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to Dr. Clay  
with best regards

Tandan

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Copenhagen. Vol. 2, p. 151-154. Issued 15. December 1958.26. MALLOPHAGA (INSECTA). PART II  
A NEW SPECIES OF *IBIDOECUS* CUMMINGS, 1916

BY

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*Ibidoecus diana*e sp. n.

(Text-figs. 1-6)

Type host: *Threskiornis molucca pygmaeus* Mayr

A critical examination of the characters shows that this species is intermediate between *I. clausus* (Giebel) from *Threskiornis melanocephala* (Latham) and a new species from *Pseudibis papillosa* (Temminck). This latter species, the description of which is now in the press, is referred to throughout this paper as *Ibidoecus* new species.

The characters to be taken into consideration in comparing males of related species are the genitalia and the sternal thickening on segment VII. In the former character *diana*e shows a greater degree of resemblance to *clausus* than to either *threskiornis* or the new species, in the nature of the sternal thickening on segment VII it resembles both *clausus* and *threskiornis*. This thickening in the species examined from ibises belonging to the genus *Threskiornis* is in the form of a median plate whereas in the new species from *Pseudibis papillosa* (Temminck) it is in the form of lateral plates. The three mesosomal sclerites are basically identical in shape in *clausus* and *diana*e, differing only in their size and proportions; the parameres and the median sclerite (fig. 2, m) also exhibit similar differences. In the mesosome, the ventral-most sclerite in *threskiornis* and the penis in *Ibidoecus* new species are markedly different and these characters, along with differences in the abdominal chaetotaxy, the size of the parameres and the size and shape of the median sclerite, readily separate these forms from the two former species. From *clausus* it can be distinguished by the dorsal abdominal chaetotaxy and the genitalia, especially by the shape and proportions of the mesosomal sclerites.

The female, on the contrary, unequivocally resembles *Ibidoecus* new species in possessing a median, butterfly-shaped, post-vulval sclerite with oblique thickening and another adjacent sclerite each side, and in the position and length of the tergo-central setae on the terminal abdominal segments (IX-XI); these setae are not placed on the tergal plates and normally extend beyond the posterior margin of the abdomen. In *threskiornis* and *clausus* the post-vulval sclerites are of altogether different shapes; the tergo-central setae in *threskiornis* are not only placed on the tergites but fall considerably short of their posterior margin, while in *clausus* these setae are

located off the tergites and are relatively longer but never extend beyond the posterior margin of the abdomen. *I. diana*e can, however, be distinguished from *Ibidoecus* new species by (i) the dorsal abdominal chaetotaxy, as there are fewer setae on each segment than in the latter species; the terminal abdominal segments in the latter normally have 4 tergo-central setae, while *diana*e has only 2; (ii) the number of setae on edge of the vulva: in *Ibidoecus* new species there are 15-21 as against 24-30 setae in *diana*e. Other, but less striking, differences are the shape of the head and gular plate, the shape of sternites on segment VII and of the genital plate, as well as the lateral sclerites in the genital region.

*Male* (text-figs. 1-3): General characters of head, thorax and abdomen as shown in fig. 1. Pterothorax with 16-21 setae each side on the dorsal, posterior margin; mesosternum with 2 short and metasternum normally with 2, rarely 3, long setae. Tergal thickening on segment XI in the form of triangular plates; sternal thickening on segment VII in the form of a median plate, prominent in its middle due to heavier pigmentation (fig. 3). Chaetotaxy with variation shown in Table I; lateral edge of sternum IX with 1-2 short setae each side. Genitalia as shown in fig. 2. The parameres extend beyond the penis, even when the latter is fully extruded; the mesosome consists of three sclerites, which show interspecific differences.

