

A NEW SPECIES OF *NEOPHILOPTERUS* CUMMINGS, 1916
(MALLOPHAGA, ISCHNOCERA) FROM CEYLON

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Synopsis. A new species of *Neophilopterus* is described from males and females collected in Northern Hambantota, Ceylon, from *Ibis I. leucocephalus* (Pennant), the painted stork.

PHILOPTERIDAE

Neophilopterus Cummings, 1916

Neophilopterus phillipsi sp. n. (figs. 1-8)

Host: *Ibis I. leucocephalus* (Pennant)

This species is close to *N. horridus* (Giebel, 1876), *N. indicus* (Piaget, 1880), *N. episcopi* (Kellogg, 1910) and *N. sarae* Tenderio, 1958. It is, however, closest to *N. horridus* and *N. sarae*, especially in the striking similarity of the male external genitalia. It can be distinguished from them and other mentioned taxa by the shape of the preantennal region and tergites of segment II. Furthermore, the male may be separated by details of terminalia and external genitalia and the female by the shape of genital plates.

Alkali treated specimens brown, apparently a well sclerotized species. Sexual dimorphism in size.

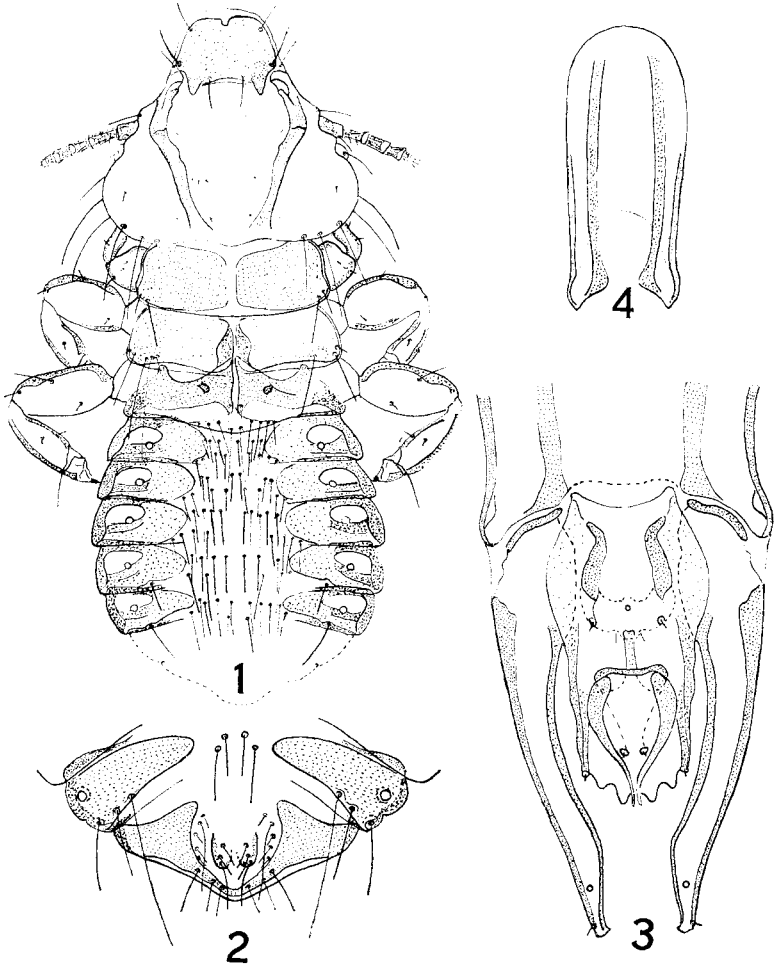
Male. General characters as in fig. 1. Head triangular with flat apex and rounded temples, wider than long, widest across level of marginal temporal seta 2; preantennal region shorter than postantennal; hyaline rim prominent and arises slightly behind the tip of marginal carina; posterolateral ends of dorsal anterior plate well sclerotized and conical with blunt apices; preantennal dorsal suture moderately wide; conus broad and protruding; temporal and occipital carinae prominent, former extends to preantennal nodus and merges with it. Head setae (names according to Clay, 1951): dorsal submarginal significantly thick and on dorsal anterior plate; anterior ventral 1 on posterolateral margin of ventral anterior plate; anterior ventral 2 much anterior to anterior ventral 3 (fig. 5); anterior dorsal on posterior margin of dorsal anterior plate, moderately long; postnodal and posttemporal minute; preantennal and mandibular moderately long to long; ocular moderately long; preconal short to moderately long; marginal temporal 1 short to moderately long, 2 and 6 long, 3, 4 and 5 elongated, latter extends beyond prothorax.

