Review of the Amyrsidea in the Subgenus Argimenopon
(Mallophaga: Menoponidae)¹

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ABSTRACT Seventeen species are recognized in the subgenus Argimenopon Eichler, genus Amyrsidea Ewing, from galliform hosts of the Megapodidae. Tetraonidae, Phasianidae (except Odontophorus), and Numididae: descriptions, illustrations, and a key are provided. Five new species and their type-hosts are: A. (A.) nicobariensis (Megapodius nicobariensis Cuvier); A. (A.) impejani (Lophophorus impejanus); A. (A.) himalavensis (Tetrao novauchula h. himalavensis; A. (A.) tibetani (Tetrao novauchula tibetanus aquilonifer); and A. (A.) rolluli (Rallulus roulouri). A lectotype is designated for Menopon fulvomaculatum Denny, and seven new synonymies are given.

A recent study by Scharf and Price (1977) of the menoponid genus Amyrsidea Ewing, 1927, delineated five subgenera and discussed the species in two of them. Amyrsidea and Numidimenopon Scharf, 1927. Subsequently, Scharf and Emerson (in press) have reviewed the taxa in a third subgenus, Desumemenopon Carrick, 1954. Here we present descriptions, illustrations, and a key to recognize species in the subgenus Argimenopon Eichler, 1947; also included are four names considered as species indeterminata, since they cannot be placed with certainty on the basis of the present descriptions and materials.

In the following descriptions, numbers of certain head setae are those given by Clay (1969). The characteristics associated with the genus Amyrsidea and an explanation of morphological terms are given by Scharf and Price (1977) and will not be repeated here. Measurements are in millimeters. Unless noted, all illustrations are of specimens from the type-host. The nomenclature of the hosts essentially follows Peters (1934). All new species and nomenclatorial changes involved in this paper are the sole responsibility of W.C.S.

Subgenus Argimenopon Eichler

Argimenopon Eichler, 1947: 5. Type-Species: Argimenopon polytrichium Eichler

The members of this subgenus form a group of closely related lice known from the Megapodidae, Tetraonidae, Phasianidae (except Odontophorus), and Numididae. They may be separated from other subgenera by the following combination of characteristics.

1. Wide temples, with difference of 0.10–0.25 between temple and precocular width.
2. Hypopharyngeal sclerite weakly to strongly developed (Fig. 13 to 15).
3. Precocular slit 0.04–0.05 deep.
4. Precocular seta 11 longer than 0.10, and thicker than seta 10.

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(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) Large, prominent eyes.
(8) Sternite I with 2–8 setae.
(9) Outer medianterior metanotal setae shifted anteriorly, except in two species, A. phaeostoma and A. impejani, with 17–43 such setae.
(10) Female without sexually dimorphic enlarged terga.
(11) Female pleura not extended.
(12) Female terminal segment with anal fringe and sternal features as in Fig. 12, or with spiniform setae in dorsal anal fringe (Fig. 2), or with anal fringe weakly developed to absent.

Amyrsidea (Argimenopon) nicobariensis Scharf, New Species (Fig. 1)

Type-Host: Megapodius nicobariensis eumigus Dillwyn


Female.—As for male, except as follows. Medium anterior tergal setae: II–VIII, 12–27; last tergum with
total of 44–50 anterior and inner posterior setae. Sternal setae: II—VI, 28–38; VII, 46–56; and sternal brushes each with 18–32 short setae. Subgenital plate with 32–33 marginal, 25 anterior setae. Anal fringe of 49–62 dorsal, 63–67 ventral setae on broad (0.55–0.58), well developed anal and preanal sclerotization. Vulval sac with microtrichia along posterior margin.

**Dimensions.**—Preocular width (POW), male 0.54–0.56, female 0.56–0.59; temple width (TW), male 0.78–0.80, female 0.83–0.86; prothorax width (PW), male 0.62–0.65, female 0.69–0.72; metathorax width (MW), male 0.68–0.71, female 0.77–0.81; total length (TL), male 2.48–2.54, female 2.65–3.02; male genitalia width (GW) 0.16–0.17, length (GL) 0.65–0.68.

**Remarks.**—The characteristic preocular setae, wide temples, male genitalia with overall distinctive appearance (Fig. 1), presence of 44–50 setae on female last tergum, and very wide female anal sclerotization identify this species.

**Material Examined.**—Holotype male, *M. n. cumingii*, skin. Bird Room 3050; in collection of British Museum (Natural History). Paratype: female, same data as
holotype, in collection of British Museum (Natural History). Other material: 1 male, 1 female, M. n. cumingii, Philippine Islands.

