equal to the III. (In the female, the antennæ have the II segment longest, the I nearly but not quite as long as the II, the III and the IV subequal and shortest of all, and the V slightly longer than the IV).

8. *Lipeurus longicornis* Piaget.

Piaget, Les Pediculines, 1880, p. 334, pl. XXVII, fig. 3.

Eight males, nine females and three young were collected from the Temminck's cormorant, *Phalacrocorax capillatus*, shot in Prov. Shinano.

9. *Lipeurus hebraeus* Nitzsch.

Giebel, Insecta Epizoa, 1874, p. 226, Taf. XVI, figs. 5, 6; Piaget Les Pediculines, 1880, p. 326, pl. XXVII, fig. 2; Taschenberg, Die Mallophagen, 1882, p. 130, Taf. IV, Fig. 4, 4a.

This species has previously been known only from several species of cranes (*Grus*). It is a remarkable fact that I obtained a female specimen from the mallard, *Anas boschas*, captured in Prov. Shinano. The measurements of my specimen agree well with those given by Taschenberg, but are considerably larger than those given by Piaget. It may be that the latter author had before him an immature specimen.

Measurements :

	Piaget	Taschenberg	Uchida
	♀, mm.	♀, mm.	♀, mm.
Length of body	3.50	5.24	5.25
Width of body... ..	0.90	1.37	1.46
Length of head	0.84	1.08	1.08
Width of head	0.70	1.04	0.97
Length of thorax	0.70	1.06	0.94
Width of thorax	0.65	1.08	1.10
Antenna	0.35	—	0.48

10. *Lipeurus squalidus* Nitzsch.

Denny, Monogr. Anopl. Brit., 1842, p. 176, pl. XIV, fig. 5 ; Giebel, Insecta Epizoa, 1874, p. 241, Taf. XVI, fig. 1 ; Piaget, Les Pediculines, 1880, p. 344, pl. XXX, fig. 5 ; Kellogg, New Mallophaga, I, 1896, p. 132, pl. X, figs. 6, 7 ; Kellogg, New Mallophaga, III, 1899, p. 102.

Three male and two female specimens of this species were collected by Mr. N. Kuroda from a widgeon (*Maleca penelope*), from a falcated teal (*Eunetta falcata*) and from a Mallard (*Anas boschas*), all which birds were captured at Haneda in the suburb of Tokyo. Further were obtained a young male from a skin of Hooper swan (*Cygnus musicus*, collected in Seoul, Korea, March 1895) and a single female from a Japanese green pheasant (*Phasianus versicolor*, from Prov. Iwashiro). Probably the latter case was one of a straggler, transmitted from the game-bag in which the host bird was carried.

This common and very widely distributed species is exceedingly variable. With regard to the dimensions of body and the number of long hairs in the posterior angles of metathorax, the specimens before me closely resemble the form which was obtained by Professor Kellogg from *Charitonetta albeola*, *Anas boschas*, and *Erismatura rubida*. Their measurements are as follows :—

	♀	♂	♂
	mm.	mm.	mm.
Length of body	3.48	3.43	2.86
Width of body	0.66	0.66	0.48
Length of head	0.65	0.65	0.65
Width of head	0.45	0.44	0.43

11. *Lipeurus temporalis* Nitzsch.

Nitzsch, Germar's Mag. Ent., III, 1818, p. 292 ; Denny, Monogr. Anopl. Brit., 1842, p. 175, pl. xiv, fig. 7 ; Giebel, Insecta Epizoa, 1874, p. 239 ;

Piaget, Les Pediculines, 1880, p. 350, pl. XXXI, fig. 1, Kellogg, New Mallophaga, I, 1896, p. 130, pl. X, fig. 1.

Ten specimens, all female, were collected by Mr. N. Kuroda from a red breasted merganser, *Mergus serrator*, taken at Haneda near Tokyo, 1915.

This species differs from the preceding only in being smaller and in having the ground colour of body deeper brown with somewhat indistinct blackish markings. As has been pointed out by Professor Kellogg,* the two forms from *Anas* and *Merganser* may be regarded to be the same specifically, but it seems they should be distinguished, on account of the above differences, as varieties or subspecies.

