

# Description of Some New Amblyceran Mallophaga from the Zoological Survey Department, Karachi

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The author examined a number of Amblyceran Mallophaga collected from birds of Pakistan. These studies brought to light several species, not represented before, from Indo-Pakistan. Three species, viz., *Colpocephalum bengalensis* from *Corvus macrorhynchus* Wagler, *Myrsidea sindianus* from *Dicrurus h. hottentotus* (Linn.) and *Laemobothrion siddiqii* from *Circaetus ferox* (Gmelin) are described as new.

## Introduction

THE Amblyceran Mallophaga of Indo-Pakistan sub-continent have been casually studied by a number of investigators in the past. Kellogg and Paine (1914), Kellogg and Nakayama (1915), Qadri (1935) and Ansari (1943-1955) made some useful contributions in recent years.

We had an opportunity of examining some new material of these parasites through the courtesy of Dr. A. R. Ranjha, Director, Zoological Survey Department, Karachi, who initiated collection in the course of routine survey of Pakistan birds. This material contained several new species and this paper comprises description of these together with some new records of older species.

It is largely a matter of convenience at what one decides to divide one species or sub-species from another, provided some measure of conformity is observed in relation to the divergence of characters from the common type in each genus. Determination of a species within this group is rendered more difficult, because colour and size are more or less constant, variability of characters is not great and constant and therefore likely to be regarded useless for specific determination. As long as extensive collection representing one genus from one host-group is not

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available, this difficulty remains unsurmountable.

### 1. *Ciconiphilus nyctardis* (Denny)

*Colpocephalum nyctardis* Denny, 1842, Mon. Anop. Brit., p. 199, 215, pl. 20, fig. 9.

Type-host: *Nycticorax n. nycticorax* (Linn.) Ardeidae

This is one of the long known species and has been recorded from almost all places where the type-host has been found. The specimens before us were collected from the Night Heron *Nycticorax n. nycticorax* (Linn.) shot in Karachi (M/s. Siddiqi and Hasan, June 7, 1954).

Body 1.81 × 0.68 mm., frontal margin to the ocular notch 0.15 × 0.43 mm., ocular notch to the occipital margin 0.15 × 0.59 mm., ocular notch to the posterior extremities 0.22 × 0.59 mm., prothorax 0.197 × 0.38 mm., pterothorax 0.18 × 0.56 mm., abdomen 0.19 × 0.68 mm.

### 2. *Colpocephalum bengalensis* Ansari (Text-figs. 1-7)

*Colpocephalum bengalensis* Ansari, 1955 Proc. VII Pak. Sci. Conf., Bahawalpur.

Type-host: The Jungle Crow (*Corvus macrorhynchus* Wagler): Corvidae

Male (holotype) 1.14 × 0.44 mm. Head 0.30 × 0.44 mm. Frontal margin to the occipital margin 0.13 × 0.32 mm., rounded, flat in front, ocular notch moderately deep, ocular blotch well formed and well pigmented, quadrate. Ocular notch to the occipital margin 0.18 × 0.44 mm., gular plate with fine elongate hairs. Ocular notch to the posterior extremities of temples 0.19 mm. Prothorax 0.11 × 0.29 mm., boat-shaped, lateral angles acute, posterior margin furnished with a row of setae. Prosternum bell-shaped, narrow anteriorly. Pterothorax 0.14 ×

0.39 mm., trapezoidal. Legs moderately long, posterior femora with three combs of setae on the ventral aspect. Abdomen  $0.64 \times 0.44$  mm., widest at the III and IV segments, and then tapering gradually to the posterior segments, tergites well

formed, entire with two transverse rows of setae; Pleurites well developed, IX without downwardly and upwardly turned setae; IV sternite with two combs of setae. Male genitalia well developed, elongate and narrow; basal plate tapering to a point in front and flattened distally; sclerite of the genital sac well developed; parameres rod-like endomeral plates considerably flattened.