Amysidea (Argimenopon) francolinus (Bedford)  
(Fig. 2-4)

Menopon francolinus Bedford, 1920: 712. Type-Host: Francolinus s. sephaena (A. Smith)

Male.—Postmentum on each side with 1 long and 2 medium setae, and 1 very short lateral seta. Minute mid-dorsal head setae, with inner 17 anterior to outer 18. Hypopharyngeal sclerite strongly developed (Fig. 14). Preocular seta 10 more slender than seta 11. Gular plate with 4 + 4 setae. Pronotal margin with 12-14 long, 2-4 short setae. Metanotal margin with 13-14 setae: meso- and metasternal plates with 11-12 and 8-9 setae, respectively. Venter of each femur III with brush of 11-19 short setae. Marginal abdominal tergal setae I, 15-18; II-VII, 22-32; VIII, 14-20. No anterior tergal setae. Each side of last tergum with 1 very long and no inner posterior setae. Sternal setae: I, 4; II, 20-23; III, 33-47; IV-V, 19-25; VI, 16-23; VII, 34-41; VIII, 22-24. Sternal brushes on IV-VI, each with 10-16 short setae. Subgenital plate with lateral rugose spinous area (Fig. 3) and 4 marginal, 20-22 anterior setae. Genitalia (Fig. 4) with uniquely shaped spines on sac, small Y-shaped sclerite associated with posterior portion of sac, and paired sclerotizations beginning above base of parameres extending parallel with sac, as well as epimeres forming 3 retractor bars on each side of endomeral plate; parameres broadly retractile.

Female.—As for male, except as follows. Last tergum with bummlike protrusions bearing microtrichia; each side with pair of short setae mediol to very long marginal seta (Fig. 2). Midportion of sterna VII-VIII fused on 1 specimen, separated on other (Fig. 2). Sternum VIII-IX connected by internal heavy sclerotization extending from anal margin to posterior sternum VII (Fig. 2). Dorsal anal fringe with 20-24 spiniform setae, medium length laterally and shorter medially (Fig. 2). Large area of vulval microtrichia present.

Dimensions.—POW, male 0.38-0.39, female 0.42; TW, male 0.48-0.49, female 0.54; PW, male 0.39-0.40, female 0.43-0.46; MW, male 0.46-0.48, female 0.50; TL, male 1.90-1.93, female 2.12; male GW 0.15-0.16, GL 0.53-0.56.

Remarks.—The absence of anterior tergal setae, the distinctive male genitalia and female terminalia sclerotization, and the female spiniform dorsal anal fringe separate A. francolinus from all other Argimenopon species. Indeed, the spiniform dorsal anal fringe strongly resembles members of the subgenus Amysidea. However, this species does not share the reduced eyes, preocular slit, and narrowed head of Amysidea and is properly placed here.

Material Examined.—Two male, 2 female (including 1 male, 1 female paratypes of M. francolinus) F. s. sephaena, Transvaal.

Amysidea (Argimenopon) powelli (Bedford)  
(Fig. 5-7)

Menopon powelli Bedford, 1920: 714. Type-Host: Pternistis swainsoni (A. Smith)

Amysidea aestopiaca Tendiero, 1965: 34. Type-Host: Francolinus c. castaneicollis Salvadori. New Synonymy

Male.—Head as for A. francolinus, except with weakly developed hypopharyngeal sclerite (Fig. 15). Pronotal margin with 10-14 long, 4-8 short setae. Metanotal margin with 8-15 setae: mesosternal and metasternal plates with 12-15 and 8-14 setae, respectively. Venter of each femur III with brush of 18-28 short setae. Marginal abdominal tergal setae I, 18-26; II-VII, 20-30; VIII, 16-21. Medium anterior tergal setae I, 10-40; II-VI, 22-67; VII, 5-46; VIII, 4-24; with widely divergent counts showing no consistency within or between hosts. Each side of last tergum with 2 very long marginal setae, 6-9 short lateral setae anterior to them, total of 6-7 inner posterior setae, and 3-10 medioanterior setae. Sternal setae: I, 4-8; II, 20-31; III, 26-53; IV-VIII, 17-54. Sternal brushes on IV-VI, each with 13-36 short setae. Subgenital plate with total of 18-40 marginal and anterior setae. Genitalia (Fig. 7) with short parallel sclerites anteriorly on sac, retractor epimeres and parameres, and additional sclerotization of side of endomere (not visible on all specimens) giving bummlike appearance.

Female.—As for male, except as follows. With total of 21-44 anterior and inner posterior setae on last tergum. Sternum VIII separate from subgenital plate, with latter shaped as in Fig. 5 and having 4-12 marginal and 21-44 anterior setae, except specimens from F. africanaus as in Fig. 6. Only weak fringes of anal setae, with 15-22 dorsal, 22-32 ventral setae. Vulval sac of most specimens with microtrichia.

Dimensions.—POW, male 0.34-0.37, female 0.33-0.44; TW, male 0.46-0.52, female 0.51-0.63; PW, male 0.32-0.41, female 0.38-0.48; MW, male 0.42-0.50, female 0.52-0.62; TL, male 1.42-1.86, female 1.90-2.22; male GW 0.10-0.11, GL 0.44-0.48.

Remarks.—The male genitalia, with the short apical sclerites on the sac and retractor epimeres, are easily separable from other members of this subgenus. The female terminalia, especially the weakly developed anal fringes, separate this and the following species from other members of both the genus and subgenus. The apparent divergence of setal counts, certain dimensions, and the variation of subgenital plates (Fig. 5 and 6) may be attributable to the wide host distribution of this species among 4 genera and 14 species and subspecies of the family Phasianidae. Similarities outweigh differences, however, and it seems best to recognize this group as a single species.