*Female* (text-figs. 4-6): Head and thorax similar to that of male. Pterothorax with 17-21 setae each side on the dorsal, posterior margin; mesosternum with 2 short and metasternum with 2 long setae. Abdomen with segments IX-XI fused, without any indication of a suture between segments IX-X and XI; tergal plates on segments IX-XI interrupted posteriorly along the medial line (fig. 4). Abdominal chaetotaxy with variation shown in Table I. Terminal segments with only 2 tergo-central setae, not placed on the tergites, which extend beyond the posterior margin of the abdomen, and 3 setae each side on the dorso-lateral margin (fig. 4); lateral edge of sternum IX with 2 long, inwardly directed setae each side. Genital region as shown in fig. 5. Margin of vulva set with 24-30 setae and with small setae present on its ventral surface. Post-vulval sclerites as shown in fig. 6.

Body measurements of types shown in Table II, as well as breadth of head at temples and the cephalic index of the specimens examined.

*Holotype* male and *allotype* female; slide no. 618 in the British Museum (Natural History) from *Threskiornis molucca pygmaeus* Mayr from Rennell Island, collected by Mrs. DIANA BRADLEY on 23. x. 1953, during the British Museum (Natural History) Rennell Island Expedition, 1953. *Paratypes*: 11 males and 10 females from the same specimen of *Threskiornis* as above; 2 females (and many nymphs) from the same host and the same locality collected on 2. xi. 1951 by the Danish Rennell Expedition.

The species is named in honour of Mrs. DIANA BRADLEY, who collected the form.

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#### EXPLANATION OF TEXT FIGURES ON P. 153

*Ibidoecus diana*e sp. n. 1. Male. 2. Male genitalia. 3. Sternal thickening of segment VII of male abdomen. 4-6. Female. 4. Terminal segments of abdomen, dorsal. 5. Terminal segments of abdomen, ventral. 6. Post-vulval sclerites.

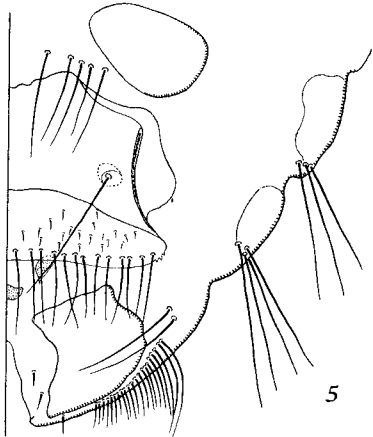
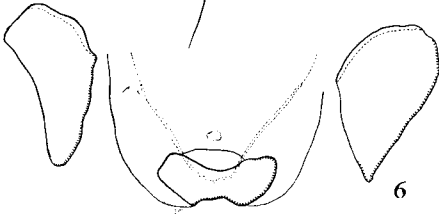
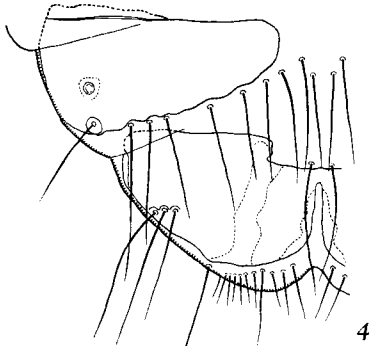
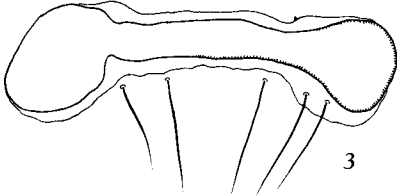
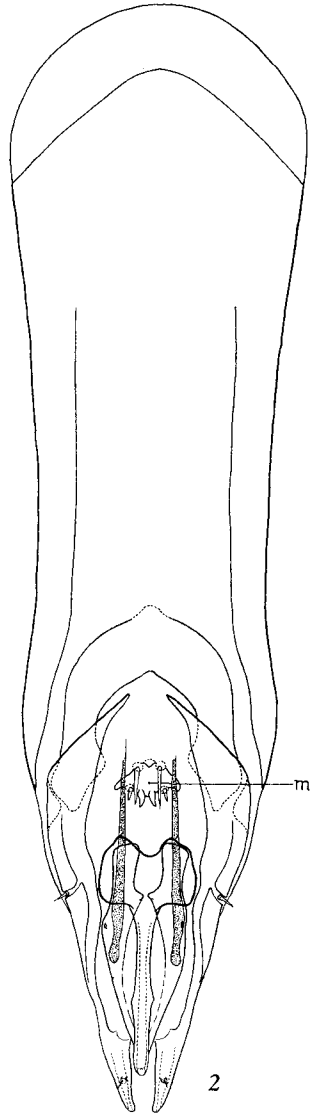
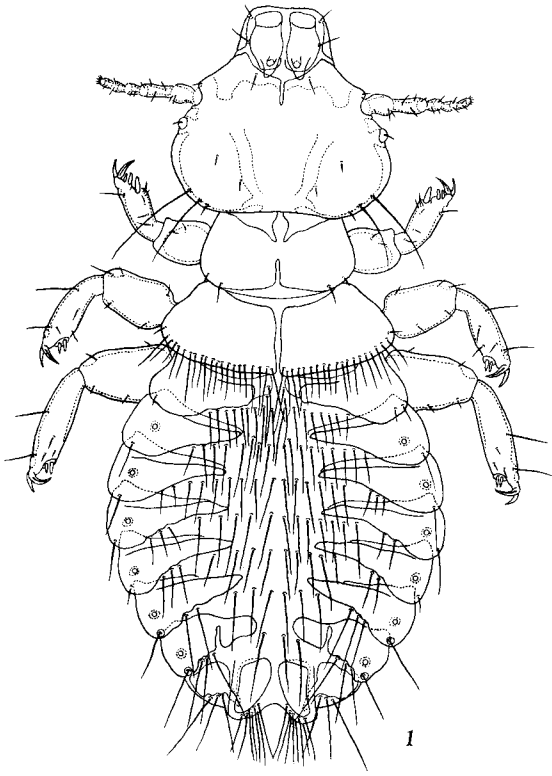


