

# Subfamily Eucneminae Eschscholtz, 1829

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**Differential diagnosis.** Larger size, infusate reddish elytra and entirely black colored pronotum will distinguish *S. bipectinatus* from *S. apicalis*.

**Distribution.** A very rare eucnemid species previously known from Papua New Guinea, Taiwan and Vietnam (FLEUTIAUX 1947, SUZUKI & CHOU 2012)). The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a tropical montane deciduous forest.

### SUBFAMILY EUCNEMINAE ESCHSCHOLTZ, 1829

**Diagnosis.** Mandibles slender, without teeth, originally with ventrally expanded lateral surfaces; antennomeres IX–XI originally enlarged, tubular, sexually dimorphic; prothoracic tibiae with one apical spur; lateral surfaces of mesothoracic and metathoracic tibiae flattened with sharp angles between lateral and caudal surfaces, originally with hairs and spines; male prothoracic tarsomere I with or without sex combs; tarsomere IV originally simple; prohypomeron with basally closed lateral antennal grooves; male aedeagus flattened; median lobe free, without dorsal basal struts, originally with notched apex; female eighth sternite partly sclerotized; bursa originally bifurcate, undivided; spermatheca sclerotized, divided.

#### Key to the tribes within the subfamily Eucneminae

- |   |  |                                      |
|---|--|--------------------------------------|
| 1 | Prothoracic tibiae with one apical spur. ....  | 2                                    |
| – | Prothoracic tibiae without apical spur. ....   |                                      |
|   | .....  | <b>Dendrocharini Fleutiaux, 1920</b> |
| 2 | Tarsi simple, without ventral lobes. ....  | 3                                    |
| – | Tarsi with ventral lobes. ....   | <b>Galbitini Muona, 1991</b>         |
| 3 | Cylindrical form; hypomeron usually without excretory hairs along antennal grooves. .... | <b>Mesogenini Muona, 1993</b>        |
| – | Elongated form; hypomeron with excretory hairs along antennal grooves. ....              | <b>Eucnemini Eschscholtz, 1829</b>   |

#### Tribe Dendrocharini Fleutiaux, 1920

**Diagnosis.** Form massive, cylindrical; eyes small; mandible short, with secondary ventral tooth; frontoclypeal region short, very wide; antennal sockets widely separated; apical spur absent on prothoracic tibiae; tarsomere IV simple; antennomeres III–XI flattened, triangular; metathoracic sternum without tarsal grooves; aedeagus flattened, highly modified, tubular; basal piece very small, dorsally closed; median lobe with entire apex; lateral lobes transversely divided dorsally; bursa simple, divided; spermatheca sclerotized, divided.

**Key to the genera within the tribe Dendrocharini**

- 1 Tarsi simple, without ventral lobes. ... *Scopulifer* Fleutiaux, 1896  
 – Tarsi with ventral lobes. ... *Dendrocharis* Guérin-Ménéville, 1843

***Scopulifer* Fleutiaux, 1896**

**Diagnosis.** Dendrocharini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; male prothoracic tarsomere I simple, with sex combs; metathoracic coxal plates parallel-sided; last visible ventrite strongly produced; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae and transverse rows of spine combs; tarsomeres simple, without ventral lobes.

**Key to the species of *Scopulifer***

- 1 Elytra with indications of broken striae. .... 2  
 – Elytra without striae. .... *Scopulifer atkinsoni* Fleutiaux, 1912  
 2 Lateral sides of pronotum weakly arcuate, gradually narrowing craniad; frons with delicate median carina. ....  
 ..... *Scopulifer asiaticus* sp.nov.  
 – Lateral sides of pronotum strongly arcuate, not narrowed craniad; frons without delicate median carina. .... *Scopulifer laosianus* sp.nov.

***Scopulifer asiaticus* sp.nov.**

(Fig. 77)

**Type material.** Male holotype: “LAOS centr., 27.IV.1997, 70 km NE Vientiane, BAN PHABAT env., 150 m, N 18°16.1′, E 103°10.9′, M. Strba and R. Hegovits leg.” / “*Scopulifer alternans*, Bonvouloir, 1875, J. Muona det. 2014” / “HOLOTYPE, *Scopulifer, asiaticus*, Otto, det. R.L. Otto, 2015” (♂ handwritten behind species name on label) [red printed label]. Holotype is deposited in JMC.

Paratype: 3, from the following locality: LAOS: 1, “LAOS centr., 27.IV.–1.V.1997, 70 km NE Vientiane, BAN PHABAT env., 150 m, N18°16.1′, E103°10.9′, E. Jendek & O. Šauša leg.” / “*Scopulifer alternans*, Bonvouloir, 1875, J. Muona det. 2014”; 1, “LAOS centr, Bolikhamsai prov., BAN NAPE – Kaew Nua Pass, 18.4.–1.5.1998, alt. 600 ±100 m, N 18°22.3′ E 105°09.1′ (GPS), M. Strba & R. Hergovits leg.” / “*Scopulifer alternans*, Bonvouloir, 1875, J. Muona det. 2014”; THAILAND: 1, “THAILAND Bor. occ., PAI, SOPPING, 28.5–5.6.1997, lgt. M. Snizek” / “*Scopulifer alternans*, Bonvouloir, 1875, J. Muona det. 2014”.

Each specimen labeled: “PARATYPE, *Scopulifer, asiaticus*, Otto, det. R.L. Otto, 2015” (♂ handwritten behind species name on label) [yellow printed label]. Paratypes are deposited in JMC.

**Description.** Male holotype: Length, 6.50 mm. Width, 2.00 mm. Body cylindrical, elongate; uniformly dark brown; basal antennal segment dark brown, remaining segments reddish-brown; femur and tibiae dark brown; tarsi reddish-brown; head, pronotum and elytra clothed with short, yellowish recumbent setae (Fig. 77).

*Head:* Tightly granulose, subspherical; frons with small, median, deep, circular fovea above frontoclypeal region and delicate median carina extending from vertex to apical margin of frontoclypeal region; surface dull; apical margin of frontoclypeal region evenly rounded, less than 2 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Serrate from antennomeres II–X, reaching as far back as the hind angles of the pronotum; antennomere III longer than IV; antennomeres IV–X subequal, serrate, about as long as wide; antennomere XI slightly longer than X.

*Pronotum*: Granulose; surface somewhat shiny; as long as wide, with short, slightly divergent hind angles; lateral side gradually narrow cranially, arcuate; disc convex, with delicate median groove extending from base up to 3/4 the length of pronotum; base sinuous.

*Scutellum*: Somewhat shiny, oblong, sub-trapezoid and distally rounded.

*Elytra*: Striae very weakly indicated, almost indistinct, broken; interstices slightly elevated, surfaces granulose.

*Legs*: First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV simple, without ventral lobes; metathoracic tarsomere V elongate with simple claws.

*Venter*: Granulose, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Variation.** Three male paratypes were examined. The paratypes measured 7.00–7.50 mm long and 2.25–2.50 mm wide, larger and slightly wider than the holotype. Exoskeletal coloration are similar to the holotype. Granules on the apical edge of the pronotum is slightly spaced wider on one of the paratypes. Frontal carina on the frons are much more reduced in one of the paratypes compared against the holotype.