Pronotum and pteronotum divided medially; pronotum with two setae in each posterolateral angle, outer short to moderately long, inner long; pteronotum with 3-5 setae each side posterolaterally (fig. 1), longest seta in oblong clear space each side extends to the posterior margin of abdominal segment III; no prosternal seta; meso- and metasternum with 2 and 4 long setae respectively.

Abdomen has eight apparent segments: apparent 1 (I+II) called II, apparent 8 is IX-XI. Tergites II-VIII as characteristically pigmented lateral plates, those of IX-XI prolonged posteriorly to form a continuous rim and laterally recede from abdominal margin (fig. 2); sternites of II as prominent transversely elongated lateral plates, of III-VIII not delineable. Anal opening dorsal, anal lobes laterally sclerotized and do not extend beyond posterior margin of abdomen; genital opening ventral in position; external genitalia as shown in fig. 3.

Abdominal chaetotaxy. Length and position of important setae have been abbreviated thus; m. minute; sh. short; ml. moderately long; lg. long; elg. elongated; tc. tergo-central; tl. tergo-lateral; sc. sterno-central; sl. sterno-lateral. Tergal (ml to lg, disposition as in figs. 1, 2). Total and average thus: II, (anterior 2 extend to or slightly beyond posterior margin of II) 8-11, 9.5/4; III, 10-13, 11.25/4; IV, 11-14, 12.5/4; V, 14-17, 15/3; VI, 12-15, 13/3; VII, 9-12, 11/3; VIII, anterior 4-6 tc, (outer 2 lg, inner 2-4 ml), posterior 1 tr, 2 tl (outer lg, inner prolonged, extends beyond posterior margin of abdomen), 1-2 tl, 1 tr (trichobothrium on tergite, elg). Post-spiracular seta apparently without contiguous sensillus 1+1 on VI and VII (ml to lg). Chaetotaxy of terminalia as in fig. 2; anal setae 3+3 (sh to ml). Pleural, each side

and total respectively. II, 2-4, 5-7 (2-4 lg, 0-2 ml, 2 sh to ml); III, 4-5, 8-9 (2-4 lg, 5-6 ml); IV, 3-5, 7-10 (2 elg, 2-4 lg, 2-4 ml); V, 4-5, 8-10 (4 elg, 2-4 lg, 2 ml); VI, 4-5, 9-10 (6 elg, 0-2 lg to elg, 2 ml); VII, 5-6, 10-11 (6-8 elg, 1-2 lg to elg, 2 ml); VIII, 5, 10 (8 elg, 2 ml). One ml dorsolateral seta on each side of III-VII is appreciably apart from other pleural setae of that side specially on III, IV, V. On VI, VII, this seta becomes further lateral and closer to other pleural setae and hence has been counted among pleural setae. Sternal (lg to elg, on II sc, on rest scattered). II, 4-7; III, 6; IV, 6-7; V, 6; VI, 6-8; VII, 4-7; VIII, 3-4.



Figs. 1-4.—*Neophilopterus phillipsi* sp. n. ♂: 1, dorsal view of holotype, terminalia indicated in outlines only; 2, dorsal view of terminalia on a larger scale; 3, external genitalia; 4, basal plate.