The specimens from a "chicken," presumably Gallus gallus (L.), are not surprising considering the frequency with which members of the genus Francolinus are reported to be housed together in domestication, the taxonomic closeness of the hosts, and the chances of parasite transfer between these hosts.
A single male off *Francolinus* sp. from British East Africa is similar to this species, but has a strongly developed hypopharyngeal sclerite and slightly different sclerotization and epimeres in the genitalia. Although this might indicate existence of an additional species of this subgenus from *Francolinus*, it would be imprudent to describe it without adequate host information.

**Material Examined.**—Three male, 4 female *P. swainsonii*, Transvaal; 1 male, 1 female *P. leucospesinus infuscatus* Cabanis. Kenya: 3 male, 3 female (including 1 male, 1 female paratypes of *M. powelli*) *F. s. sephaena*. Transvaal: 1 male, 1 female (holotype and allotype, respectively, of *A. aethiopica*) *F. c. castaneocollis*. Ethiopia: 4 female *F. a. africans* Stephens. Transvaal: 2 male, 2 female *F. bicalarus* (L.): French Cameroon. Ivory Coast: 1 male, 1 female *E. clappertoni* Children. N. Cameron; 1 male, 1 female *L. levallantii kikuyensis* Ogilvie-Grant. Uganda: 1 male, 1 female *F. s. squamatus* Cassin. French Cameroon; 1 male, 2 female *N. natalensis* A. Smith. Transvaal; 1 male, 7 female *F. icterorhynchos* dybowskii Oustalet, Uganda; 1 male *F. h. hildebrandti* Cabanis, Kenya: 2 male, 13 female *F. h. altumi* Fischer and Reichenow, Kenya; 2 male, 2 female *E. e. erckelli* (Rüppell), Ethiopia: 1 male, 1 female “chicken” = *G. gallus* (L.). French Cameroon; 1 male, 1 female *N. melaleuca* (L.): Kenya: 2 female *P. petrosus* (Gmelin). Cameroon

**Amyrisidea (Amyrisipon) agelastes Tendeleo**

(*Fig. 8 and 9*)

*Amyrisidea agelastes* Tendeleo. 1965: 49. Type-Host: *A. meleagrides* Bonaparte

**Male.**—Head as for *A. francolinus*, except with weakly developed hypopharyngeal sclerite (*Fig. 15*). Pronotal margin with 12 long, 8 short setae. Metanotum margin with 16–17 setae; meso- and metasternal plates with 12 and 10 setae, respectively. Venter of each femur III with brush of 28–31 short setae. Marginal abdominal tergal setae: I, 22–28; II–VI, 26–32; VII, 21–24; VIII, 15–16. Medium anterior tergal setae: I–IV, 2–6. Each side of last tegum with 2 very long marginal and 6 short setae lateroanterior to them, and total of 12–14 short to medium inner posterior setae. With 3–4 setal sockets or sensilla on each side (*Fig. 8*) anterior to inner posterior setae. Sternal setae: I, 7; II, 25–35; III, 56–63; IV–VI, 19–27; VII, 42–46; VIII, 30. Sternal brushes: IV, 31–49; V, 35–42; VI, 24–26. Subgenital plate with total of 16 marginal and anterior setae. Genitalia with sclerotizations of sac having broad, knoblike anterior portions. Spurs of sac limit to posterior fourth, epimeres broad and flattened distally, and parameres retrose (*Fig. 9*).

**Female.**—As for male, except for terminalia. Subgenital plate with 14–15 marginal, 8 anterior setae. Preanal plate extending under sternum VIII; vulval microtrichia arranged in 3–5 lateral rows. Anus with 45–51 dorsal, 66–71 ventral fringe setae arranged in random lengths, much as in *Fig. 12*.

**Dimensions.**—POW, male 0.38, female 0.40; TW, male 0.55, female 0.58; PW, male 0.43, female 0.46; MW, male 0.52, female 0.62; TL, male 1.60, female 2.07; male GW 0.15, GL 0.56.

**Remarks.**—Not only are the male genitalia distinguished from those of *A. powelli* by the broadened end of the sac sclerite, fewer spines on the sac, and broadened epimera, but they are also at least 0.04 mm wider. The female terminalia, by lacking a well-developed anal fringe as in *Fig. 12*, are characteristic of only this species and *A. powelli*. However, *A. agelastes* may be separated from *A. powelli* by the reduced number of setae on the last tegum, the greater number of marginal setae on the subgenital plate, and the fusion of sternum VIII with the subgenital plate. Both sexes lack anterior tergal setae on V–VIII. These two species are the only ones of this subgenus from the family Numidae.

**Material Examined.**—Two male, 1 female (including holotype male of *A. agelastes*) *A. meleagrides*, Liberia, Congo.

**Amyrisidea (Amyrisipon) phaeostoma (Nitzsch)**

(*Fig. 10*)

*Menopon phaeostomum* Nitzsch, 1866 (In Giebel): 391. Type-Host: *Pavo cristatus* L.


