

A New Subgenus and Two New Species of *Amyrsidea* (Mallophaga: Menoponidae)^{1,2}

WILLIAM C. SCHARF³ AND ROGER D. PRICE⁴

ABSTRACT

Five subgenera are recognized for the genus *Amyrsidea* Ewing from the Galliformes: *Amyrsidea* from the Phasianidae, *Cracimenopon* Carriker from the Cracidae, *Desumenopon* Carriker from *Odontophorus* of the Phasianidae, *Argimenopon* Eichler from 4 families, and the new subgenus *Numidimenopon* from the Numididae. Two

new species are described: *A. (N.) vulturini* from *Acryllium vulturinum* and *A. (N.) plumiferae* from *Guttera plumifera plumifera*. A key is given to the 5 subgenera and keys, descriptions, and illustrations for the species within the subgenera *Amyrsidea* and *Numidimenopon*.

The menoponid genus *Amyrsidea* Ewing, 1927, was originally established to include Mallophaga that are from galliform hosts but do not possess the ventral spinous head processes of the genus *Menacanthus* Neumann, 1912. Subsequent work has resulted in the description of *Argimenopon* Eichler, 1946, *Cracimenopon* Carriker, 1954, and *Desumenopon* Carriker, 1954, taxa variously regarded as distinct genera or as subgenera of *Amyrsidea*. The present work was undertaken to determine the status of the names associated with *Amyrsidea*, to redescribe the recognized taxa, to describe new taxa, and to provide keys for their identification.

This paper presents descriptions and illustrations of the genus *Amyrsidea* sensu lato, of the nominate subgenus and the new subgenus *Numidimenopon*, and of the 7 species included in these 2 subgenera. The remaining 3 subgenera—*Cracimenopon*, *Desumenopon*, and *Argimenopon*—will be treated in subsequent works.

In the following descriptions, numbers of certain head setae are those given by Clay (1969). Measurements are in millimeters. Unless noted to the contrary, all illustrations are of specimens from the type-host. The nomenclature of the hosts essentially follows Peters (1934). All nomenclatorial changes involved in this paper are the sole responsibility of the senior author.

The species described here all belong to *Amyrsidea* sensu lato and share the following features; for brevity, these will not be repeated under the subgeneric or specific descriptions.

Head.—With shallow to deep preocular slit; nodi moderately developed, associated carinae weak.

Alveoli of marginal temple setae 26 and 27 closely associated, with seta 26 finer and shorter than 27; long occipital setae 21–23, with alveoli in straight line; long to very long marginal temple setae 24, 27, 29, and 31; preocular seta 8 much shorter and finer than setae 9–11; dorsal seta 16 mediad to setae 14 and 15; dorsal sensilla *a*, *b*, and *c* present; mid-dorsal setae 17 and 18 variable in length, but usually minute. Antenna with slightly expanded pedicel and undivided terminal segment. According to Clay (1969), terminal antennal segment with no indentation as in *Menacanthus*, with 2 sensilla and 2 lateral setae close together at end of segment when viewed with scanning electron microscope. Gular plate rounded posteriorly, uniformly pigmented. No ventral spinous process arising near base of maxillary palpus.

Thorax.—Outer central pronotal seta 1 heavier than inner seta 2, or both minute; prosternal plate moderately developed, without setae other than usual 1 + 1 anterior to it. Normal vertically oblong postnotum. Mesothorax not as sclerotized ring; 4 medio-anterior mesonotal setae with pair close together on each side. Ventral femur III with distinct setal brush.

Abdomen.—Tergites I and II with 2 short setae anterior to and one lateral to postspiracular seta; adjacent medial seta of short to medium length. Postspiracular setae very long on III–VIII, somewhat shorter on I and II. Well developed setal brushes variably on sternites III–VI. Female sternites VII and VIII fused; no genital chamber structure obvious, but frequently with lining of microtrichia. Male genitalia essentially symmetrical, with broad expanded basal apodeme and spiculate sac with significantly variable associated sclerites.

KEY TO SUBGENERA OF *Amyrsidea*

1. Preocular seta 11 shorter than 0.10, and of similar thickness to seta 10 (Fig. 1) 2
- Preocular seta 11 longer than 0.10, and thicker than seta 10 3

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³ Dept. of Biology, Northwestern Michigan Coll., Traverse City 49684.

⁴ Dept. of Entomology, Fisheries, and Wildlife, Univ. of Minnesota, St. Paul 55108.