Female.—General characters of head and thorax much as in male but the same setae are longer and stouter except posttemporal which is delineable with difficulty. Pronotal setae absent in two out of three females examined; pteronotum with five setae each side (fig. 6).

Interpretation of abdominal segments as in male. Tergites of II characteristic (fig. 6), those of III-VIII as widely separated lateral plates, pigmentation pattern as in male; tergites of terminalia continuous through secondary sclerotization. Sternites of II as prominent lateral thickenings (fig. 6), sternum in the region III-VII poorly sclerotized. Terminalia as shown in figs. 7, 8; anal lobes may project slightly beyond the posterior margin of abdomen; genital opening ventral; post-vulval sclerites lateral elongated dagger-shaped and dorsal to these are irregular supra sclerites, one

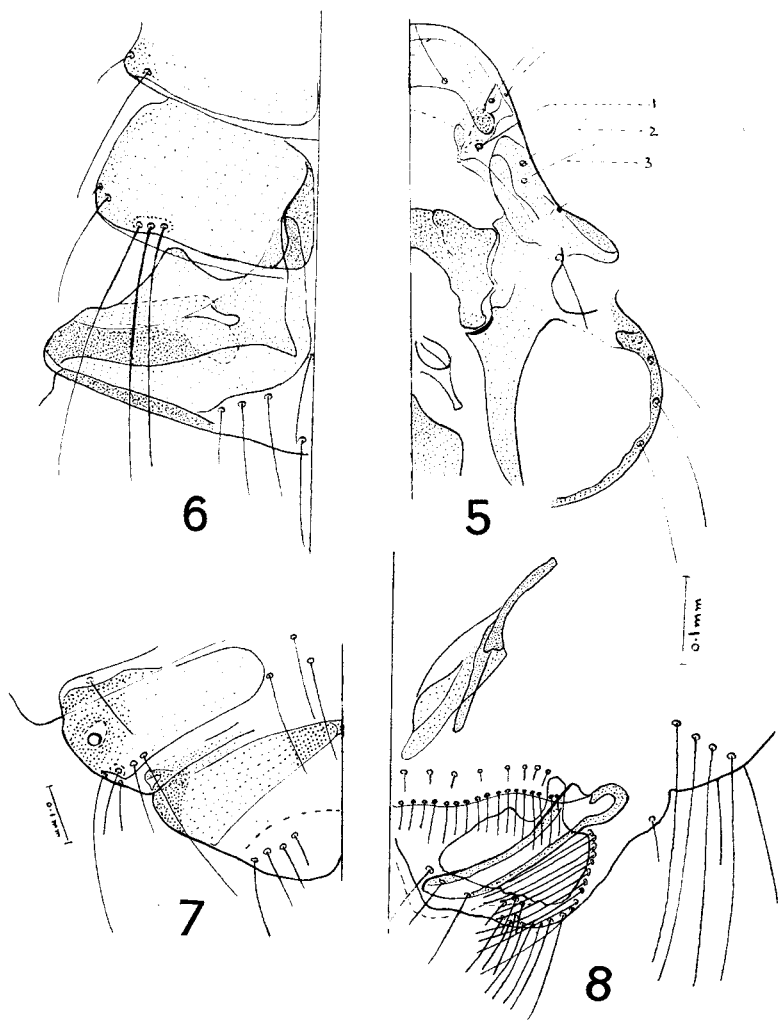


Fig. 5.—Male *Neophilopterus phillipsi* sp. n., ♂: ventral view of head, one side only; 1, 2, 3, anterior ventral setae.

Figs. 6-8, *Neophilopterus phillipsi*, sp. n., ♀: 6, part of thorax and abdominal segment II, dorsal view; sternite of II shown in broken line; 7, 8, dorsal and ventral view of terminalia respectively, one side only.

each side, (latter support the anal lobes); genital plates lateral, narrow and elongated; spermatheca dorsoventrally compressed and sclerotized, oblong area around opening of spermathecal duct feebly sclerotized.