Measurements of the specimens on hand are as follows:—

	♀	♀	♀	♀	♀	♀	♀	♀	♀	♀
Length of body ...	mm. 3.06	mm. 3.27	mm. 3.27	mm. 3.27	mm. 3.27	mm. 3.38	mm. 3.27	mm. 3.27	mm. 3.27	mm. 3.06
Width of body ...	.55	.58	.60	.62	.55	.52	.60	.62	.62	.55
Length of head ...	.58	.60	.61	.61	.61	.61	.61	.61	.61	.58
Width of head ...	.42	.46	.46	.46	.45	.45	.45	.45	.46	.44

12. *Lipeurus intermedius* Piaget.

Piaget, Les Pediculines, 1880, p. 368, pl. XXIX, fig. 7.

One male, five females and two young were collected from a *Phasianus versicolor*, shot in Prov. Iwashiro, Feb. 18, 1916. Six males and five females were taken from skins of *Phasianus scintillans* collected in Prov. Shinano and in Prov. Musashi, Jan. 10, 1903; and one male, two females and four young from a skin of *Gennaesus swinhoii* from Formosa.

* Kellogg, New Mallophaga III, p. 102.

Measurements.

	♀	♀	♀	♀	♀	♀	♀	♀	♀	♂	♂	♂	♂	♂	♂
	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.
Length of body ...	2.86	3.00	2.91	2.72	2.91	2.72	2.93	2.64	2.68	2.47	2.40	2.47	2.44	2.48	2.28
Width of body ...	.65	.75	.67	.66	.62	.62	.63	.53	.53	.50	.51	.53	.51	.58	.53
Length of head ...	.58	.67	.61	.63	.62	.62	.63	.53	.53	.55	.53	.55	.54	.58	.53
Width of head ...	.40	.45	.44	.43	.46	.43	.47	.33	.31	.34	.33	.35	.34	.39	.31
Length of thorax...	.51	.53	.53	.47	.53	.47	.54	.46	.45	.48	.45	.49	.47	.53	.45
Width of thorax ...	.42	.51	.45	.46	.50	.44	.50	.37	.35	.39	.39	.41	.39	.45	.35
Antenna... ..	.31	.32	.33	.31	.31	.31	.33	.28	—	.41	.39	.43	.41	.41	—

The specimens differ from typical *L. intermedius* from *Euplocamus ignitus* in having larger head and wider body, and in the male being larger. For the sake of comparison I append below Piaget's measurements of the typical specimens :

	♀	♂
	mm.	mm.
Length of body	2.95	2.20
Width of body	0.56	0.40
Length of head	0.55	0.50
Width of head	0.35	0.29

13. *Lipeurus heterographus* Nitzsch.

Giebel, Insecta Epizoa, 1874, p. 218; Piaget, Les Pediculines, 1880, p. 360, pl. XXIX, fig. 2; Taschenberg, Die Mallophagen, 1882, p. 169; Osborn, Bull. 5 (n. s.), Div. Ent. U. S. Dep. Agr. Wash., 1896, p. 197.

Eight females and ten males from a domestic fowl at Komaba near Tokyo; and five females from *Phasianus versicolor*, killed in Prov. Iwashiro, Feb. 8, 1916.

14. *Lipeurus variabilis* Nitzsch.

Denny, Monogr. Anopl. Brit., 1842, p. 164, pl. XV, fig. 6; Giebel,

Insecta Epizoa, 1874, p. 219, Taf. XVI, fig. 3; Piaget, Les Pediculines, 1880, p. 364, pl. XXIX, fig. 4.

A male and a female from a *Phasianus versicolor*, killed in Prov. Iwashiro, April 1914; one female from a domestic fowl in Tokyo; and two females from a specimen of *Gennaeus swinhoii* obtained in Formosa.

The specimens possess at each of the posterior angles of metathorax a long hair, and adjoining this, a white space with four long hairs; on the abdomen they show two longitudinal submedian rows of weak hairs. In these points, the specimens seem to approach Kellogg's *Lipeurus introductus**; but in all other respects they agree quite closely with Piaget's description of *Lipeurus variabilis*.

15. *Lipeurus formosanus* Uchida.