**Etymology.** The specific epithet is derived from the term Asia, in which the new species is distributed on the Asian subcontinent.

**Differential diagnosis.** Presence of weakly indicated, near indistinct elytral striae will distinguish *S. asiaticus* from *S. atkinsoni*. Weakly arcuate, gradually narrowing pronotum and presence of delicate median carina on frons will further distinguish *S. asiaticus* from *S. laosianus*.

**Distribution.** A very rare eucnemid species known from two localities in northern and northeastern Laos, as well as a single locality in Thailand.

**Ecoregion(s).** Luang Prabang montane rain forests, Northern Annamites rain forests.

**Biology.** Developmental stages remain unknown. All adults were taken from a lowland semi-evergreen forest.

### *Scopulifer atkinsoni* Fleutiaux, 1912

(Fig. 78)

**Material examined.** Seven specimens were available for study: 2, “LAOS centr, 27.IV.1997, 70 km NE Vientiane, BAN PHABAT env., 150m, N 18° 16.1 E 103° 10.9, M. Strba & R. Hegovits leg.” / “*Scopulifer atkinsoni*, Fleutiaux 1912, J. Muona Det. 2014” (JMC); 3, “LAOS, Bolikhamxai pr., 18°16'N 103°11'E, 70 km NEE Vientiane, 27–30.iv.1997, 150 m, Vít Kubáň leg.” (GERP, NHMB); 1, “LAOS-N (Louangphrabang), 11–21.v.2002, 19°35'N, 101°58'E, THONG KHAN, ~750 m, Vít Kubáň leg.” / “*Scopulifer atkinsoni*, Fleutiaux, 1912, J. Muona det. 2014” (JMC); 1, “LAOS, Houa Phan prov., 20°42.40'N/104°23.70'E, Muang Sop Bao, 300 m, 6–8.vi.2009, M. Geiser & D. Hauck leg.” / “NHMB Basel, NMPC Prague, Laos 2009 Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň” (NHMB).

**Redescription.** Length, 6.50–9.00 mm. Width, 2.50–3.00 mm. Body cylindrical, elongate; uniformly dark brown to black; basal antennal segment dark brown to black, remaining segments reddish-brown; femur and tibiae dark brown to black; tarsi reddish-brown; head, pronotum and elytra clothed with sparse, short, yellowish recumbent setae (Fig. 78).

*Head:* Granulose, subspherical; frons with small, median, deep, circular fovea above frontoclypeal region; surface dull; apical margin of frontoclypeal region evenly rounded, less than 2 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres II–X, reaching as far back as the hind angles of the pronotum; antennomere III slightly longer than IV; antennomeres IV–X progressively wider than long to as long as wide, subequal, serrate; antennomere XI slightly longer than X.

*Pronotum:* Granulose; surface dull; as long as wide, with short hind angles; lateral side gradually narrow cranially, arcuate; disc convex; base sinuous.

*Scutellum:* Shiny, oblong, sub-trapezoid, distally rounded and apically grooved.

*Elytra:* Striae absent; interstices absent, surfaces granulose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV simple, without ventral lobes; metathoracic tarsomere V elongate with simple claws.

*Venter:* Granulose, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Lack of elytral striae will distinguish *S. atkinsoni* from both *S. asiaticus* and *S. laosianus* in Laos.

**Distribution.** A rare eucnemid species previously known from India, Myanmar, Philippines and Vietnam. The species was taken for the first time in Laos.

**Ecoregion(s).** Luang Prabang montane rain forests, Northern Indochina subtropical forests.

**Biology.** BEESON (1941) reported the species bores in wood of *Pentacme suavis* de Candolle (Dipterocarpaceae). Adults were taken from a dry evergreen forest, lowland semi-evergreen forest and tropical montane deciduous forest.

### *Scopulifer laosianus* sp.nov.

(Fig. 79)

**Type material.** Female holotype: “LAOS north, LUANG NAMTHA env., 4.–12.v.1998, R. HERGOVITS leg.” (handwritten) / “Scopulifer ?feai, Fleutiaux, 1896, J. Muona det. 2014” / “HOLOTYPE, *Scopulifer, laosianus*, Otto, det. R.L. Otto, 2015” (♀ handwritten behind species name on label) [red printed label]. Holotype is deposited in JMC.

**Description.** Female holotype: Length, 11.50 mm. Width, 3.75 mm. Body cylindrical, elongate; uniformly black; basal antennal segment black, remaining segments brown; femur and tibiae dark brown to black; tarsi dark brown; head, pronotum and elytra clothed with short, whitish recumbent setae (Fig. 79).

*Head*: Granulose, subspherical; frons with small, median, deep, circular fovea above frontoclypeal region; surface dull; apical margin of frontoclypeal region evenly rounded, less than 2 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Serrate from antennomeres II–X, reaching as far back as the hind angles of the pronotum; antennomere III slightly longer than IV; antennomeres IV–X subequal, serrate; antennomeres IV, VIII–X as long as wide; antennomeres V–VII wider than long; antennomere XI slightly longer than X.

*Pronotum*: Granulose; surface dullish; as long as wide, with divergent, moderate hind angles; lateral sides arcuate; disc convex, with short, basal, delicate median groove; base sinuous.

*Scutellum*: Somewhat shiny, oblong, sub-trapezoid and distally rounded.

*Elytra*: Striae very weakly indicated, broken; interstices flattened, surfaces granulose.

*Legs*: First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV simple, without ventral lobes; metathoracic tarsomere V elongate with simple claws.

*Venter*: Granulose, with short, whitish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Etymology.** The specific epithet, *laosianus* is derived from the country in which the new species has been collected.

**Differential diagnosis.** Laterally arcuate pronotum will distinguish *S. laosianus* from both *S. asiaticus* and *S. atkinsoni* in Laos.

**Distribution.** A very rare, endemic eucnemid species known from a holotype collected in the Luangnamtha province in Northern Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a dry evergreen forest.

### ***Dendrocharis* Guérin-Ménéville, 1843**

**Diagnosis.** *Dendrocharini*, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; male prothoracic tarsomere I simple, with sex combs; metathoracic coxal plates parallel-sided; last visible ventrite strongly produced; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae and transverse rows of spine combs; tarsomeres with ventral lobes; male aedeagus dorsoventrally compressed, without secondary lateral lobes; median lobe simple, usually pointed apically; lateral lobes simple, entire; flagellum simple.

**Note.** A revision of the tribe *Dendrocharini* is currently underway as of this publication, including descriptions of several new *Dendrocharis* species collected in Laos. Three new species will not be included in this study.