**Female.**—As for male, except for terminalia. Subgenital plate with 14–15 marginal, 8 anterior setae. Preanal plate extending under sternum VIII; vulval microtrichia arranged in 3–5 lateral rows. Anus with 45–51 dorsal, 66–71 ventral fringe setae arranged in random lengths, much as in *Fig. 12*.

**Dimensions.**—POW, male 0.58–0.60, female 0.58–0.62; TW, male 0.76–0.82, female 0.61–0.65; PW, male 0.57–0.62, female 0.61–0.65; MW, male 0.68–0.72, female 0.72–0.82; TL, male 2.45–2.60, female 2.29–2.95; male GW 0.19–0.20, GL 0.65–0.70.

**Remarks.**—This and the following species are the only members of this subgenus with females having well-developed anal fringes and both sexes having more than four medioanterior metanotal and abdominal tergal setae. Of these two, *A. phaeostoma* is much larger in all dimensions for both sexes. In addition, this species has
a strongly developed hypopharyngeal sclerite, 6–12 fewer anterior tergal setae. Sternal brushes on III–VII (vs. only IV–VI in A. impejani), and 16–20 more sternal setae on II–VIII. The way in which the parameres meet, in combination with the paired marginal sac sclerites, makes the genitalia distinctive within the genus.

Material Examined.—Two male, 4 female P. crispatus, Siam, Rajputana; 1 male, 4 female P. muticus L., Siam.

Amyrisidea (Argimenopon) impejani Scharf, New Species (Fig. 11 and 12)

Type-Host: Lophophorus impejani (Latham)

Male.—Head and thorax as for A. francolinus, except for weakly developed hypopharyngeal sclerite (Fig. 15), 18–43 median metanotal setae, and mesosternal and metasternal plates with 10–11 and 9–10 setae, respectively. Marginal abdominal tergal setae: I, 16; II–VII, 20–25; VIII, 12–14. Medium anterior tergal setae: I–VI, 19–22; VII–VIII, 8–12. Last tergum with 2 very long marginal setae on each side. 2 short setae lateroanterior to these, and total of 4–6 inner posterior setae with medial 2 longer. Sternal setae: I, 4; II–VII, 20–28; VIII, 16. Sternal brushes on IV–V, each with only 5–6 short setae. Subgenital plate with 4 long, 2 short marginal setae, and 2 long anterior setae, with crescentric sclerotization similar to Fig. 21, but without posterior protrusions and with anterior border complete. Genitalia (Fig. 11) with V-shaped sclerite having slender connection to spinous sac, and retrorse parameres with widely separated bases.


Dimensions.—POW, male 0.33–0.34, female 0.35–0.36. TW, male 0.44–0.45, female 0.47–0.49; PW, male 0.36–0.37, female 0.42–0.43; MW, male 0.38–0.40, female 0.47–0.50; TL, male 1.82–1.86, female 2.09–2.13: male GW 0.11–0.13, GL 0.34–0.37.

Remarks.—See remarks for A. phaseastoma for comparison of these species. In addition, the genitalia of A. impejani have a distinctive sac sclerite.


Amyrisidea (Argimenopon) lagopi (Grube) (Fig. 13)

Menopon lagopi Grube. 1851: 491. Type-Host: Lagopus alpinus = L. mutus pleskei Serebrovsky

Menopon latifasciatum Piaget, 1889: 465. Type-Host: Tetrao u. urogallus L. New Synonym

Menopon striatum Kellogg, 1899: 44. Type-Host: Lagopus l. alexandrae Grinnell. New Synonym


Male.—Head as for A. francolinus, except with moderately developed hypopharyngeal sclerite (Fig. 13). Pronotal margin with 13–15 long, 3–8 short setae. Metanotal margin with 12–20 setae: mesosternal and metasternal plates with 9–16 and 8–11 setae, respectively. Venter of each femur III with brush of 19–33 short setae. Marginal abdominal tergal setae: I, 14–17; II–VII, 16–20; VIII, 12–20. No anterior tergal setae. Last tergum with 2 very long marginal setae on each side, 4–6 short setae lateroanterior to them, and total of 5–10 inner posterior setae. Sternal setae: I, 2; II, 13–19; III, 18–46; IV–VII, 15–24; VIII, 25–35; IX, 12–22. Sternal brushes on III–VI, each with 14–20 short setae. Subgenital plate with total of 22–25 marginal and anterior setae. Genitalia similar to Fig. 16, but with shorter parameres (0.18–0.22).


Dimensions.—POW, male 0.43–0.47, female 0.45–0.56; TW, male 0.55–0.62, female 0.60–0.67; PW, male 0.45–0.49, female 0.47–0.53; MW, male 0.47–0.52, female 0.56–0.65; TL, male 1.78–2.05, female 2.07–2.67; male GW 0.09–0.10, GL indistinct.

Remarks.—The moderately developed hypopharyngeal sclerite, presence of only two setae on sternum I (shared with A. perdicis) in both sexes, and long parameres (but shorter than those of A. perdicis) on the long slender genitalia, identify A. lagopi.