**Female (Allotype)**: more or less similar to male,  $1.07 \times 0.58$  mm. Head  $0.31 \times 0.45$  mm. Frontal margin to the ocular notch  $0.14 \times 0.32$  mm. Ocular notch to the occipital margin  $0.15 \times 0.45$  mm. Ocular notch to the posterior extremities of the temples  $0.17$  mm. Prothorax  $0.13 \times 0.30$  mm. Pterothorax  $0.16 \times 0.43$  mm. Posterior femora showing sexual differences, with four combs of setae, last row usually brief. Abdomen  $0.39 \times 0.58$  mm. IV sternite with two combs of setae. Sub-genital plate with posterior notch posterior margin with a row of setae shown in the figure.

**Holotype (male), allotype (female) and paratypes** males and females from the Jungle Crow (*Corvus macrorhynchus* Wagler) shot in Harbanga (District Chittagong), Mr. Siddiqi, March 4, 1954.

### 3. *Colpocephalum* Species

A female specimen was collected from the Booted Eagle *Hierraetus pennatus* (Gmelin) Falconidae shot in Shujawal (District Tatta, Sind), on November 15, 1953.

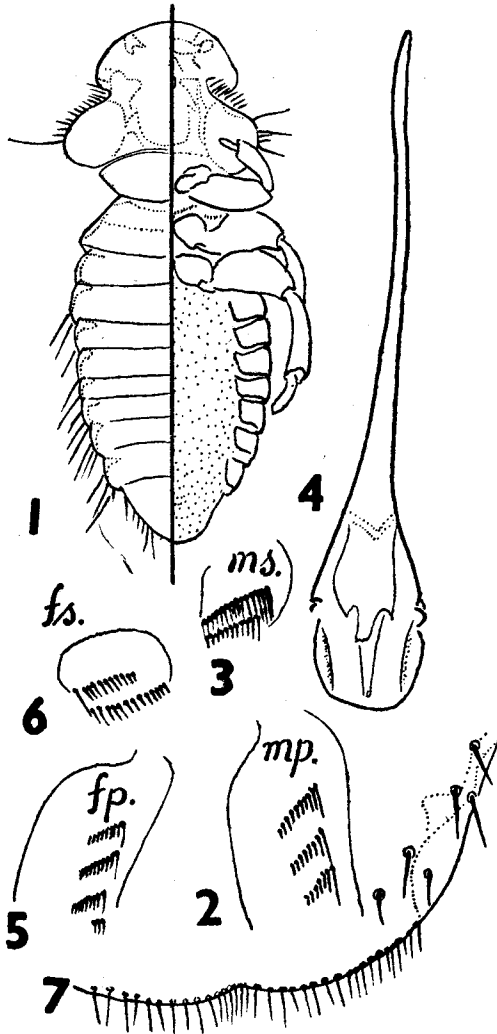
### 4. *Myrsidea sindianus* Ansari

(Text-figs. 8—10)

*Myrsidea sindianus* Ansari, 1955. Proc. VII Pak. Sci. Conf., Bahawalpur.