Key to the species of *Dendrocharis*

- 1 Dorsum with elongate setae. ....  
 ..... *Dendrocharis intermedia* Fleutiaux, 1896  
 – Dorsum with short, sparse setae. ....  
 ..... *Dendrocharis rouyeri* Fleutiaux, 1912

*Dendrocharis intermedia* Fleutiaux, 1896

(Fig. 80)

**Material examined.** Ten specimens were available for study: 2, “LAOS centr., 27.IV.1997, 70 km NE Vientiane, BAN PHABAT env., 150 m, N18°16.1', E103°10.9', M. Strba & R. Hegovits leg.” / “*Dendrocharis bicolor* “B”, Redtenbacher 1867, J, Muona det. 2014” (JMC); 5, “LAOS, Borikhamxai prov., 18°16'N, 103°11'E, 70 km NEE Vientiane, 27–30.iv.1997, 150 m, Vít Kubáň leg.” (GERP, NHMB); 1, “LAOS, Louangnamtha pr., 21°09'N 101°19'E, Namtha → Muang Sing, 5–31.v.1997, 900–1200 m, Vít Kubáň leg.” (NHMB); 1, “LAOS-N, 22.iv.1999, Louangphrabang pr., 20°43'N, 102°41'E, MUANG NGOY, 500 m, Vít Kubáň leg.” / “*Dendrocharis bicolor* “B”, Redtenbacher 1867, J, Muona det. 2014” (JMC); 1, “LAOS: S-Oudomxai Prov., PAK BENG, 450 m, N19°53'37”, E101°07'51”, 18–27.v.2001, JIŘÍ KOLIBÁČ leg.” (NHMB).

**Redescription.** Length, 10.00–13.00 mm. Width, 3.00–4.00 mm. Body cylindrical, elongate; uniformly dark brown-black; antennomeres I dark brown-black, antennomeres II–XI reddish-brown; femur and tibiae dark brown-black; tarsi dark reddish-brown; head, caudal area of pronotum and scutellum with distinct but scant, short gold colored setae; remaining areas of pronotum and elytra clothed with sparse, short, yellowish recumbent setae (Fig. 80).

*Head:* Granulose, subspherical; frons convex, with small, median circular fovea above frontoclypeal region; surface dullish; apical margin of frontoclypeal region evenly rounded, less than 2 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres III–X, reaching as far back as the hind angles of the pronotum; antennomere III as long as IV; antennomeres IV–X each wider than long, subequal, serrate; antennomere XI slightly longer than X.

*Pronotum:* Granulose; surface somewhat shiny; setose; slightly longer than wide, with moderate hind angles; lateral sides parallel-sided at basal 2/3, arcuate at apical 1/3; disc convex, with moderately developed median tubercle, with median shallow groove extending from base to tubercle; base sinuous.

*Scutellum:* Setose, quadrate, distally rounded; without median keel.

*Elytra:* Striae strongly indicated at apical 1/2; interstices flattened to slightly elevated, surfaces granulose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres II–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter:* Granulose, with scant, recumbent, short, yellowish setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Presence of elongate setae on dorsum, along with broken elytral striae near apices will distinguish *D. intermedia* from *D. rouyeri*.

**Distribution.** A rare, widespread eucnemid species have been taken in India, Laos, Malaysia, Myanmar, the Philippines and Vietnam.

**Ecoregion(s).** Luang Prabang montane rain forests, Northern Indochina subtropical forests.

**Biology.** FLEUTIAUX (1927) and BEESON (1941) both reported the species bores in wood of *Shorea robusta* Roth (Dipterocarpaceae). Adults were taken from a dry evergreen forest, lowland semi-evergreen forest and tropical montane deciduous forest.

### *Dendrocharis rouyeri* Fleutiaux, 1912

(Fig. 81)

**Material examined.** Three specimens were available for study: 1, “N LAOS, 13–24.V.1997, 15 km NW Luang Namtha, N 21°07.5′ E 101°21.0′, M. Strba & R. Hergovits leg.” / “*Dendrocharis rouyeri*, Fleutiaux, 1912, J. Muona det. 2014” (JMC); 1, “LAOS-NE, Xieng Khouang prov., 19°37–8′N 103°20–1′E, 30 km NE Phonsavan : Ban Na Lam → Phou Sane Mt., 1300–1700 m, 10–30.v.2009, M. Geiser leg.” / “NHMB Basel, NMPC Prague, Laos 2009 Expedition; M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň” (NHMB); 1, “NE LAOS, Hua Phan prov., Ban Saleui, Phou Pan (Mt.), 1300–1900 m, 7.iv.–25.v.2010, 20°12′N, 104°01′E, leg. C. Holzschuh” / “BMNH{E}, 2012–14, C. Holzschuh” (BMNH).

**Redescription.** Length, 9.50–12.00 mm. Width, 2.50–4.00 mm. Body cylindrical, elongate; uniformly dark brown; antennomere I dark brown, antennomeres II–XI medium brown; femur and tibiae dark brown; tarsi medium brown; head, pronotum and elytra clothed with short, sparse, yellowish recumbent setae (Fig. 81).

*Head:* Granulose, subspherical; frons convex, with median circular fovea above frontoclypeal region; surface dull; apical margin of frontoclypeal region evenly rounded, less than 2 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres II–X, reaching as far back as the hind angles of the pronotum; antennomere III slightly longer than IV; antennomeres IV–X each as long as wide, subequal, serrate; antennomere XI slightly longer than X.

*Pronotum:* Granulose; surface dull; sparsely setose; slightly longer than wide, with short hind angles; lateral side gradually narrow apically, arcuate; disc convex, with small median tubercle, without median shallow groove or carina; base sinuous.

*Scutellum:* Sparsely setose, short, quadrate, distally rounded.

*Elytra:* Striae not indicated; interstices slightly elevated; surfaces granulose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres II–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter:* Granulose, with sparse, short, recumbent yellowish setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Lack of elytral striae as well as presence of short, sparse setae on dorsum will distinguish *D. rouyeri* from *D. intermedia* in Laos.

**Distribution.** A very rare eucnemid species previously known from Indonesia. The species was taken for the first time in Laos.

**Ecoregion(s).** Luang Prabang montane rain forests, Northern Indochina subtropical forests.



**Biology.** Developmental stages remain unknown. Adults were taken from a dry evergreen forest and tropical montane deciduous forest.

### Tribe Mesogenini Muona, 1993

**Diagnosis.** Form cylindrical; frons with median keel; tarsomere IV simple; male prothoracic tarsomere I without sex combs; tarsomeres without ventral lobes; antennomeres III–XI gradually more serrate and transverse towards apex; hypomeron usually without hairy excretory organs along antennal grooves; metathoracic sternum with tarsal grooves; metathoracic coxal plates usually parallel-sided; basal piece dorsally closed; median lobe divided in apical and basal parts; ventral basal struts apically fused; fused basal portion of lateral lobes dorsally attached to basal piece; lateral lobes transversely divided dorsally, apices turned dorsocaudad; bursa simple, divided; spermatheca sclerotized, divided, globular with secondarily expanded, pileated apex.