The name established by Grube (1851) has been retained on the basis of 4 male and 3 female specimens from Lagopus l. albus = L. leucopus (L.) from Churchill, Canada, which were identified as this species by Dr. Theresa Clay and bear the note, “Compared with Grube’s type M. lagopi. T.C. 1938.”

Material Examined.—Six male, 12 female (including 2 cotype females of M. striatum), L. lagopus, Canada, Kodiak Island, Alaska: 1 male, 3 female L. mutus dixoni Grinnell, Alaska: 3 female Falciipennis falciipennis (Hartlaub), Lower Amur. A. Asia: 11 male, 7 female L. tetrix britannicus Witherby and Lonmborg, Scotland: 3 male, 3 female T. urogallus, Sweden.

Amyrisidea (Argimenopon) perdicis (Denny) (Fig. 14 and 16)

Menopon perdicis Denny, 1842: 200. 225. Type-Host: Perdix cinerea = P. p. perdicis (L.)

Menopon hexapilosus Vrazier, 1956: 121. 126. Type-Host: P. colchicus. New Synonym

Male.—Essentially as for A. lagopi, except with strongly developed hypopharyngeal sclerite (Fig. 14) and very long (0.30–0.34) parameres on long, slender genitalia (Fig. 16).

Female.—Essentially as for A. lagopi, except hypopharyngeal sclerite as for male: marginal tergal setae on III–VII, 23–30, and VIII, 21–25; and with vulval microtrichia.

Dimensions.—POW, male 0.42–0.48, female 0.45–0.52; TW, male 0.50–0.65, female 0.62–0.70; PW, male 0.43–0.54, female 0.49–0.53; MW, male 0.50–0.60, female 0.56–0.71; TL, male 1.97–2.22, female 2.04–2.58; male GW 0.09–0.10, GL indistinct.

Remarks.—It seems probable that this species has spread to a number of hosts in diverse genera and families by transfer in captivity where each has been kept for game or domestication purposes.
Materials Examined.— Four male, 4 female *P. per- dix*, England, France, Slovenia; 5 male, 1 female *Alectoris rufa* (L.), England; 1 male, 1 female *Francolinus capensis* (Gimel), South Africa; 5 male, 10 female (including female cytotype of *M. hexapilus*) *P. colchicus*, England, United States; 1 male, 2 female *Pediocetes phasianellus* (L.), United States; 2 male, 5 female *Bonasa umbellus* (L.), United States; 2 male, 10 female *Tympanuchus cupido* (L.), United States.

**Amyrisidea (Argimenopon) polytricha** (Eichler)  
(Fig. 17)

*Argimenopon polytrichum* Eichler, 1947: 6. Type-Host: *Argusianus argus* (L.)


**Dimensions.**—Both sexes in same range. POW, 0.51–0.53; TW, 0.68–0.71; PW, 0.49–0.56; MW, 0.61–0.66; TL, 2.01–2.22; male GW, 0.13–0.15; GL, 0.45–0.48.

**Remarks.**—The extremely thick sternal brushes on IV–VI and the presence of sternal brushes on III–VII in both sexes enable identification. The male genitalia are distinctive in their combination of characteristics, although the sclerite has some resemblance to that of *A. sternosetosa* (Fig. 27), and the paramere and epimere arrangement is similar to the same species (Fig. 25 and 26).

**Material Examined.**—Six male, 6 female *A. argus*, Malaya, Siam: 1 male, 1 female *Polyclectron bicalcaratum* ghigii (Delacour and Jabouille), Annam.

**Amyrisidea (Argimenopon) afropavo** Benoit (Fig. 19)

*Amyrisidea afropavo* Benoit, 1962: 20. Type-Host: *Afpavos consenisis* Chapin

**Male.**—Head as for *A. francolinus*. Except for weakly developed hypopharyngeal sclerite (Fig. 15). Pronotal margin with 14 long, 5–6 short setae. Metanotal margin with 16–18 setae; mesosternal and metasternal plates with 16–19 and 8–9 setae, respectively. Venter of each femur III with brush of 34–42 short setae. Marginal abdominal tergal setae: I–VII, 17–29; VIII, 15–18. No anterior tergal setae. Last tergum with 1–2 very long marginal setae on each side, 3–4 short setae lateroanterior to them, and total of 9 inner posterior setae. Sternal setae: I, 4–5; II–VIII, 13–21. Sternal brushes: III, 7–9; IV–VII, 16–21; VIII, 7–9. Subgenital plate as for *A. minuta* (Fig. 18), except 11–13 marginal, 6–9 anterior setae. Genitalia (Fig. 19) with characteristic paired sclerites meeting at anterior portion of spinous sac and bordering its lateral edges, flapple projections cephalad to base of parameres, and broadened epimevers.


**Dimensions.**—POW, male 0.29–0.30, female 0.31–0.33; TW, male 0.42, female 0.46–0.50; PW, male 0.35–0.36, female 0.38–0.41; MW, male 0.37–0.40, female 0.50–0.55; TL, male 1.42–1.62, female 1.86–1.90; male GW 0.08–0.09, GL 0.40–0.43.