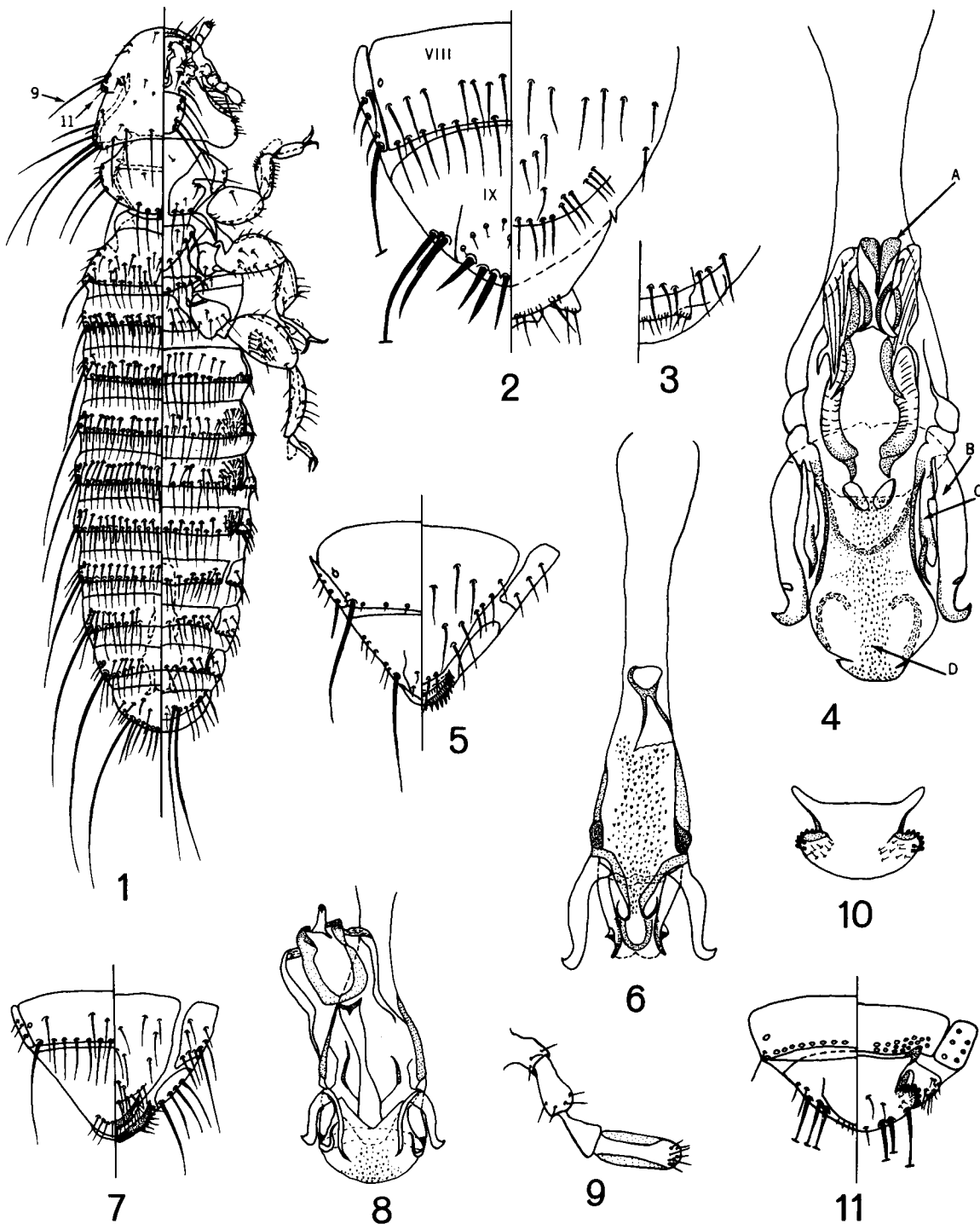


FIG. 1-4.—*A. ventralis*. 1, male; 2, female terminalia, extruded anus; 3, female retracted anus; 4, male genitalia (A, genital sclerite; B, paramere; C, epimere; D, endomeral plate).
 FIG. 5, 6.—*A. oculeae*. 5, female terminalia; 6, male genitalia.
 FIG. 7, 8.—*A. elbeli* (ex *Arborophila rufogularis*). 7, female terminalia; 8, male genitalia.
 FIG. 9.—Antenna of subgenus *Numidimenopon*.
 FIG. 10, 11.—*A. desousai*. 10, male subgenital plate (ex *Numida ptilorhyncha*); 11, male terminalia (only setal sockets shown anteriorly).

2. Eyes reduced, inconspicuous; preocular slit very shallow, 0.025 or less, as in Fig. 1; 4-12 setae on sternite I; female with long spiniform inner posterior setae on tergite IX (Fig. 2) or short spiniform setae in dorsal anal fringe (Fig. 5 or 7), and without ventral pleural extension; limited to Phasianidae *Amyrsidea*
 Eyes large, prominent; preocular slit usually deeper than 0.025; no setae on sternite I; female without spiniform setae as above, and with ventral pleural extension; limited to Cracidae
 *Cracimenopon*
3. With at least 4 dorsal head sensilla between sensilla *c*; limited to *Odontophorus* (Phasianidae) *Desumenopon*
 With 0-2 dorsal head sensilla between sensilla *c* ... 4
4. Terminal antennal segment long and slender, ratio of width to length less than 0.5 (Fig. 9); female with unusual terminalia (Fig. 12, 16, 17, or 20); limited to Numididae *Numidimenopon*
 Terminal antennal segment shorter and wider, ratio of width to length more than 0.5; female with terminalia variously differing from above; on Megapodidae, Tetraonidae, Phasianidae (except *Odontophorus*), and Numididae *Argimenopon*

Subgenus *Amyrsidea* Ewing

Amyrsidea Ewing, 1927: 90. Type-species: *Menopon ventrale* Nitzsch.