#### Key to the genera within the tribe Mesogenini

- 1 Tarsomere IV simple. .... 2
- Tarsomere IV excavate-emarginate. .... 3
- 2 Metathoracic coxal plates medially 3.00–6.00 times wider than laterally; body elliptical, robust. .... *Euryostus* Bonvouloir, 1871
- Metathoracic coxal plates parallel-sided; body subcylindrical. ....  
..... *Mesogenus* Bonvouloir, 1871
- 3 Metathoracic sternum without tibiotarsal grooves. .... 4
- Metathoracic sternum with tibiotarsal grooves. ....  
..... *Vitellius* Bonvouloir, 1871
- 4 Antennomere III shorter than or as long as IV. ....  
..... *Feaia* Fleutiaux, 1896
- Antennomere III longer than IV. .... *Arisus* Bonvouloir, 1871

#### *Arisus* Bonvouloir, 1871

**Diagnosis.** Mesogenini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; metathoracic coxal plates either parallel-sided or medially 1.20–2.50 times wider than laterally; last visible ventrite either rounded or truncated; tarsomere IV excavate-emarginate; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae and transverse rows of spine combs; male aedeagus dorsoventrally compressed, without secondary lateral lobes; median lobe simple, with separate apical median sclerite either entire or bifurcate; lateral lobes with secondary constriction apically, longitudinally bilobed; flagellum simple.

**Note.** J. Muona (pers. comm.) is currently revising the group. He will be describing a few new species in the Southeast Asian and Oceanic regions, including one species taken in Laos. The new species will not be included in this study. Identification was made

possible by examining the types of two species from the MNHN. The remaining species identification was accomplished with assistance of Jyrki Muona through personal communication.

### Key to the species of *Arisus*

- 1 Vertex with median carina. .... 2
- Vertex convex, without median groove or carina. .... 3
- 2 Pronotum shiny, with confluent punctations. ....  
..... *Arisus castelnaui* Bonvouloir, 1871
- Pronotum dullish, densely rugose to granulose. ....  
..... *Arisus orientalis* Bonvouloir, 1871
- 3 Pronotum with lateral gibbosities. ....  
..... *Arisus bituberculatus* Fleutiaux, 1935
- Pronotum without lateral gibbosities. ....  
..... *Arisus wicardi* Bonvouloir, 1871

#### *Arisus bituberculatus* Fleutiaux, 1935

(Fig. 82)

**Material examined.** One specimen was available for study: “LAOS, Phongsaly prov., PHONGSALY env., 6.–17.v.2004, ~ 1500 m, 21°41'N 102°06'E, M. Brancucci leg.” (BMNH).

**Redescription.** Length, 10.50 mm. Width, 3.00 mm. Body subcylindrical, elongate and tapering towards elytral apex; uniformly dark brown; antennomeres I dark brown, antennomeres II–XI medium-brown; legs dark reddish-brown; head, pronotum and elytra clothed with short, sparse, yellowish recumbent setae (Fig. 82).

*Head:* Rugose, subspherical; frons convex; surface somewhat shiny; frontoclypeal region with pair of carina present along lateral sides; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres IV–X, reaching as far back as the hind angles of the pronotum; antennomere III almost as long as the combined lengths of IV and V; antennomere IV as long as V; antennomeres V–X each as long as wide, serrate; antennomere XI longer than X.

*Pronotum:* Very closely punctate to rugose; surface dullish; wider than long, with moderate, sharp hind angles; basal 1/2 parallel-sided, apical 1/2 arcuate; disc convex, with pair of delicate small circular foveae and pair of very small gibbosities; base sinuous, with foveae at both sides of scutellum.

*Scutellum:* Shiny, oblong, quadrate and distally rounded.

*Elytra:* Striae indicated; interstices slightly elevated; surfaces closely, shallowly punctate to transversely rugose, setose.

*Legs:* First tarsomere as long as the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–III simple; metathoracic tarsomere IV excavate-emarginate; metathoracic tarsomere V elongate with simple claws.

*Venter*: Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Lack of median carina or groove on the head will distinguish *A. bituberulatus* from *A. castelnaui* and *A. orientalis*. Presence of lateral gibbositities will further distinguish *A. bituberulatus* from *A. wicardi*.

**Distribution.** A very rare eucnemid species previously found in India. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** GARDNER (1935) described larvae collected from a decaying *Macaranga denticulata* (Blume) (Euphorbiaceae) log in Bengal, India. A single adult was taken from a tropical montane deciduous forest.

### *Arisus castelnaui* Bonvouloir, 1871

(Fig. 83)

**Material examined.** Four specimens, including the holotype were available for study: 1, "INDONESIA: Sumatra, Annai Valley, 400m, October 1995, St. Jakl lgt" (GERP); 1, "INDONESIA: S. Kalimantan, Kandangan Dist., Loksado vill., 8–15.11.1997, St. jakl lgt" (GERP); 1, "INDONESIA: Sumatra, Mt. Tandikat, 400–600m, cca 25 km N. Pariaman, January 2007, St. Jakl lgt." (GERP). These specimens were compared against the holotype (Fig. 83) collected in Malaysia from Bonvouloir's collection conserved at the Paris Museum. No specimens from Laos were available for study during the course of this research.

**Redescription.** Length, 11.50–16.00 mm. Width, 3.50–4.50 mm. Body subcylindrical, elongate and tapering towards elytral apex; uniformly dark brown; antennomeres I–II dark brown, antennomeres III–XI reddish-brown; legs reddish-brown; head, pronotum and elytra clothed with short, yellow recumbent setae (Fig. 83).

*Head*: Confluently punctate, subspherical; frons convex; vertex with short, delicate median carina; surface somewhat shiny; lateral sides of frontoclypeal region carinate; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Strongly serrate from antennomeres IV–X, reaching just beyond the pronotal hind angles; antennomere III almost as long as the combined lengths of IV and V; antennomeres IV–X each wider than long; antennomere XI longer than X.

*Pronotum*: Rugose to confluent punctate; surface shiny; as long as wide, with moderate, sharp hind angles; basal 2/3 parallel-sided, apical 1/3 arcuate; disc convex, with pair of tubercles and shallow median groove extending throughout entire length; base sinuous, with short median carina above scutellum.

*Scutellum*: Finely punctate, shiny, setose, quadrate and distally rounded; median carina present.

*Elytra*: Striae indicated; interstices slightly elevated; surfaces closely punctate, setose.

*Legs*: First tarsomere presumably longer than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae flattened in cross section; metathoracic tarsomeres I–III simple; metathoracic tarsomere IV excavate-emarginate; metathoracic tarsomere V presumably elongate with simple claws.

*Venter*: Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates medially 1.25–2.50 times wider than laterally.

**Differential diagnosis.** Delicate median carina on the frons will distinguish *A. castelnau* from *A. bituberculatus* and *A. wicardi*. Shiny pronotal luster and confluent punctate surfaces will further distinguish *A. castelnau* from *A. orientalis*.

**Distribution.** A very rare eucnemid species was previously found in India, Indonesia, Laos, Malaysia and Papua New Guinea. In Laos, *A. castelnau* was taken at Haut Mékong, Pang-Ngéou (FLEUTIAUX 1923).

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown.

### *Arisus orientalis* Bonvouloir, 1871

(Fig. 84)

**Material examined.** One specimen was available for study: “NE LAOS, Hua Phan prov., Ban Saleui, Phou Pan (Mt.), N20°12' E104°01', 1300–1900 m, 11.iv.–15.v.2012” / “BMNH{E}, 2012-14, C. Holzschuh” (BMNH).

**Redescription.** Length, 9.25 mm. Width, 2.75 mm. Body elliptical, robust and tapering towards elytral apex; uniformly dark brown; antennomere I dark brown, antennomeres II–XI medium-brown; legs dark brown; head, pronotum and elytra clothed with short, sparse, yellowish recumbent setae (Fig. 84).