Uchida, Journ. Coll. Agr., Tokyo Imp. Univ., Vol. III, No. 4, 1917, p. 179, fig. I.

Three female and four young individuals were taken from the skins of the following birds, all collected in Formosa: *Arboricola crudigularis*, *Bambusicola sonorivox* and *Gennaeus swinhoii*.

Measurements :

	♂	♀	♀
	mm.	mm.	mm.
Length of body	2.02	2.00	2.00
Width of body	0.42	0.42	0.40
Length of head	0.52	0.52	0.52
Width of head... ..	0.40	0.39	0.40
Length of thorax	0.37	0.37	0.37
Width of thorax	0.31	0.31	0.31
Antenna	0.26	0.26	0.26

* Kellogg, New Mallophaga II, p. 501, pl. LXVIII, figs. 1 & 5.

16. *Lipeurus cinereus* Nitzsch.

Giebel, Insecta Epizoa, 1874, p. 221; Piaget, Les Pediculines, 1880, p. 353, pl. XXVIII, fig. 5.

A male, three females and four young of this species were collected by Mr. N. Kuroda from a specimen of *Coturnix japonica*, shot at Numazu, Prov. Suruga, Feb. 26, 1916. Three more females were taken from a skin of the same bird killed in Prov. Shinano, Jan. 25, 1915.

All the specimens agree well with the descriptions given by Giebel and Piaget, except in the fact that they are somewhat larger. Measurements of the specimens (those in parenthesis are Piaget's):

	♂	♀
	mm.	mm.
Length of body	2.13 (1.8)	1.85 (1.5)
Width of body	0.61 (0.52)	0.40 (0.31)
Length of head	0.56 (0.44)	0.51 (0.42)
Width of head	0.42 (0.32)	0.34 (0.25)
Length of thorax	0.28 (0.33)	0.28 (0.28)
Width of thorax... ..	0.36 (0.31)	0.33 (0.25)
Antenna	0.18 (0.14)	0.25 (0.21)

According to Piaget, the species is very variable in size; a female measured by him reached 2.2 mm. in length.

17. *Lipeurus comstocki* Kellogg and Chapman.

Kellogg and Chapman, Journ. New York Ent. Soc. Vol. X, 1902, p. 23, pl. III, fig. 2.

A female specimen of the species was found on a Siberian ruddy crane (*Porzana fusca*) from Tokyo, and a female on eastern water rail (*Rallus aquaticus indicus*) killed in Prov. Tosa.

18. *Lipeurus turturis* sp. nov.

A single female specimen was taken from an eastern turtle-dove

Turtur orientalis), shot at Morioka, Prov. Rikuchû, July 15, 1916. This new species belongs to the group *clypeati sutura indistincta*, and resembles Paine's *L. baculoides** from the mourning dove, *Zenaidura macroura*, but differs from it in size, chaetotaxy, shape of temples, etc.

Description of the female:—Body 1.63 mm. long, 0.39 mm. wide; ground colour of body pale brownish, with brownish markings on head and thorax; lateral bands of abdomen reddish brown.

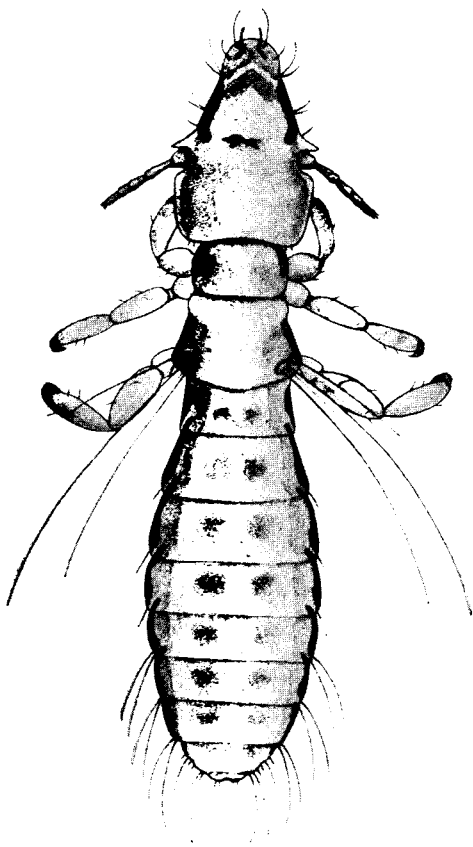


Fig. 3.