The members of this subgenus are known only from the Phasianidae. They may be separated from the other subgenera by the following combination of characteristics:

- (1) Head narrow, with difference between temple and preocular width only 0.06-0.13 (Fig. 1).
- (2) Hypopharyngeal sclerite weakly to strongly developed.
- (3) Preocular slit shallow, only up to 0.025 deep.
- (4) Preocular seta 11 shorter than 0.10, and of similar thickness to seta 10.
- (5) No dorsal head sensilla between sensilla *c*.
- (6) Terminal antennal segment short and wide, ratio of width to length more than 0.5.
- (7) Eyes reduced, inconspicuous.
- (8) Sternite I with 4-12 setae.
- (9) Female without sexually dimorphic enlarged tergites.
- (10) Female pleura without ventral extension.
- (11) Female with either long spiniform inner posterior setae on tergite IX (Fig. 2) or short spiniform setae in dorsal anal fringe (Fig. 5 or 7).

Amyrsidea (Amyrsidea) ventralis (NITZSCH)
 (Fig. 1-4)

Menopon ventrale Nitzsch, 1866: 391. Type-host: *Argus giganteus* = *Argusianus argus* (L.).

Male.—As in Fig. 1. Preocular slit 0.020-0.025 deep. Middorsal head setae minute, inner seta 17 medio-anterior to outer 18. Each side of postmentum with 1 short, 1 medium, and 1 long seta. Gular plate

with 4 + 4 setae. Hypopharyngeal sclerite strongly developed. Pronotal margin with 12 long, 4-8 short setae. Metanotum with 19-22 long marginal, 26-37 medio-anterior setae; mesosternal and metasternal plates roughly triangular, with 8-11 and 15-16 setae, respectively. Venter of each femur III with brush of 38-44 short setae. Marginal abdominal tergal setae: I, 23-26; II-V, 28-32; VI, 26-28; VII-VIII, 18-26; all with uniformly medium setae between postspiracular setae. With medium anterior tergal setae: I, 33-38; II, 38-42; III-V, 26-36; VI, 24-28; VII, 18-22; VIII, 12-13. Each side of last tergite with a very long marginal seta, 3-4 medium setae latero-anterior to it, 4-5 medium anterior setae, and 8-9 total medium inner posterior setae. Pleura with 3-5 marginal, 1-2 anterior medium setae. Sternal setae: I, 8-11; II, 36-37; III-V, 21-24; VI, 31-47; VII, 24-38; VIII, 25-28. Sternal brushes: III, 20-22; IV, 23-25; V, 11. Sternites VIII and IX not fused; IX with 19-21 setae, including 4 very long, remainder medium. Genitalia with complex genital sclerite (Fig. 4:A), retrorse parameres (Fig. 4:B), twisted epimeres (Fig. 4:C), and spinous endomerical plate with internal sclerotization (Fig. 4:D).

Female.—Head, thorax, and abdominal sternal setae on I-VII as for male, except with only 4-7 medio-anterior metanotal setae. Tergal setae: I, 21-26; II, 26-28; III-VI, 30-36; VII, 26; VIII, 17-19. Last tergite as in Fig. 2, with small circle of minute setae anteriorly, 8 stout spiniform inner posterior setae, and 2 long, 1 slender medium setae on each side. Anterior tergal setae: I, 13-22; II, 34-51; III, 39-50; IV, 45-56; V, 44-45; VI, 37-44; VII, 26-30; VIII, 14-15. Total of 27 setae on subgenital plate; anus extensible (Fig. 2 vs. Fig. 3), with 11-12 short, 6-8 medium setae.

Dimensions.—Preocular width, ♂ 0.27-0.30, ♀ 0.30-0.31; temple width, ♂ 0.23-0.33, ♀ 0.25-0.36; prothorax width, ♂ 0.32-0.36, ♀ 0.33-0.38; metathorax width, 0.39-0.41; total length, ♂ 1.57-1.64, ♀ 1.68-1.97; ♂ genitalia width 0.08-0.11, length 0.40-0.42.

Remarks.—The type-species for the genus, *A. ventralis*, being slender and without obvious eyes, seems to be somewhat aberrant and not typical of the majority of the species. It is the only member of this subgenus with the inner posterior setae of tergite IX modified as spiniforms and without spiniform setae fringing the anus. It also has the deepest preocular slit of this subgenus. The new host record reported below for this species is closely related to the type-host.