*Head*: Deeply punctate to rugose, subspherical; frons convex; vertex with short, fine median carina; surface somewhat shiny; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Serrate from antennomeres IV–X, reaching as far back as the hind angles of the pronotum; antennomere III almost as long as the combined lengths of IV and V; antennomere IV slightly shorter than V, as long as wide; antennomeres V–X each wider than long; antennomere XI longer than X.

*Pronotum*: Irregularly rugose to granulose; surface dull; slightly wider than long, with moderate, sharp hind angles; lateral sides narrowing cranially; disc convex, with small pair of circular foveae and median groove from base to apical end, basally depressed; base sinuous.

*Scutellum*: Shiny, quadrate and distally rounded.

*Elytra*: Striae indicated; interstices slightly elevated; surfaces closely punctate to transversely rugose, setose.

*Legs*: First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–III simple; metathoracic tarsomere IV excavate-emarginate; metathoracic tarsomere V elongate with simple claws.

*Venter*: Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates medially 1.25–2.50 times wider than laterally.

**Differential diagnosis.** Delicate median carina on the frons will distinguish *A. orientalis* from *A. bituberculatus* and *A. wicardi*. Duller pronotal luster and microsculpture will further distinguish *A. orientalis* from *A. castelnaui*.

**Distribution.** A very rare eucnemid species previously found in Indonesia and Myanmar. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a tropical montane deciduous forest.

*Arisus wicardi* Bonvouloir, 1871

(Fig. 85)

**Material examined.** Two specimens were available for study: 1, "LAOS-NE, Houa Phan prov., 20°13'09–19"N 103°59'54"–104°00'03"E, 1480–1550 m, PHOU PANE Mt., 1.–16.vi.2009, Zdeněk Kraus leg." / "NHMB Basel, NMPC Prague, Laos 2009 Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň" (NHMB); 1, "NE LAOS, Hua Phan prov., Ban Saleui, Phou Pan (Mt.), N20°12' E104°01', 1300–1900 m, 11.iv.–15.v.2012" / "BMNH{E}, 2012–14, C. Holzschuh" (BMNH).

**Redescription.** Length, 11.00 mm. Width, 3.50 mm. Body elliptical, robust and tapering towards elytral apex; uniformly dark brown; antennomeres I–II dark brown, antennomeres III–XI medium-brown; legs dark brown; head, pronotum and elytra clothed with short, sparse, yellowish recumbent setae (Fig. 85).

*Head:* Strongly confluent punctate, subspherical; frons convex, with delicate median groove; surface somewhat shiny; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres IV–X, reaching as far back as the hind angles of the pronotum; antennomere III almost as long as the combined lengths of IV and V; antennomere IV slightly shorter than V; antennomeres V–X each wider than long, serrate; antennomere XI longer than X.

*Pronotum:* Irregularly confluent punctate to rugose; surface shiny; slightly wider than long, with moderate, sharp hind angles; basal 2/3 parallel-sided, apical 1/3 arcuate; disc convex; base sinuous, with two deep impressions.

*Scutellum:* Shiny, oblong, quadrate and distally rounded; apical median carina present.

*Elytra:* Striae indicated; interstices slightly elevated; surfaces closely punctate to transversely rugose, setose.

*Legs:* First tarsomere shorter the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–III simple; metathoracic tarsomere IV excavate-emarginate; metathoracic tarsomere V elongate with simple claws.

*Venter:* Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates medially 1.25–2.50 times wider than laterally.

**Differential diagnosis.** Delicate median groove on the frons will distinguish *A. wicardi* from all *Arisus* species present in Laos.

**Distribution.** A very rare eucnemid species previously found in Indonesia, Myanmar, Papua New Guinea. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. All adults were taken from a tropical montane deciduous forest.

### *Euryostus Bonvouloir, 1871*

**Diagnosis.** Mesogenini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; metathoracic coxal plates medially 3.00–6.00 times wider than laterally; last visible ventrite either strongly produced, rounded or truncated; tarsomere IV simple; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae and longitudinal rows of spines or with setae and transverse rows of spine combs.

**Note.** These two specimens were compared against types of *Euryostus reichei* Bonvouloir, 1871 and *Euryostus hypocrita* Bonvouloir, 1871 loaned from the MNHN. Both specimens did not match against these types and have determined these specimens belong to an undescribed species.

### *Euryostus asiaticus* sp.nov.

(Fig. 86)

**Type material.** Female holotype: “NE LAOS, Hua Phan prov., Ban Saleui, Phou Pan (Mt.), N20°12' E104°01', 1300–1900 m, 11.iv.–15.v.2012” / “BMNH{E}, 2012-14, C. Holzschuh” / “HOLOTYPE, *Euryostus, asiaticus*, Otto, det. R.L. Otto, 2014” (♀ handwritten behind species name on label) [red printed label]. Male allotype: “LAOS-NE, Houa Phan prov., 20°13'09–19"N 103°59'54"–104°00'03"E, 1480–1550 m, PHOU PANE Mt., 1.–16.vi.2009, Zdeněk Kraus leg.” / “NHMB Basel, NMPC Prague, Laos 2009 Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň” / “ALLOTYPE, *Euryostus, asiaticus*, Otto, det. R.L. Otto, 2014” (♂ handwritten behind species name on label) [yellow printed label]. Holotype is deposited in BMNH. Allotype is deposited in NHMB.

**Description.** Female holotype: Length, 13.00 mm. Width, 4.50 mm. Body elliptical, robust and tapering towards elytral apex; uniformly dark brown; antennomeres I and II dark brown, antennomeres III–XI reddish-brown; legs reddish-brown; head, pronotum and elytra clothed with short, sparse, yellowish recumbent setae (Fig. 86).

*Head:* Confluently punctate to rugose, subspherical; frons convex, with median carina; surface somewhat shiny; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres IV–X, reaching as far back as the hind angles of the pronotum; antennomere III longer than the combined lengths of IV and V; antennomere IV slightly longer than V; antennomeres V–X each wider than long, each antennomere progressively smaller, serrate; antennomere XI longer than X.

*Pronotum:* Confluently rugose; surface dull; wider than long, with moderate, sharp hind angles; lateral side gradually narrowing cranially, arcuate; disc convex, with delicate median groove extending through entire length of pronotum; base sinuous.

*Scutellum:* Shiny, oblong, quadrate and distally truncated.

*Elytra*: Punctate striae indicated; interstices elevated, closely punctate, setose.

*Legs*: First tarsomere as long as the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV simple; metathoracic tarsomere V elongate with simple claws.

*Venter*: Punctate, almost rugose with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates medially 3.00–6.00 times wider than laterally.

*Allotype*: 12.00 mm long, 4.00 mm wide; pronotum strongly arcuate apically; similar exoskeletal structures.

**Etymology.** The specific epithet is derived from the term Asia, in which the new species is distributed on the Asian subcontinent.

**Differential diagnosis.** Sparse setae and slightly less densely punctuated elytra will distinguish *E. asiaticus* from *E. reichei*. Vaguely defined elytral striae will further distinguish *E. asiaticus* from *E. hypocrita*.