Lifeurus turturis n. sp. Female. $\times 60$.

Head 0.43 mm. long; 0.27 mm. wide; widest through eyes; head in front of antennæ triangular, longer than the parts behind antennæ, which parts are of a quadrangular shape; clypeus rounded, expanded, with a pair of long and another pair of short clavate appendages on the frontal part; marginal hairs five on each side, two of them standing at the clypeal suture and the rest in front of trabeculæ; four dorsal hairs on clypeus; trabeculæ large, conical; antennæ long, the first segment thick and as long as the third segment, the second longest, the last coming next in length, and the fourth shortest; eye angular with a very fine hair; temporal margin straight, somewhat converging posteriorly; two very small prickles on each temporal angle; occipital margin slightly concave.

* Paine, Report Laguna Mar. Lab. I, 1912, p. 174, Fig. 95.

Ground colour of head pale brownish ; antennal bands broad, conspicuous, dark brown, interrupted by a colourless, distinct and Λ -shaped broad suture ; posterior ends of the bands somewhat bent inwards in front of each antenna ; ocular blotch small, rounded, dark brown ; temporal band narrow, pale brownish, broadened just below eye, gradually narrowing towards the angle.

Prothorax 0.1 mm. long, 0.19 mm. wide ; short, quadrangular : lateral margins nearly straight and very slightly diverging posteriorly ; posterior margin somewhat convex ; posterior angles rounded, each bearing a short spine ; lateral bands brown. Metathorax 0.2 mm. long, 0.27 mm. wide ; quadrilateral, widest at the posterior angles ; sides nearly straight, diverging posteriorly ; anterior lateral angles slightly extended ; posterior lateral angles rounded, each with a short spine ; a long pustulated hair, two very long hairs and a weak hair on a pustule near each lateral angle ; posterior margin convex ; marginal bands narrow, brown. Legs paler than thorax, with pale indistinct marginal markings.

Abdomen 0.9 mm. long, 0.39 mm. wide ; elongate oval ; segments widening to the fourth and then gradually narrowing to the ninth ; segments II and III longer than any other ; posterior angles a little extended, each bearing one short hair on segments II-IV ; two long hairs on segments V-VII ; segment VIII with a slight emargination on each side, bearing three long and a few short hairs ; the last segment small, rounded, slightly emarginated at tip, bearing four very short hairs. Ground colour of abdomen whitish ; segments I-VII with reddish brown lateral bands which extend anteriorly into preceding segment, each side of segments I-VII brown ; all segments with a pair of pale yellowish brown blotches forming two submedian rows.

19. *Lipeurus baculus* Nitzsch.

Denny, Monogr. Anopl. Brit., 1842, p. 172, pl. XIV, fig. 3 ; Giebel, Insecta Epizoa, 1874, p. 216 ; Piaget, Les Pediculines, 1880, p. 303, pl. XXV, fig. 2 ; Taschenberg, Die Mallophagen, 1882, p. 123 ; Osborn, Bul.

No. 5 (n. series), Div. Ent. U. S. Dept. Agr., 1896, p. 199, fig. 121; Kellogg, *New Mallophaga*, II, p. 506, pl. LXVIII, figs. 4 & 6; Mjöberg, *Arkiv för Zoologi*, Bd. VI, 1910, p. 85. *Pediculus columbæ* Linné, *Systema Naturæ*, 36, 1767, p. 2920; Fabricius, *Systema Entmologiae*, 1775, p. 809; *Lipeurus bacillus*, Giebel, *Insecta Epizoa*, p. 215.

Two males and five females were collected from a domestic pigeon in Prov. Shinano, April 14, 1915; and three more specimens, all male, were taken from the Chinese turtle dove (*Turtur chinensis*) and the Formosan green pigeon (*Sphenocercus formosæ*), both from Formosa.

Tokyo, Oct. 30, 1916.

Kelly

With the compliments of
SEINOSUKE UCHIDA.

Bird-infesting Mallophaga of Japan (III).

(Genus *Lipeurus*)

By

Seinosuke Uchida, *Jūgakushi*.

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