**Remarks.**—The small dimensions set this species and the next apart as the smallest two of the genus. *A. afropavo* may be separated from *A. minuta* by the former’s weakly developed hypopharyngeal sclerite (Fig. 15), larger number of setae in the brushes of ventral femur III, females with more sternal setae, both sexes with more setae in sternal brushes, and the female with more inner posterior and anal fringe setae. The male genitalia may differ only in the wider-appearing epimere.

**Material Examined.**—Three male, 3 female (including 1 male, 1 female paratypes of *A. afropavo*), *A. congensis*, Belgian Congo.

*Amyrisidea (Argimenopon) minuta* Emerson  
(Fig. 18 and 20)

*Amyrisidea minuta* Emerson, 1961: 117. Type-Host: *Pavo cristatus*

**Male.**—Head as for *A. francolinus*. Thorax and abdomen as for *A. afropavo*, except as follows. Venter of femur III with 17–25 short setae. Sternal brushes on IV–VI with 10–18 short setae. Subgenital plate (Fig. 18) with 2 very long setae on each side, total of 12–14 marginal and 4–5 anterior setae.


**Dimensions.**—POW, male 0.29–0.31, female 0.35–0.36; TW, male 0.37–0.39, female 0.47–0.48; PW, male
Type-Host: Tetraogallus h. himalayensis G. R. Gray

Male.—Head as for A. francolinus, except with weakly developed hypopharyngeal sclerite (Fig. 15). Pronotal margin with 14 long, 2 short setae. Metanotal margin with 14 setae: mesosternal and metasternal plates with 17–19 and 10 setae, respectively. Venter of each femur III with 24–25 short setae. Marginal abdominal tergal setae: I, 19–20; II–VII, 20–26; VIII, 16–18. No anterior tergal setae. Each side of last tergum with 2 very long marginal setae, 4–5 short setae lateroanterior to them, and total of 6–7 inner posterior setae. Sternal setae: I, 4–5; II–VIII, 18–32. Sternal brushes on III–VI, each with 8–21 short setae. Subgenital plate with 10 marginal, 11 anterior setae. Genitalia (Fig. 22) with small spinous sac bearing ovate double-pointed sclerite, epimeres directed inward, and parameres anteriorly broad, posteriorly narrower and retractor.

Female.—As for male, except subgenital plate with 17–18 marginal, 16–20 anterior setae and anus with 31–35 dorsal, 58–60 ventral fringe setae.

Dimensions.—Both sexes in same range. POW, 0.55–0.56; TW, 0.66–0.67; PW, 0.52; MW, 0.67–0.68; TL, 2.59–2.70; male GW 0.14–0.16, GL 0.48–0.50.

Remarks.—The male genitalia along with the combination of setal, dimensional, and hypopharyngeal characteristics given above identify A. himalayensis. It is noteworthy that the subgenital plate of this species is similar to Fig. 21 but lacks the bummispicose prolusion along the postero edge that A. subaequale and related species possess.

Material Examined.—Holotype male, T. h. himalayensis, Afghanistan, May 1937, Meinertzhagen 9824; in collection of British Museum (Natural History). Para- types: 1 male, 3 females. same data as holotype, except April 1937; in collection of British Museum (Natural History).

Amyrsidea (Argimenonop) tibetani Scharf, New Species (Fig. 23)

Type-Host: Tetraegallus tibetanus aquilonifer R. and A. Meinertzhagen

Male.—As for A. himalayensis, except as follows. Last tergum with total of 6–7 inner posterior setae. Sternal setae: I, 3–5; II–VI, 19–33; VII, 36–42; VIII, 23–24. Sternal brushes: III, 9–13; IV–V, 18–28; VI, 13–25. Subgenital plate with 12 marginal, 12–14 anterior setae. Genitalia (Fig. 23) with sclerite of spinous sac consisting of 2 short slender bars, epimeres of medium length and directed posteriorly, and parameres of nearly equal width throughout length.

Female.—As for male, except subgenital plate with 14–16 marginal, 18 anterior setae and anus with 63–65 dorsal, 61–62 ventral fringe setae.

Dimensions.—Both sexes in same range. POW, 0.59–0.51; TW, 0.65–0.67; PW, 0.52–0.53; MW, 0.63–0.65; TL, 2.22–2.40; male GW 0.15–0.16, GL 0.46–0.50.

Remarks.—A. tibetani is closest to A. himalayensis, with details of the male genitalia the primary differentiating feature. Other minor differences are found in sternal setae, sternal brushes, inner posterior setae, setae of the male subgenital plate, and number of dorsal fringe setae of the female anus.