Material Examined.—7 ♂, 6 ♀, *A. argus*, Malaya, England; 1 ♂, 1 ♀, *Rheinardia ocellata* (Elliot), Annam.

Amyrsidea (Amyrsidea) oculeae PRICE AND ELBEL
 (Fig. 5, 6)

Amyrsidea oculeae Price and Elbel, 1969: 336. Type-host: *Caloperdix oculea oculea* (Temminck).

Male.—Much as for *A. ventralis*, except as follows.

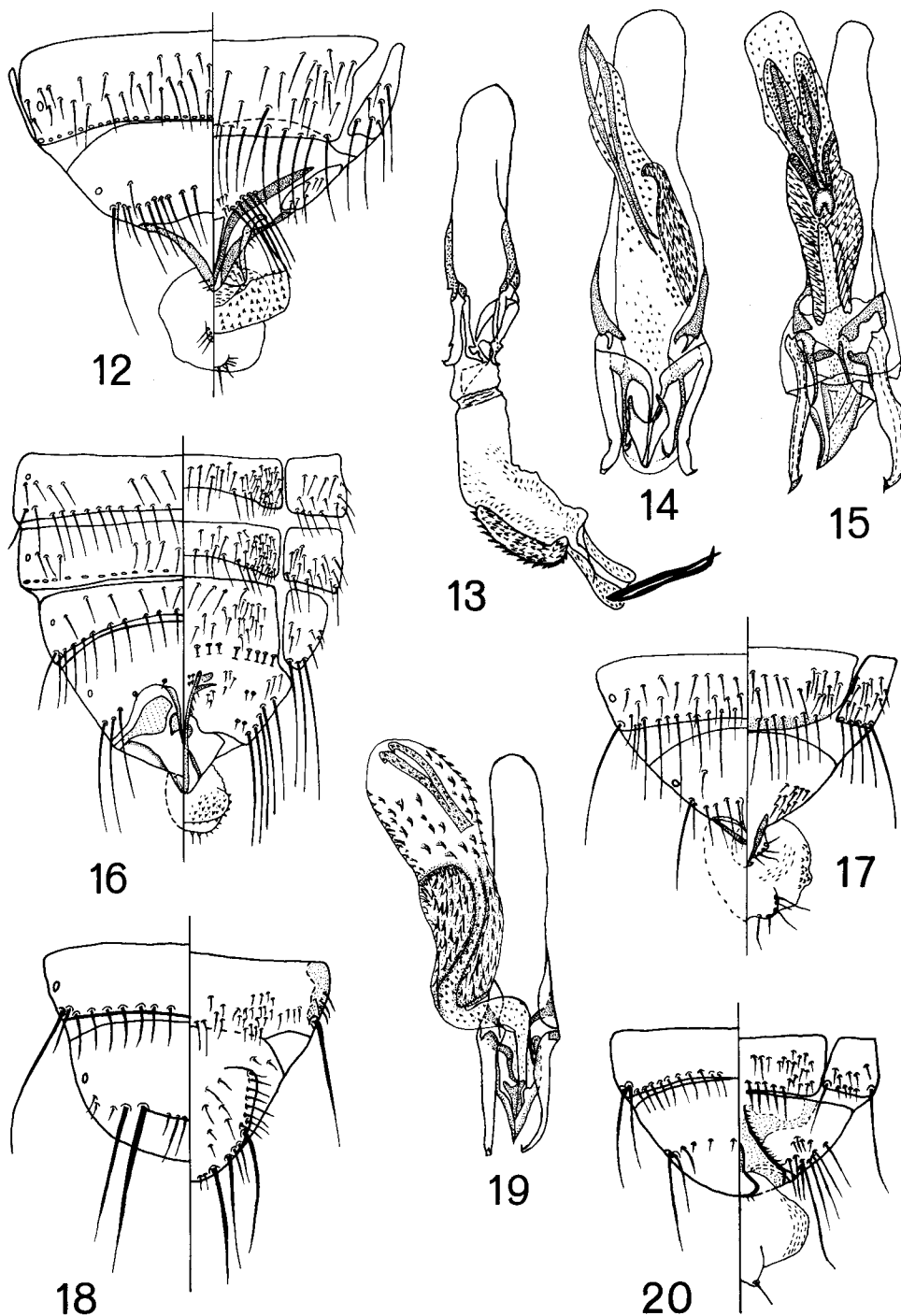


FIG. 12-14.—*A. desousai*. 12, female terminalia; 13, male genitalia; 14, male genitalia (ex *Numida ptilorhyncha*).
 FIG. 15, 16.—*A. lopesi*. 15, male genitalia; 16, female terminalia.
 FIG. 17.—*A. vulturini*, female terminalia.
 FIG. 18-20.—*A. plumiferae*. 18, male terminalia; 19, male genitalia; 20, female terminalia.