**Distribution.** A very rare, endemic eucnemid species known from two localities within a single province in NE Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. All adults were taken from a tropical montane deciduous forest.

### *Vitellius Bonvouloir, 1871*

**Diagnosis.** Mesogenini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; metathoracic coxal plates parallel-sided; last visible ventrite strongly produced; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae and longitudinal rows of spines; male aedeagus dorsoventrally compressed, without secondary lateral lobes; median lobe simple, with separate apical median sclerite that is usually entire or bifurcate; basal piece dorsally closed; lateral lobes entire, simple, without transverse evagination dorsally; apices of lateral lobes directed laterally; flagellum simple.

**Note.** Identification was based on comparing these beetles against translated, interpreted information from FLEUTIAUX (1896).

### *Vitellius singularis* (Fleutiaux, 1896)

(Fig. 87)

*Feaia singularis* Fleutiaux, 1896: 540–541

**Material examined.** Five specimens were available for study: 2, “LAOS, 24–29.iv.2001, Khammouan prov., 18°07′N 104°29′E, Ban Khoun Ngeun, ~ 200 m, Vít Kubáň leg.” (NHMB); 1, “LAOS-N (Louangphrabang), 11–21.v.2002, 19°35′N, 101°58′E, THONG KHAN, ~750 m, Vít Kubáň leg.” / *Vitellius* sp., J. Muona det. 2014” (JMC); 1, “LAO, Phongsaly prov., 21°21′N 102°03′E, BAN SANO MAI, 19–26.v.2004, ~ 1150 m, D. Pacholátko leg.” (NHMB); 1, “LAOS, Bokeo prov., 5 km W Ban Toup, Bokeo Nature Reserve, 500–700m, 20°27–28′N 100°45′E, 4.–18.v.2011” / “NHMB Basel, Laos 2011 Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & V. Vongphachan” (GERP).

**Redescription.** Length, 4.00–6.25 mm. Width, 1.25–2.00 mm. Body subcylindrical, robust and tapering towards elytral apex; uniformly dark black; antennomeres I dark brown, antennomeres II–XI reddish-brown; legs reddish-brown; head, pronotum and elytra clothed with short, sparse, greyish-white recumbent setae (Fig. 87).

*Head:* Very closely punctate to rugose, subspherical; frons convex, with delicate median carina, not extending to apex of frontoclypeal region; surface somewhat dull; apical margin of frontoclypeal region feebly trilobed, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Pectinate to flabellate from antennomeres IV–X, reaching as far back as the hind angles of the pronotum; antennomere III as long as II, rectangular; antennomere IV broadly triangular; antennomeres V–X each longer than wide; rami subequal, each slightly longer than IV ramus; antennomere XI shorter than X.

*Pronotum:* Very closely punctate to rugose; surface dull; as long as wide, with moderate, sharp hind angles; lateral sides arcuate; disc convex, with variable delicate pair of circular fovea and median groove extending from base to near center of pronotum; base sinuous.

*Scutellum:* Shiny, broadly triangular and distally rounded.

*Elytra:* Striae indicated; interstices elevated, closely punctate to rugose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–III simple; metathoracic tarsomere IV excavate-emarginate; metathoracic tarsomere V elongate with simple claws.

*Venter:* Punctate, with short, greyish-white recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** A single species within the group is known in the region. Majority of other species in the group are largely distributed in the Neotropical region, extending up to the far southern areas of the Nearctic region.

**Distribution.** A very rare eucnemid species previously found in Myanmar. The species was taken for the first time in Laos.

**Ecoregion(s).** Luang Prabang montane rain forests, Northern Annamites rain forests, Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. Adults were taken from a dry evergreen forest, lowland semi-evergreen forest, tropical montane deciduous forest and tropical montane evergreen forest.

### *Feaia Fleutiaux, 1896*

**Diagnosis.** Mesogenini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; metathoracic coxal plates parallel-sided; last visible ventrite either produced or excavated; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae.



***Feaia geiseri* sp.nov.**

(Figs 88 and 89)

**Type material.** Male holotype: “LAOS-NE., Xieng Khouang prov., 19°37–8’N, 103°20–1’E, 30 km NE Phonsavan: Ban Na Lam → Phou Sane Mt., 1300–1700 m, 10.–30.v.2009, M. Geiser leg.” / “NHMB Basel, NMPC Prague, Laos 2009 Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň” / “HOLOTYPE, *Feaia, geiseri*, Otto, det. R.L. Otto, 2014” (♂ handwritten behind species name on label) [red printed label]. Female allotype: “NE LAOS, Hua Phan prov., Ban Saleui, Phou Pan (Mt.), N20°12’ E104°01’, 1300–1900 m, 11.iv.–15.v.2012” / “BMNH{E}, 2012-14, C. Holzschuh” / “ALLOTYPE, *Feaia, geiseri*, Otto, det. R.L. Otto, 2014” (♀ handwritten behind species name on label) [yellow printed label]. Holotype is deposited in NHMB. Allotype is deposited in BMNH.

Paratype: 1, from the following locality: “Coll. I.R.Sc.N.B, TONKIN, Hoa-Binh, (North-VIETNAM), ex. coll. OBERTHUR, I.G.: 18.293” (light yellow cardstock) / “*Feaia ?geiseri* Otto, J. Muona det. 2014” / “PARATYPE, *Feaia, geiseri*, Otto, det. R.L. Otto, 2014” (♀ handwritten behind species name on label) [yellow printed label]. Paratype is in RBINS.

**Description.** Male holotype: Length, 5.25 mm. Width, 1.75 mm. Body subcylindrical, elongate and tapering towards the elytral apex; uniformly black, except lateral elytral margin brownish; antennae black, except antennomere II brownish; femur and tibiae black; tarsi brownish; head and pronotum clothed with very short black recumbent setae; elytra clothed with very short, white recumbent setae (Fig. 88).

*Head:* Very closely punctate, subspherical; frons convex, with fine median carina and median fovea above clypeus; surface dull; apical margin of frontoclypeal region feebly trilobed, about 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Pectinate from antennomeres VI–X, reaching to hind angles of pronotum; antennomeres III–V gradually wider, triangular; rami on antennomeres VI–X short, thick, arising laterally; antennomere XI wide, thick and asymmetrically elliptical.

*Pronotum:* Granulose; surface dull; as long as wide, with short hind angles; basal 3/4 parallel-sided, apical 1/4 arcuate; disc simple; base sinuous, with median shallow groove above scutellum.

*Scutellum:* Shiny, without punctations, quadrate and distally rounded.

*Elytra:* Striate; interstices elevated; surfaces with dense, shallow punctations.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–III simple; metathoracic tarsomere IV excavated and emarginated; metathoracic tarsomere V elongate with basally swollen claws.

*Venter:* Punctate, with white recumbent setae; hypomeron with basally closed, deep, lateral antennal grooves; metathoracic episternum partially concealed, caudally widened; metathoracic coxal plates medially 3.00–6.00 times wider than laterally.

*Allotype:* 6.50 mm long; same as male holotype, except antennae are shorter and strongly serrate (Fig. 89).