Amyrsidea (Argimenonop) subaequale (Piaget) (Fig. 21 and 24)

Menopon subaequale Piaget, 1880: 463. Type-Host: Euplocamus ignitus = Lophura ignita (Shaw)


Menopon substitutum Harrison, 1916: 45. Nomen novum for M. subaequale Piaget, 1880 (nee Liothema subaequale Haan, 1829)

Male.—Head as for A. francolinus, including strongly developed hypopharyngeal sclerite (Fig. 14). Pronotal margin with 13–16 long, 3–4 short setae. Metanotal margin with 15–16 setae; mesosternal and metasternal plates with 15–19 and 7–12 setae, respectively. Venter of each femur III with 34–58 short setae. Marginal abdominal tergal setae: 1. 16–19; II–VII, 18–23; VIII, 16–18. No anterior tergal setae. Each side of last tergum with 2 very long marginal setae, 3–5 short setae lateroanterior to them, and total of 7–13 inner posterior setae. Sternal setae: I, 3–5; II–VII, 15–36. Sternal brushes: III, 8–30; IV–VI, 25–54; VII, 10–22. Subgenital plate with total of 25–41 marginal and anterior setae, and shape as in Fig. 21, with bummispicose pronusions on posterior edge. Genitalia (Fig. 24) with Y-shaped sclerite on spinous sac, epimeres and parameres extending posteriorly without modifications seen in other species.

Female.—As for male, except as follows. With 2–4 more marginal tergal setae. Poorly defined brushes of 10–14 short setae each on sternum VII. Subgenital plate
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Dimensions.—Both sexes in same range. POW. 0.48–0.57; TW. 0.62–0.69; PW. 0.47–0.52; MW. 0.56–0.62; TL. 2.07–2.30; male GW 0.13–0.14, GL 0.42–0.50.

Remarks.—Since no females of A. subaequale are known from L. ignita, the female description above is for specimens of G. nycthemerus. A. subaequale is differentiated from the other species by the combination of male genitalic features, including the shape of the sac sclerite, the strongly developed hypophygeal sclerite, the structure of the male subgenital plate, and the large dimensions of both sexes.

Material Examined.—Three male (paratypes of M. subaequale) L. ignita, no locality; 2 male, 3 female G. nycthemerus. Assam, Thailand; 3 male, 2 female G. l. leucomekanos (Latham). Thailand: 5 male, 5 female Hoplophera e. erythrocephalus (Raffles). Sumatra: 2 male, 1 female Lobophopsis bulweri Sharp. Borneo.

Amyrsidea (Argimenopon) sternosetosa (Eichler) (Fig. 25–27)

Argimenopon substitutum sternosetosum Eichler, 1947: 7. Type-Host: Lophura rufa (Raffles)

Both sexes essentially as for A. subaequale, except for male genitalia (Fig. 25–27) with paired anterior portions of sclerite consistently lying laterally within heavily spinous sac, and wide epimeral sclerotizations.

Dimensions.—Both sexes in same range. POW. 0.45–0.48; TW. 0.59–0.66; PW. 0.45–0.50; MW. 0.56–0.64; TL. 1.90–2.20; male GW 0.14–0.17, GL 0.37–0.47.

Remarks.—In addition to the male genitalic differences already mentioned, this species usually has wider genitalia than A. subaequale. It is apparent that the genital sclerite of A. subaequale (Fig. 24) and the three aspects of the sclerite of A. sternosetosa (Fig. 25–27) may represent different views of similar structures. However, the genital sclerite of A. sternosetosa is most frequently seen laterally, and when seen frontally, is as in Fig. 27, with curved anterior piece and short double sclerotizations posteriorly.

Material Examined.—Two male L. rufa, Malaya; 50 male, 46 female Hierophasia swinhoei (Gould), Taiwan: 7 male, 9 female Systicus mikado (Goddle–Grant), Formosa; 1 male Pucrasia macrolopha bidelphi Marshall, Kashmir; 1 female P. macrolopha (Lesson), Himalayas.

Amyrsidea (Argimenopon) uniseriata (Piaget) (Fig. 28)

Menopon uniseriatum Piaget, 1880: 464. Type-Host: Phasianus pretulus = Diadigallus diardi (Bonaparte)

Both sexes essentially as for A. subaequale, except for male genitalia (Fig. 28) with paired anterior portions of sac sclerite forming an elongate V broadest at anterior end. Dimensions of both sexes in range given for A. subaequale.

Material Examined.—Thirteen male, 9 female D. diardi, Thailand.

Amyrsidea (Argimenopon) rolluli Scharf. New Species (Fig. 29)

Type-Host: Rollulus rourollu (Scopoli)

Both sexes essentially as for A. subaequale, except marginal abdominal tergal setae on VII. 14–15, and VIII. 12–14. genitalia (Fig. 29) of male with sclerite resembling that of A. subaequale, but more slender; and with highly modified epimeral structure showing sclerotic alar expansions posteriorly.

Dimensions.—Both sexes in same range. POW. 0.47–0.50; TW. 0.61–0.64; PW. 0.50–0.51; MW. 0.60–0.62; TL. 1.98–2.12; male GW 0.11–0.12, GL indistinguishable.


Species Indeterminata

Amyrsidea (Argimenopon) fulvomaculata (Denny)

Menopon fulvomaculatum Denny, 1842: 199. 218. Type-Host: Perdid coturnix = Coturnix c. coturnix (L.)

Menopon pallescens Giebel, 1866: 391. Nomen novum for M. fulvomaculatum Denny

Only three females off quail from Britain were available for study and their poor condition precludes accurate identification. However, they resemble those of A. perdicis closely; the nearness of the hosts suggests that subsequently this species may be conspecific with A. perdicis if males are discovered. In the meantime, of the three females, the single specimen alone on slide 52.98 is designated as lectotype and the other two are paratypes.