Head with preocular slit at most only shallow indentation, interpreted by Price and Elbel (1969) as being absent; minute inner middorsal head seta 17 far anterior to outer 18. Metanotum with 10 long

marginal, a short median setae associated with each corner seta, and 4-7 medio-anterior setae. Metasternal plate with 9-10 setae. Venter of each femur III with brush of 13-17 setae. Marginal abdominal

tergal setae: I, 18–21; II, 17–21; III–V, 19–22; VI, 18–21; VII, 15–19; VIII, 8; medially with short among longer setae on I–VII, uniformly medium on VIII. Anterior tergal setae: I, 0–1; II, 2–5; III, 7–11; IV, 10–19; V–VI, 9–27; VII, 1–12; VIII, 0–1; predominantly minute setae on VI–VIII. Last tergite with a very long seta on each side, 4 fine setae latero-anterior to this, and 4 inner posterior setae, with outer pair stouter and longer than inner pair. Sternal setae: I, 4; II, 17–23; III, 28–30; IV–V, 30–34; VI, 26–27; VII, 23–27; VIII, 19–22; IX, 16–17. Setae in each sternal brush: IV, 15–20; V, 14–21; VI, 6–12. Genitalia as in Fig. 6.

Female.—As for male, except for terminalia (Fig. 5). Each side of last tergite with a very long seta, 1–2 fine and 3 short heavier setae latero-anterior to this, and total of 4–6 minute inner posterior setae. Sternites VIII and IX fused, medioposteriorly with 3–5 setae, anteriorly with 21–25. Anus with 21–26 setae in each fringe, including 12–15 median short spiniform setae dorsally.

Dimensions.—Preocular width, ♂ 0.23–0.25, ♀ 0.24–0.26; temple width, ♂ 0.29–0.32, ♀ 0.34–0.36; prothorax width, ♂ 0.25–0.27, ♀ 0.27–0.30; metathorax width, ♂ 0.30–0.32, ♀ 0.36–0.40; total length, ♂ 1.34–1.46, ♀ 1.54–1.65; ♂ genitalia width 0.06–0.07, length 0.28–0.32.

Remarks.—*A. oculeae* is slightly smaller than *A. ventralis*, has fewer setae in the sternal brushes, has short spiniform setae in the female dorsal anal fringe, and lacks anterior setae across female tergite VIII. Also, the anterior setae on female tergites VI and VII are very short.

Material Examined.—6 ♂, 6 ♀ (including 4 ♂, 4 ♀ paratypes of *A. oculeae*), *C. o. oculea*, Thailand.

Amyrsidea (Amyrsidea) elbeli

EMERSON AND STOJANOVICH

(Fig. 7, 8)

Amyrsidea elbeli Emerson and Stojanovich, 1963: 263.

Type-host: *Arborophila brunneopectus erythroprhrys* Sharp.

Male.—Much as for *A. oculeae*, except as follows. Preocular slit about 0.02 deep. Minute middorsal head setae 17 and 18 in straight line across head. Hypopharyngeal sclerite weakly developed. Marginal tergal setae: I, 14–16; II, 18–22; III–VII, 21–29; VIII, 18–19. Anterior tergal setae: I, 8–10, but only 3–4 on specimen from *Ithaginis cruentus* (Hardwicke). Each side of last tergite with 2 very long marginal setae, 4 medium to long latero-anterior setae, no medial anterior setae, and total of 10–12 medium inner posterior setae. Sternal setae: I, 2–4; II, 16–19; III, 18–25; IV, 14–15; V, 20–22; VI, 18–35; VII, 27–29; VIII, 12–20. Sternite IX with 14 marginal, 14 anterior setae. Genitalia as in Fig. 8.

Female.—As for male, except for terminalia (Fig. 7). Last tergite without very long marginal setae. Subgenital plate with 10–16 marginal, 18–21 anterior setae. Dorsal anal fringe of 20–26 short spiniform, 14–18 medium setae; ventral fringe of 20 short setae.

Dimensions.—Preocular width, ♂ 0.30–0.31, ♀ 0.30–0.31; temple width, ♂ 0.41–0.43, ♀ 0.42–0.45; prothorax width, ♂ 0.33–0.35, ♀ 0.33–0.38; metathorax width, ♂ 0.46–0.48, ♀ 0.48–0.49; total length, ♂ 1.42–2.25, ♀ 2.24–2.41; ♂ genitalia width 0.15–0.16, length 0.34–0.37.

Remarks.—*A. elbeli* is closest to *A. oculeae*, with the greatest differences being the larger size of the former, the medium size marginal and anterior setae on tergite VIII, the sternal brushes on IV and V only, the larger number of median spiniform setae flanked by short setae in the dorsal anal fringe of the female, and the characteristic short and wide male genitalia.