Table I. Abdominal chaetotaxy.

	Male (3)			Female (5)		
	pleural each side	tergal total	sternal total	pleural each side	tergal total	sternal total
II	2-3	16-21	2 <sup>3</sup>	3-4	22-24	2
III	3-4	17-19	11	2-4	24-33	8-11
IV	3	18-21	11-12	3-4	31-36	10-13
V	3	16-19	11-13	3-5	32-36	10-12
VI	3-4	11-15	9-10	2-4	30-36	9-11
VII	2-3	1 <sup>1</sup> ,9-12,1 <sup>1</sup>	4-6	2-3	1 <sup>1</sup> ,26-30,1 <sup>1</sup>	9-14
VIII	4	1 <sup>1</sup> ,7-10,1 <sup>1</sup>	2	4	1 <sup>1</sup> ,15-20,1 <sup>1</sup>	1-2
IX		3 <sup>2</sup> , 3 <sup>2</sup>				
IX-XI					3 <sup>4</sup> ,2 <sup>5</sup> -3 <sup>5</sup> ,3 <sup>4</sup>	

1. represents the seta in the pocket of the integument (CLAY, 1955), each side.
2. each side.
3. minute setae.
4. setae on dorso-lateral margin of the segments.
5. tergo-central setae.

Table II. Measurements, in mm, of types in *Canada balsam*.

	Male		Female	
	length	breadth	length	breadth
Head	1.09	1.19	1.17	1.30
Prothorax	0.45	0.82	0.42	0.88
Pterothorax	0.47	1.25	0.54	1.34
Abdomen	1.79	1.83	1.91	1.86
Total	3.68		4.20	
C. I.		1.10		1.15
<i>Paratypes</i>				
Breadth across temples	1.09,	1.19,	1.22	1.27, 1.29, 1.32, 1.34
C. I.	1.10,	1.15,	1.21	1.11, 1.13, 1.15, 1.18

## REFERENCES

- CLAY, T., 1955: The post-spiracular seta and sensillus in the Mallophaga. - Ann. Mag. nat. Hist. (12) 7: 716-718.