**Type-host**: The Indian Hair Crested Drongo *Dicrurus h. hottentotu* (Linn.): Dicruridae.

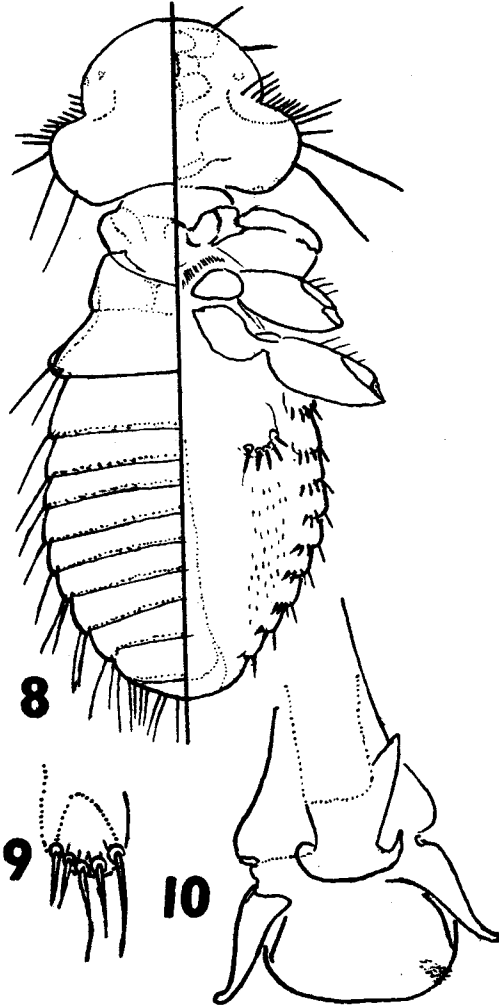
**Male (Holotype)**  $1.37 \times 0.45$  mm. Head  $0.38 \times 0.49$  mm. Preocular region  $0.20 \times 0.36$  mm., semi-circular in front, ocular fleck not well marked. Post-ocular region  $0.15 \times 0.49$  mm, temples moderately expanded, sloping inwards from the middle to the occipital margin, gular plate furnished with two moderately long and one exceptionally long seta. Ocular



*Colpocephalum bengalensis* Ansari; (1) dorsal and ventral aspects of male (2) ventral aspect of posterior femora showing combs of setae in male, (3) combs of hairs on the abdominal sternite III, male, (4) male genital armature, (5) ventral aspect of the posterior femora showing combs of setae in female, (6) combs of setae on the abdominal sternite of female, (7) vulvar chaetotaxy.

slit to the posterior extremity of the temples 0.18 mm. Prothorax  $0.14 \times 0.28$  mm., trough shaped, large, lateral angles obtuse and rounded, bearing two setae, lateral margins practically confluent with the posterior margin, posterior lateral margin strongly convex, Pterothorax  $0.23 \times 0.44$  mm., mesothorax distinct, more or less as long as meta-thorax

with straight lateral margins metathorax trapezoidal, diverging laterally, posterior lateral angle with a spine and a seta continued with the posterior row of setae. Posterior femora with a patch of 23 short setae. Sternal plates and pericoxal carinae well developed. Abdomen  $0.65 \times 0.48$  mm., ovate; segment II largest, others subequal, each with a transverse row of setae; tergal plates entire; paratergal plates well pigmented; ventral surface with a transverse row of hairs and several short and weak hairs on each side merging more or less with general chaetotaxy, III sternite with aster of five spines on each side of the sternite, IV-VII with a patch of short setae. Male genitalia well built, dorsal plate moderately long, expanded at the apex and narrow anteriorly, parameres short and broad with turned out tips; endomeres feebly sclerotised median sclerite of the genital sac complex and well developed, anchor-shaped with robust anterior portion and narrow, turned upwards cross piece.



*Myrsidea sindianus* Ansari; (8) dorsal and ventral aspects of male, (9) aster of setae spinous setae on III sternite, (10) distal portion of male genitalia.

*Holotype* (male) from the Indian Hair Crested Drongo (*Dicrurus h. hottentotu* (Linn.)), shot in Rangamati, Mr. Siddiqi February 18, 1954.

##### 5. *Myrsidea trithorax* (Piaget)

*Menopon trithorax* Piaget, 1885, *Pediculines Supplementary*, 97, pl. 10, fig. 8.

This is one of the familiar species and is commonly found on the Jungle Crow (*Corvus macrorhynchus* Wagler): Corvidae several males and females before us were collected from the type-host shot in Harbanga (Chittagong), Mr. Siddiqi, March 4, 1954.

##### 6. *Trinoton nyrocae* Eichler

*Trinoton nyrocae* Eichler 1943, *Stetten ent Ztg.*, 104, 97, figs. 6-7.