Material Examined.—4 ♂, 5 ♀ (including 1 ♂, 2 ♀ paratypes of *A. elbeli*), *A. b. erythroprhrys*, Borneo; 1 ♂, 3 ♀, *A. torqueola torqueola* (Valenciennes), Assam; 1 ♂, 2 ♀, *A. rufogularis* (Blyth), Nepal, Cambodia, Thailand; 1 ♂, 1 ♀, *I. cruentus*, Nepal.

KEY TO SPECIES IN THE SUBGENUS *Amyrsidea*

1. Female with long spiniform inner posterior setae on last tergite (Fig. 2); male with genitalia as in Fig. 4 *ventralis*
Female without such spiniform setae on last tergite, but with short spiniform dorsal anal setae (Fig. 5, 7); male with genitalia as in Fig. 6 or 8 2
2. Female with up to 16 short spiniform dorsal anal setae (Fig. 5); male with genitalia as in Fig. 6 *oculeae*
Female with 26–38 short spiniform dorsal anal setae (Fig. 7); male with genitalia as in Fig. 8 *elbeli*

Subgenus *Numidimenopon* Scharf, new subgenus

Type-species: *Menacanthus desousai* Keler.

The members of this subgenus are known only from hosts in the family Numididae. They may be separated from the other subgenera by the following combination of characteristics:

- (1) Head with wide temples, with difference between temple and preocular width 0.16–0.26.
- (2) Hypopharyngeal sclerite weakly to strongly developed.
- (3) Preocular slit 0.05–0.12 deep.
- (4) Preocular seta 11 longer than 0.10, and thicker than seta 10.
- (5) No dorsal head sensilla between sensilla *c*.
- (6) Terminal antennal segment long and slender, ratio of width to length less than 0.5 (Fig. 9).
- (7) Large prominent eyes.
- (8) Sternite I with 3–8 setae.
- (9) Female without sexually dimorphic enlarged tergites.
- (10) Female pleura without ventral extension.
- (11) Female segment IX highly modified with protruding spinous sac and unusual setal configurations (Fig. 12, 16, 17, 20).

Amyrsidea (Numidimenopon) desousai (KELER)
(Fig. 10-14)

Menacanthus desousai Keler, 1953: 29. Type-host: *Numida mitrata limpopoensis* = *Numida meleagris mitrata* Pallas.

Male.—Each side of postmentum with 1 medium, 1 long, 2 short setae. Middorsal head setae minute, with inner seta 17 medio-anterior to outer 18. Hypopharyngeal sclerite weakly developed. Gular plate with 6 + 6 setae. Pronotal margin with 14-16 long, 2 medium, 2 short setae. Metanotum with 12 long marginal, 20-30 medio-anterior setae; mesosternal and metasternal plates roughly triangular, with 16-19 and 10-12 setae, respectively. Venter of each femur III with brush of 42-45 short setae. Marginal abdominal tergal setae: I, 19-29; II-V, 30-40; VI, 28-39; VII, 25-32; VIII, 22. With medium anterior tergal setae: I-V, 40-60; VI, 38-56; VII, 28-34; VIII, 0. Each side of last tergite with 3 long setae, 2-5 short latero-anterior setae, and total of 8 short inner posterior setae (Fig. 11). Pleura normal, but with minute weakly developed sclerites between sterna and pleura of V-VIII. Sternal setae: I, 7-8; II, 24-40; III, 22-24; IV, 30-34; V, 28-31; VI, 19-24; VII, 10-15; VIII, 0. Sternal brushes each side: III, 25-30; IV-VI, 38-42; VII, 29-31. Sternites VIII and IX not fused, but with overlapping sclerotized extension reaching from anterior IX to posterior VIII (Fig. 11). Subgenital plate with bump-like protrusions along its latero-anterior edge; specimens from *N. meleagris* (L.) with 6 bumps on each side (Fig. 11), those from *N. ptilorhyncha* Hartlaub with 7-8 bumps each side (Fig. 10). Genitalia with elongate genital sclerite and spinous sac (Fig. 13, 14).

Female.—Head, thorax, marginal abdominal tergal setae, and sternal brushes as for male, except only 14-17 medio-anterior metanotal setae. Anterior tergal setae: I-VII, 41-74; VIII, 2. Tergite IX with lateral internal sclerotization and 2 short terminal setae on each side. Protruding genital sac with 6 short setae on dorsal medial surface (Fig. 12). Sternal setae: I, 8; II-VI, 33-54; VII, 61-65. Fused sternites VIII and IX with 8-11 medium, 10-11 short setae arranged in relation to internal sclerotizations as in Fig. 12. Protruding genital sac ventrally with many small setae and area of microtrichia anteriorly, 9-11 short setae medioposteriorly (Fig. 12).