Amyrsidea (Argimenopon) strepsilae (Denny)

Menopon strepsilae Denny, 1842: 201, 226. Type-Host: Strepsilas collaris. —Error

The placement of this name is impossible, since the type-host is in error and the type-specimen is a nymph. No adult specimens were available for study; the name is included here only because Hopkins and Clay (1952) considered it to be an Amyrsidea and close to several members of Argimenopon.

Amyrsidea (Argimenopon) triseriata (Piaget)

Menopon triseriatum Piaget, 1880: 460. Type-Host: Gallus gallus bankiva Temminck

Only two female paratypes of this species have been seen; these were off G. g. bankiva from Java and proved to be inseparable from females of A. subaequale, A. uniseriata, A. sternosetosa, or A. rolluli. Although this may prove to represent a separate species if males are
found, it definitely is not A. powelli, which has also been found on G. gallus. When one considers how well the Mallophaga of G. gallus are known, it is suspected that these specimens may be contaminants whose true identity may never be known.

**Amyrsidea** (Argimenon) lativulvata (Piaget)

*Menopon lativulvatum* Piaget, 1880: 465. Type-Host: *Megapodius rubripes* = *M. reinwardtii* Dumont

Only one female of this species off *M. reinwardtii* forsternii G. R. Gray (no locality) was available for study and it agrees in most respects with *A. nicobariensis* females. However, since males in this subgenus are critical for species recognition, accurate placement of *A. lativulvata* awaits the availability of males.

**Key to Species in the Subgenus Argimenon**

1. Precocular seta 10 with diameter equal to precocular seta 11; female with over 40 setae on last tergum and well developed anal fringe setae; male genitalia as in Fig. 1: *nicobariensis* Precocular seta 10 more slender than seta 11; female with fewer than 30 setae on last tergum and anal fringe less developed, with spiniform setae, or setae absent; male genitalia not as above 2

2. Female anus with spiniform setae in dorsal fringe (Fig. 2); male subgenital plate with rugose sclerotization (Fig. 3); and genitalia as in Fig. 4: *francolins* Female anus without spiniform setae; male genitalia not as above and subgenital plate without rugose sclerotization ................................................. 3

3. Female anus with weakly developed or apparently absent fringe setae (Fig. 5); male genitalia as in Fig. 7 or 9 ................................................. 4

4. Female anal fringe setae well developed (Fig. 12); male genitalia not as above 5

5. With at least 20 anterior setae on each of terga II–VI; female terminal segment as in Fig. 5, some with subgenital plate as in Fig. 6; male genitalia as in Fig. 7: *powelli* Without medioanterior setae on terga V–VI (4–13 lateroanterior setae on some); only up to 6 medioanterior setae on terga II–IV; female terminal segment as in Fig. 8; male genitalia as in Fig. 9: *agelastes*

6. With anterior tergal setae and at least 15 medioanterior metanotal setae ................................................. 6

7. Without anterior tergal setae and with only up to 4 medioanterior metanotal setae................................................. 7

8. With moderately developed hypopharyngeal sclerite (Fig. 13); male genitalia with parameres under 0.23 long. .......................................................... *lagopii* With strongly developed hypopharyngeal sclerite (Fig. 14); male genitalia with parameres at least 0.30 long (Fig. 16) .................................................. *perdics*

9. Sternal brushes on IV–VI very dense, at least 54 setae in each; each sternal brush on III with over 24 setae; male genitalia as in Fig. 17: *polysticta* Sternal brushes on IV–VI less dense, only up to 51 setae in each; each sternal brush on III with under 17 setae; male genitalia variable ................................................. 10

10. Total length of female under 1.95, male under 1.70 ............................................................................. 11

11. Total length of female over 1.95, male over 1.70 ............................................................................. 12

12. With weakly developed hypopharyngeal sclerite (Fig. 15); male genitalia with large spinous sac and long parameres (Fig. 19): *afropavo* With strongly developed hypopharyngeal sclerite (Fig. 14); male genitalia with small spinous sac and short parameres (Fig. 20) .................................................. *minuta* With strongly developed hypopharyngeal sclerite (Fig. 14); male subgenital plate slender, without rounded sclerotized projections; females of *tibetani* and *himalayensis* inseparable ................................................. 13

14. With strongly developed hypopharyngeal sclerite (Fig. 14); male subgenital plate with rounded sclerotized projections (Fig. 21); females of *subaequalae*, *sternosetosa*, *uniseriata*, and *rolluli* inseparable ................................................. 14

13. Male genital sclerite ovate, pointed at each end (Fig. 22): *himalayensis* Male genital sclerite of 2 short slender bars (Fig. 23): *tibetani* .................................................. 14

15. Posterior end of male genital sclerite double (Fig. 25–27) .................................................. *sternosetosa* Posterior end of male genital sclerite single, ................................................. 16

16. Genital sclerite deeply cleft (Fig. 28): *uniseriata* Genital sclerite only shallowly cleft (Fig. 29): *rolluli*

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