This species was described from the collection obtained from *Nyroca ferina* (Linn.): Anatidae the specimens before us were collected from *Nyroca r. rufa* Linn. shot in Jati (Tatta. Sind), M/s. Siddiqi and Hasan, November 17, 1953.

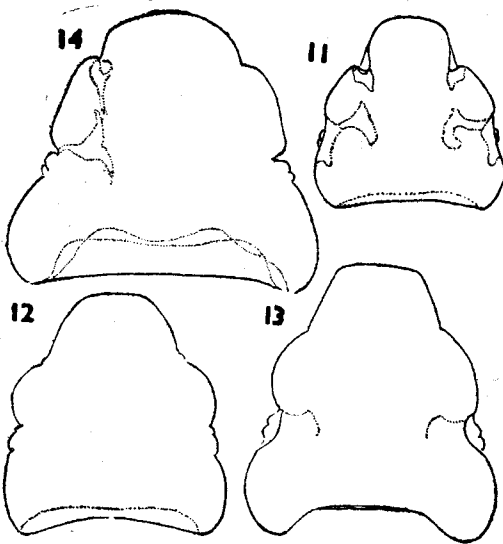
7. *Laemobothrion aquab* Ansari

(Text-figs 11—14)

*Laemobothrion aquab* Ansari, 1954, *Ind. Jour. Ent.* (in press)

Type-host: The legger Falcon (*Falco jugger* Gray): Falconidae

Several males, females and nymphs of this species were collected from the type-host shot from the Mancher Lake (Dadu, Sind) by Sufi and Asghar, January 12, 1954. Average measurements of various groups



*Laemobothrion aquab* Ansari; (11) Head of the I stage nymph, (12) II stage nymph, (13) III stage nymph, (14) adult.

were calculated and are given below. Some growth principles were applied and the results are tabulated below. For conclusion *vide* Ansari (1954 & 1955).

Body (Length × Width)	Head (Length × Width)
3.48 × 0.29	0.84 × 0.91
6.16 × 1.52	1.32 × 1.19
7.42 × 2.16	1.61 × 1.51
7.42 × 2.32	1.55 × 1.50
8.23 × 2.71	1.55 × 1.69

I. The growth of nymphal instars of *Laemobothrion aquab* and Dyar's principle.

I	II	III	adult
$0.91 \times 1.3 = 1.18$	$1.18 \times 1.3 = 1.55$	$1.55 \times 1.3 = 1.99$	
—	$1.19 \times 1.3 = 1.55$	$1.55 \times 1.3 = 2.01$	
—	—	$1.51 \times 1.3 = 1.96$	

II. The growth of nymphal instars of *Laemobothrion aquab* and Przibram-Mergusar's principle as modified by Bodenheimer.

(a) Observed and calculated body length of various instars.

adult	III	II	I
$8.23 \div 1.26 = 6.53$	$6.53 \div 1.26 = 5.1$	$5.1 \div 1.26 = 4.11$	
$7.42 \div 1.26 = 5.88$	$5.88 \div 1.26 = 4.66$	$4.66 \div 1.26 = 3.56$	
—	$6.16 \div 1.26 = 4.88$	$4.88 \div 1.26 = 3.87$	
—	—	—	3.48

(b) Observed and calculated body width of various instars.

(female)			
$2.71 \div 1.26 = 2.15$	$2.15 \div 1.26 = 1.71$	$1.71 \div 1.26 = 1.33$	
$2.32 \div 1.26 = 1.84$	$1.84 \div 1.26 = 1.46$		
$2.16 \div 1.25 = 1.71$	$1.71 \div 1.26 = 1.35$		
—	$1.52 \div 1.26 = 1.21$		
—	—	1.29	

(c) Observed and calculated head width of various instars.