Dimensions.—Preocular width, ♂ 0.63-0.65, ♀ 0.65-0.67; temple width, ♂ 0.88-0.92, ♀ 0.90-0.93; prothorax width, ♂ 0.82-0.86, ♀ 0.84-0.91; metathorax width, ♂ 0.86-0.87, ♀ 0.99-1.09; total length, ♂ 3.56-3.94, ♀ 3.90 (genital sac internal)-4.34 (sac extruded); ♂ genitalia width 0.21-0.22, length 0.78-0.86.

Remarks.—Specimens of this species are by far the largest of the genus. This represents the 1st description of a female of this species, since Keler (1953) based his description on only 1 male and 1 nymph. The unusual female terminalia are similar within the subgenus, but unique within the genus. Variation in the male subgenital plate as noted is not

surprising considering the host genus *Numida* is recognized as a single species by Peters (1934) composed of 21 subspecies with considerable geographic variation.

Material Examined.—1 ♂, 1 ♀, *N. meleagris*, Zululand; 1 ♂, 1 ♀, *Numida* sp., Africa, British East Africa; 1 ♂, *N. ptilorhyncha* (= *N. meleagris*), British East Africa.

Amyrsidea (Numidimenopon) vulturini Scharf,
new species
(Fig. 17)

Type-host: *Acryllium vulturinum* (Hardwicke).

Male.—Unknown.

Female.—Head as for *A. desousai*, except with strongly developed hypopharyngeal sclerite. Pronotal margin with 14 long, 4 short setae. Metanotal margin with 10 long setae; mesosternal and metasternal plates with 14-15 and 10 setae, respectively. Venter of femur III with brush of 33-35 setae. Marginal abdominal tergal setae: I, 13-14; II, 22-24; III-VI, 28-32; VII, 24-25; VIII, 12. With medium anterior tergal setae: I, 42-44; II-VI, 47-54; VII, 40-43; VIII, 2. Tergite IX with smaller lateral sclerotization than *A. desousai*, dorsal setae smaller, and without setae visible on dorsal portion of protruding genital sac (Fig. 17). Pleura normal, without weak sclerites between sterna and pleura. Sternal setae: I, 4; II-V, 28-35; VI, 24-25; VII, 66-68. Sternite VII slightly elongated posteriorly. Sternal brushes each side: III, 19-20; IV-V, 34-38; VI, 29-31. Fused sternites VIII and IX with 18-20 medium anterior setae, 8 setae along ventral sclerotization; protruding genital sac with microtrichial areas and 10 terminal setae (Fig. 17).

Dimensions of ♀.—Preocular width, 0.52-0.54; temple width, 0.72-0.75; prothorax width, 0.64-0.66; metathorax width, 0.72-0.75; total length, 3.30-3.35.

Remarks.—The smaller size, strongly developed hypopharyngeal sclerite, reduced number of setae both dorsally and ventrally, extension of sternite VII, smaller sclerotization and different chaetotaxy of the terminalia are the major features separating this species from *A. desousai*. However, these 2 species are the only ones known in the genus with 12 gular setae.

Material Examined.—Holotype ♀, *A. vulturinum*, Marsabit, Kenya, January 1956, Meinertzhagen 20507; in collection of British Museum (Natural History). Paratypes: 5 ♀, *A. vulturinum*, Kenya.

Amyrsidea (Numidimenopon) lopesi (TENDEIRO)
(Fig. 15, 16)

Menopon lopesi Tendeiro, 1954: 19. Type-host: *Guttera edouardi edouardi* (Hartlaub).

Male.—Head as for *A. desousai*, except with strongly developed hypopharyngeal sclerite and gular plate with 4 + 4 setae. Pronotal margin with 12-14 long, 6-8 short setae. Metanotal margin with 10 long setae; metanotum with only 2 very short fine medio-anterior setae; mesosternal and metasternal plates

with 12-14 and 6-9 setae, respectively. Venter of femur III with brush of 33-34 short setae. Marginal abdominal tergal setae: I, 13-15; II-IV, 22-26; V-VII, 25-31; VIII, 19-20. With medium anterior tergal setae: I, 4-6; II-V, 12-17; VI, 6-9; VII, 5; VIII, 0. Each side of last tergite with 4 very long marginal setae, 12 short setae latero-anterior to these, and total of 6-12 inner posterior and 70 anterior setae. Pleura normal, without weak sclerites between sterna and pleura. Sternal setae: I, 4-7; II-VIII, 14-20. Sternal brushes on III-VIII: III, 17-33; IV-VIII, 28-34. Subgenital plate with lateral thickening, 11-12 marginal and 33-40 anterior setae, but without anterior protrusions seen in *A. desousai*. Genitalia (Fig. 15) with retrorse barbs on parameres and complex spinous sac containing paired elongate sclerites meeting at inverted U-shape.