**Variation.** One fragmented female paratype was examined. The paratype measured 5.75 mm long, shorter than the allotype, but longer than the holotype. Apical margin of the pronotum is reddish in the paratype. The reddish apical margin of the pronotum is not present in both holotype and allotype. Elytra is dark brown in the paratype. Elytra in both holotype and allotype are black. It is likely the paratype was slightly teneral at the time of collection, owing to its lighter coloration of the elytra.

**Etymology.** The specific epithet is named after Michael Geiser, collector of the new species.

**Differential diagnosis.** *Feaia geiseri* differ from Southeast Asian *Feaia dubia* Fleutiaux, 1896 based on the structures of the antennae; progressively pectinate from antennomeres V–X in *F. dubia*, pectinate from VI–X in the new species in male specimens.

**Distribution.** A very rare eucnemid species known from two localities in Laos – a single locality within the Xiengkhouang province near Phonsavan and a single locality in the Houaphanh province in Northeastern Laos. The species have been taken from a single locality in Vietnam.

**Ecoregion(s).** Luang Prabang montane rain forests, Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. Both adults were taken from a tropical montane deciduous forest.

### *Mesogenus* Bonvouloir, 1871

**Diagnosis.** Mesogenini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; metathoracic coxal plates parallel-sided; last visible ventrite strongly produced; simple tarsal claws, lateral surfaces of mesothoracic and metathoracic tibiae either with setae and transverse rows of spine combs or setae and irregularly placed spines; male aedeagus dorsoventrally compressed, without secondary lateral lobes; median lobe simple, with separate apical median sclerite either entire or bifurcate; lateral lobes with secondary constriction apically, entire; flagellum simple.

**Note.** J. Muona (pers. comm.) is currently revising the group, including descriptions of two new species which were also collected in Laos. Both new species are not included in this study.

### Key to the species of *Mesogenus*

- 1 Antennae moniliform to weakly serrate; scutellum sutrapezoidally-shaped, distally rounded. .... *Mesogenus harmandi* Fleutiaux, 1922
- Antennae strongly serrate; scutellum quadrate, distally carinulate. ....  
..... *Mesogenus laosianus* Cobos, 1979

### *Mesogenus harmandi* Fleutiaux, 1922

(Fig. 90)

**Material examined.** One specimen was available for study: “LAOS, Louangnamtha pr., 21°00'N 101°25'E, LOUANG NAMTHA, 31.v.1997, 600 m, Vít Kubáň leg.” (NHMB).

**Redescription.** Length, 7.00–10.00 mm. Width, 2.00–3.00 mm. Body subcylindrical, elongate and tapering towards elytral apex; uniformly dark reddish-brown to dark brown, including antennae and legs; head, pronotum and elytra clothed with short, yellowish recumbent setae (Fig. 90).

*Head:* Granulose, subspherical; frons convex, with very shallow, median groove from vertex to frontoclypeal region; surface dull; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Short, filiform from III–X, reaching as far back as the hind angles of the pronotum; antennomere III slightly longer than IV; antennomeres IV–X each quadrate; antennomere XI longer than X.

*Pronotum:* Densely granulose; surface shiny; setose; slightly longer than wide, with moderate, sharp hind angles; basal 2/3 parallel-sided, apical 1/3 narrowing cranially; disc convex, with delicate median groove extending through entire length of pronotum.

*Scutellum:* Shiny, oblong, sub-trapezoid and distally rounded.

*Elytra:* Striae indicated; interstices elevated, closely punctate to rugose, setose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae flattened in cross section; metathoracic tarsomeres I–IV simple; metathoracic tarsomere V elongate with simple claws.

*Venter:* Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episterna caudally widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Form, antennal structures and shape of the scutellum will diagnose *M. harmandi* from *M. laosianus* Cobos in Laos.

**Distribution.** A very rare eucnemid species has been taken in Laos and Malaysia. In Laos, *M. harmandi* was taken at Melouprey and Tonlé-Repou (FLEUTIAUX 1922). Recently, records indicate the eucnemid species is still thriving in northern Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a dry evergreen forest.

### *Mesogenus laosianus* Cobos, 1979

(Fig. 91)

**Material examined.** Both holotype and allotype are known from a single locality in Laos (COBOS, 1979). A male holotype from ZSM was available for study: “(platen board with aedeagus)” / “Laos, Umg. Vientiane, III.–VI.1963” / “HOLOTYPUS, A. COBOS” (red card) / “Mesogenus, laosianus, nov. sp., Holotypus, A. Cobos det. 1967” (genus, species, nov. sp. Holotypus and year handwritten) / “Stethon, (=Mesogenus), siamensis, Muona 2014” (handwritten). Images of a female allotype were provided by Mercedes Paris of Museo Nacional de Ciencias Naturales in Madrid, Spain (MNCN): “♀” / “Laos, Umg. Vientiane, III.–VI.1963” / “EX COLECCION, Dr. A. Cobos (yellow label)” / “ALLOTYPUS, A. COBOS (red label)” / “Mesogenus, laosianus, nov. sp., allotypus, A. Cobos det. 1967 (genus, species, type and year handwritten in blue ink)” / “MNCN, Cat. Tipos No., 2448 (number handwritten)” / “MNCN\_ENT, 99929” (MNCN).

**Redescription.** Length, 9.00 mm. Width, 3.00 mm. Body subcylindrical, elongate and tapering towards elytral apex; uniformly dark brown; antennomeres I and VI dark brown, antennomeres VIII–XI slightly lighter; legs dark brown; tarsi slightly lighter; head, pronotum and elytra clothed with short, yellowish recumbent setae (Fig. 91).

*Head:* Punctate, subspherical; frons convex with median carina from vertex to frontoclypeal region; surface shiny.

*Antennae:* Weakly serrate from antennomeres V–X, reaching as far back as the hind angles of the pronotum; antennomere III nearly as long as the combined lengths of IV and V; antennomeres V–X each as long as wide, subequal, serrate; antennomere XI longer than X.

*Pronotum:* Densely punctate to granulose; surface shiny; setose; slightly longer than wide, with moderate, sharp hind angles; basal 2/3 parallel-sided, apical 1/3 narrowing cranially; disc convex, with delicate median groove extending through entire length of pronotum.

*Scutellum:* Shiny, oblong, quadrate and distally carinate.

*Elytra:* Striae faintly indicated; interstices slightly elevated, closely punctate, setose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae flattened in cross section; metathoracic tarsomeres I–IV simple; metathoracic tarsomere V elongate with simple claws.

*Venter:* Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Form, antennal structures and form of the scutellum will diagnose *M. laosianus* from *M. harmandi* Fleutiaux in Laos.

**Distribution.** A very rare, endemic eucnemid species have been taken in western Laos.

**Ecoregion(s).** Northern Khorat Plateau moist deciduous forests.

**Biology.** Developmental stages remain unknown. Both adults were taken from a lowland semi-evergreen forest.

### Tribe Eucnemini Eschscholtz, 1829

**Diagnosis.** Form elongate; frons with median keel; prothoracic tibiae with one apical spur; tarsomere IV simple; male prothoracic tarsomere 1 without sex combs; antennomeres III–XI gradually more or less serrate and transverse towards apex; hypomeral antennal grooves with hairy excretory organs; metathoracic sternum with tarsal grooves; metathoracic coxal plates originally parallel-sided; basal piece dorsally closed; median lobe divided in apical and basal parts; ventral basal struts apically fused; fused basal portion of lateral lobes dorsally attached to basal piece; lateral lobes transversely divided dorsally, apices turned dorsocaudad, with basally placed apical tooth; bursa simple, divided; spermatheca sclerotized, divided, globular.