$1.69 \div 1.26 = 1.34$	$1.34 \div 1.26 = 1.06$	$1.06 \div 1.26 = 0.84$
$1.51 \div 1.26 = 1.198$	$1.198 \div 1.26 = 0.951$	
—	$1.19 \div 1.26 = 0.95$	
—	—	0.91

8. *Laemobothrion hieraeti* Eichler

*Laemobothrion hieraeti* Eichler 1943 *Mitt. naturw. Ins. Sofia*, 16; 209. fig. 3.

Type-host: The Booted Eagle (*Hieraeti pennotus* (Gmelin.): Falconidae)

This species was recently described. The specimens before us were obtained from the type-host shot in Shujawal (Tatta, Sind), M/s. Siddiqi and Hasan, November 15, 1953. The head is about as long as broad (1.66 × 1.66). The temporal lobe extended 0.26 mm. beyond the occipital margin. Prothorax 1.83 × 1.37 mm., mesothorax 1.03 × 1.83 mm., metathorax 0.50 × 2.11 mm., abdomen 3.73 × 2.93 mm.

9. *Laemobothrion siddiqii* Ansari

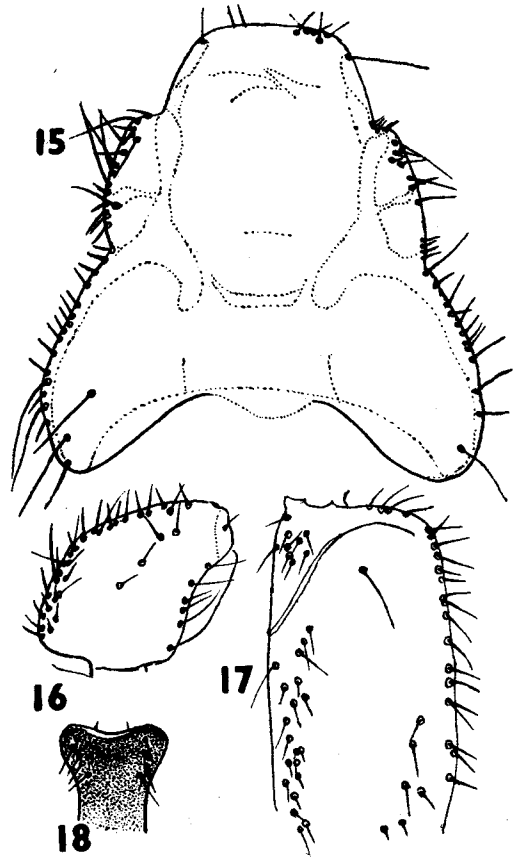
(Text-figs. 15-18)

*Laemobothrion siddiqii* Ansari 1955, *Proc. VII Pak. Sci. Conf., Bahawalpur*, p.Type-host: The Short-toed Eagle (*Circaetus ferox* Gmelin). : Falconidae

Gular setae and lateral setae on prosternal plate present. The abdominal tergites are without central uncoloured area seen in *L. vulturis* Fabricius. It comes very near *L. maximum* group.

Female (holotype) 8.69 × 2.33 mm. Head in the midline 1.33 mm., long and laterally 1.53 mm., long, greatest width at the temporals 1.53 mm. Prothorax 1.26 × 1.07 mm. Pterothorax 1.21 × 1.77 mm., proximal part of prosternal plate concave, hollow with 6-6 setae. Femoral setae of the pattern shown in the figure. Abdomen 4.90 × 2.33 mm., tergal plates confined in the middle, uniformly coloured, posterior row of subequal setae, longer seta is followed by a short seta.

Holotype (female) and paratypes (females) collected from the short-toed Eagle (*Circaetus ferox* (Gmelin)) shot in Sakrand (Nawabshah) Mr. Siddiqi, December 6, 1951.



*Laemobothrion siddiqii* Ansari; (15) head of the adult, (16-17) anterior femora and posterior femora showing chaetotaxy, (18) anterior portion of the prosternum showing chaetotaxy.

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