Female.—As for male, except for differences in dorsal chaetotaxy and terminalia (Fig. 16) as follows. Tergite VIII with 6-8 very long, 4-5 short marginal setae. Medium anterior tergal setae: I, 15-16; II-VI, 23-26; VII, 15; VIII, 0. Tergite IX with heavy lateral sclerotization and configuration as shown. Sternites VII-IX fused, with 9-11 very long lateral setae, 15-17 medium setae along former posterior margin of VII, with brush and other short setae arranged as in Fig. 16. Genital sac with microtrichia medially and short setae terminally.

Dimensions.—Preocular width, ♂ 0.52-0.54, ♀ 0.58-0.60; temple width, ♂ 0.71-0.73, ♀ 0.76-0.78; prothorax width, ♂ 0.53-0.58, ♀ 0.61-0.63; metathorax width, ♂ 0.62-0.66, ♀ 0.70-0.73; total length, ♂ 2.27-2.49, ♀ 2.70-2.78 (sac extruded); ♂ genitalia width 0.26-0.31, length 0.92.

Remarks.—The 8 gular setae separate this species and the next from the 2 preceding ones. In addition, the reduction in anterior tergal setae (especially on VII), the greater number of sternal brushes (from III-VIII), the different configuration of the female terminalia, and the structure of the parameres and genital sac of the male make this a well defined species. The photographs in Tendeiro (1954, 1965) make it obvious that his is the same species even though the description, particularly that of the female, does not permit recognition.

Material Examined.—1 ♂, 5 ♀, *G. e. sethsmithi* Neumann, Kenya; 1 ♂, *G. pucherani* (Hartlaub), Kenya.

Amyrsidea (*Numidimenopon*) *plumiferae* Scharf,
new species

(Fig. 18-20)

Type-host: *Guttera plumifera plumifera* (Cassin).

Male.—As for *A. lopesi*, but with the following thoracic and abdominal differences. Metasternal plate with 6-9 setae. With 16 marginal tergal setae on VIII. Medium anterior setae lacking on some and reduced in number on other tergites: I, 0; II-VI, 2-6; VII-VIII, 0. Each side of last tergite with 4 very long marginal setae, 6 medium setae latero-anterior to these, and total of 5-7 inner posterior

setae; without anterior setae (Fig. 18). Internal pleural thickenings obvious on VI-VIII, but pleura otherwise normal. Genitalia (Fig. 19) substantially shorter and narrower, with different arrangement of long and coarse spines associated with sac, and shorter paired sclerites not meeting in U-shape.

Female.—As for male, except terminalia (Fig. 20) as follows. Only 8-10 short slender marginal setae on tergite VIII; tergites VIII and IX apparently fused. Sternites VIII and IX fused by narrow median bridge. Lateral portion anterior to genital sac with 8 long, 8 medium, 9-11 small setae as in Fig. 20. Genital sac with small microtrichial spines and 2 medium setae terminally.

Dimensions.—Preocular width, ♂ 0.47-0.49, ♀ 0.54; temple width, ♂ 0.64-0.67, ♀ 0.72-0.75; prothorax width, ♂ 0.52-0.53, ♀ 0.55-0.56; metathorax width, ♂ 0.61-0.64, ♀ 0.68-0.70; total length, ♂ 2.25-2.43, ♀ 2.52-2.59; ♂ genitalia width 0.16, length 0.76.

Remarks.—The differences in anterior tergal setae, fusion of tergites VIII and IX, and narrow bridge of fusion of sternites VIII and IX in females, and the smaller male genitalia with its distinctive configuration of spinous sac and sclerites, set this species apart from *A. lopesi*. Tendeiro (1965) is incorrect in considering specimens from this type-host conspecific with *A. lopesi*.

Material Examined.—Holotype ♂, *G. p. plumifera*, Arnhem, French Cameroons, Brit. Mus. 1956-456; in collection of British Museum (Natural History). Paratypes: 2 ♀, same data as holotype. Other material: 1 ♂, 1 ♀, *Phasidus niger* Cassin, French Cameroons.

KEY TO SPECIES IN THE SUBGENUS *Numidimenopon*

1. With 12 gular setae; male (where known) with spines or protrusions on subgenital plate (Fig. 10, 11) 2
 With only 8 gular setae; male without spines or protrusions on subgenital plate 3
2. Female with 21-23 marginal setae on tergite VIII (Fig. 12); male with genitalia as in Fig. 13 or 14 and subgenital plate as in Fig. 10 or 11 ..*desousai*
 Female with only 11-12 marginal setae on tergite VIII (Fig. 17); male unknown*vulturini*
3. Both sexes with anterior setae on tergite VII; female with sternites VII and VIII broadly fused, and terminal segment as in Fig. 16; male with genitalia as in Fig. 15*lopesi*
 Both sexes without anterior setae on tergite VII; female with sternite VII and VIII fused by narrow median bridge, and terminal segment as in Fig. 20; male with genitalia as in Fig. 19
*plumiferae*

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