Abdominal chaetotaxy. Tergal (setae lg to elg, disposition as in male). II, 10-13, 11.33/3; III, 17-22, 19/3; IV, 19-27, 23.33/3; V, 25-32, 27.33/3; VI, 21-28, 24.66/3; VII, 20-23, 21.33/3; VIII, anterior 4-7 tc (lg), posterior 1 tr, 2 tl (as in male), 3-4 tc (lg to elg), 2 tl, 1 tr (trichobothrium on tergite, lg). Post-spiracular seta 1+1, on VI (ml), on VII (lg). Chaetotaxy of terminalia as in figs. 7, 8. Pleural, each side and total respectively. II, 2-3, 4-6 (1-2 sh, 1-2 lg, 2 elg); III, 4-6, 9-11 (3-5 sh, 2 lg, 3-4 elg); IV, 4-6, 8-11 (2-4 sh, 1-2 lg, 4-6 elg); V, 4-5, 8-10 (2 sh to ml, 6-8 elg); VI, 4-5, 9-10 (2 sh to ml, 7-8 elg); VII, 5, 10 (2 sh to ml, 8 elg); VIII, 5-6, 10-12 (2 sh to ml, 8-10 elg). Sternal (disposition as in male but longer, lg to elg on II, elg on III-VI). II, 3-6; III, 6; IV, 7-8; V, 6-8; VI, 7-10; VII, 10-11 (2 ml, 2 lg, 6-7 elg); VIII, absent. Chaetotaxy of terminalia as in fig. 8; anal setae 3+3 (1 sh, 2 ml each side); margin of vulva beset with 33-37 setae (laterally lg, medially sh to ml) besides a few minute setae placed anteriorly.

Body measurements of types and paratypes are given in Table 1.

TABLE 1.—*Neophilopterus phillipsi* SP. N.: MEASUREMENTS (MM) IN CANADA BALSAM.

	Male			Female (3)		
	Range	Mean	<i>Holotype</i>	Range	Mean	<i>Allotype</i>
Length	0.71-0.75	0.73(4)	0.75	0.83-0.89	0.86	0.89
Head						
*Breadth	0.53-0.55	0.54(4)	0.55	0.61-0.65	0.63	0.64
	0.73-0.76	0.75(4)	0.76	0.86-0.9	0.89	0.9
Length	0.21-0.23	0.22(3)	0.21	0.25-0.26	0.254	0.25
Prothorax						
Breadth	0.48-0.52	0.499(3)	0.52	0.57-0.61	0.597	0.61
Length	0.18-0.21	0.19(3)	0.21	0.21-0.23	0.22	0.23
Pterothorax						
Breadth	0.56-0.58	0.57(3)	0.58	0.68-0.73	0.71	0.71
Length	1.0-1.06	1.02(3)	1.0	1.48-1.52	1.57	1.52
Abdomen						
Breadth	0.75-0.88	0.802(3)	0.88	1.17-1.27	1.22	1.27
Total length	2.17-2.18	2.175(3)	2.17	2.79-2.89	2.85	2.89
Head Index	1.01-1.04	1.02(4)	1.01	1.01-1.04	1.03	1.01
Length of						
Paramere	0.204-0.214	0.208(8)	0.214			

* Upper line, breadth of preantennal region; lower line, breadth across temples. Number in brackets indicate the number of specimens measured.

Holotype male and *allotype* female, slide no. 256 A in British Museum (N.H.), collected by W. W. A. Phillips from *Ibis I. leucocophalus*, in Northern Hambantota, Ceylon.

Paratypes: 3 ♂ (one dissected) and 2 ♀ from the type host and locality; slide nos. 256 B, C, and D in same collection.

The species is named in honour of the collector.

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