### *Poecilochrus* Bonvouloir, 1871

**Diagnosis.** Eucnemini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; metathoracic coxal plates medially 1.20–2.50 times wider than laterally; last visible ventrite strongly produced; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae and irregularly placed spines; male aedeagus dorsoventrally compressed, without secondary lateral lobes; median lobe simple, with separate apical median sclerite

that is usually entire or bifurcate; lateral lobes entire, with secondary constriction apically; flagellum simple.

**Note.** Identification of these species were made through comparisons against translated, interpreted information from BONVOULOIR (1871) and FLEUTIAUX (1922, 1924b).

### Key to the species of *Poecilochrus*

- 1 Pronotum without median carina. .... 2
- Pronotum with median carina. ....  
..... *Poecilochrus piceus* Bonvouloir, 1871
- 2 Striae confined largely at elytral humeri. ....  
..... *Poecilochrus cordieri* Fleutiaux, 1922
- Striae present at humeri and near elytral apices. ....  
..... *Poecilochrus striatus* Fleutiaux, 1924

### *Poecilochrus cordieri* Fleutiaux, 1922

(Fig. 92)

**Material examined.** Seven specimens were available for study: 1, “LAOS, Louangnamtha pr., 21°09'N 101°19'E, Namtha → Muang Sing, 5–31.v.1997, 900–1200 m, Vít Kubáň leg.” (NHMB); 2, “Collection Naturhistorisches Basel” / “LAO, Phongsaly prov., 21°41–2'N 102°06–8'E, 28.v.–20.vi.2003, PHONGSALY env., ~ 1500 m, Vít Kubáň leg.” (NHMB); 4, “NE LAOS, Hua Phan prov., Ban Saleui, Phou Pan (Mt.), N20°12' E104°01', 1300–1900 m, 11.iv.–15.v.2012” / “BMNH{E}, 2012–14, C. Holzschuh” (BMNH; GERP).

**Redescription.** Length, 6.00–10.00 mm. Width, 2.00–2.75 mm. Body subcylindrical, elongate and tapering towards elytral apex; uniformly medium-dark brown; antennomere I dark brown, antennomeres II–XI medium brown-orange; legs reddish-brown; head, pronotum and elytra clothed with elongate, yellowish recumbent setae (Fig. 92).

*Head:* Punctate, subspherical; frons convex, with median carina; surface shiny; frontoclypeal region with pair of lateral carinae; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres IV–X, reaching as far back as the elytral humeri; antennomere III almost as long as the combined lengths of IV and V; antennomere IV slightly longer than V; antennomeres V–X each as long as wide, subequal, serrate; antennomere XI longer than X.

*Pronotum:* Sparsely punctate, laterobasal side granulose; surface shiny; setose; slightly wider than long, with moderate, sharp hind angles; lateral sides gradually narrowing cranially; disc convex; base sinuous.

*Scutellum:* Shiny, oblong, quadrate and distally rounded.

*Elytra:* Striae faintly indicated at humeri; interstices slightly elevated, sparsely punctate, setose.

*Legs:* First tarsomere longer than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV simple; metathoracic tarsomere V elongate with simple claws.

*Venter*: Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum parallel-sided; metathoracic coxal plates medially 3.00–6.00 times wider than laterally.

**Differential diagnosis.** Absence of median carina on the pronotum will distinguish *P. cordieri* from *P. piceus*. Faint indications of elytral striae confined at the humeri will distinguish *P. cordieri* from *P. striatus*.

**Distribution.** A rare eucnemid species previously found in Vietnam. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. Adults were taken from a dry evergreen forest and tropical montane deciduous forest.

### *Poecilochrus piceus* Bonvouloir, 1871

(Fig. 93)

**Material examined.** One specimen was available for study: “LAOS-NE, Houa Phan prov., 20°13′09–19″N 103°59′54″–104°00′03″E, 1480–1550 m, PHOU PANE Mt., 9.–16.vi.2009, David Hauck leg.” / “NHMB Basel, NMPC Prague, Laos 2009 Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň” (NHMB).

**Redescription.** Length, 7.50 mm. Width, 2.00 mm. Body subcylindrical, elongate and tapering towards elytral apex; uniformly medium-dark brown; antennomere I dark brown, antennomeres II–XI medium brown-orange; legs reddish-brown; head, pronotum and elytra clothed with elongate, yellowish recumbent setae (Fig. 93).

*Head*: Punctate, subspherical; frons convex, with median carina; surface shiny; frontoclypeal region with pair of lateral carinae; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Serrate from antennomeres IV–X, reaching as far back as the elytral humeri; antennomere III almost as long as the combined lengths of IV and V; antennomere IV slightly longer than V; antennomeres V–X each as long as wide, subequal, serrate; antennomere XI longer than X.

*Pronotum*: Closely punctate, laterobasal sides granulose; surface shiny, setose; slightly wider than long, with moderate, sharp hind angles; lateral sides arcuate, gradually narrowing cranially; disc convex, with delicate median carina extending through 3/4 the length of pronotum; base sinuous.

*Scutellum*: Shiny, oblong, sub-triangular and distally rounded.

*Elytra*: Striae faintly indicated at humeri; interstices flattened; surfaces rugose at humeri, sparsely punctate elsewhere; setose.

*Legs*: First tarsomere longer than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV simple; metathoracic tarsomere V elongate with simple claws.

*Venter*: Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum parallel-sided; metathoracic coxal plates medially 3.00–6.00 times wider than laterally.

**Differential diagnosis.** Presence of median carina on the base of the pronotum will distinguish *P. piceus* from both *P. cordieri* and *P. striatus*.

**Distribution.** A very rare eucnemid species previously found in Indonesia and Malaysia. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a tropical montane deciduous forest.

### *Poecilochrus striatus* Fleutiaux, 1924

(Fig. 94)

**Material examined.** One specimen was available for study: “LAOS-NE, Houa Phan prov., 20°12–13.5′N 103°59.5′–104°01′E, Ban Saleui → Phou Pane Mt., 9.–17.vi.2009, 1340–1870 m, M. Brancucci & local coll. leg.” / “NHMB Basel, NMPC Prague, Laos 2009 Expedition: M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubán” (NHMB).

**Redescription.** Length, 11.00 mm. Width, 2.50 mm. Body subcylindrical, elongate and tapering towards elytral apex; uniformly dark brown; antennomere I dark brown, antennomeres II–XI medium brown-orange; legs reddish-brown; head, pronotum and elytra clothed with elongate, yellowish recumbent setae (Fig. 94).

*Head:* Punctate, subspherical; frons convex, with median carina; surface shiny; frontoclypeal region with pair of lateral carinae; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Serrate from antennomeres IV–X, reaching as far back as the hind angles of the pronotum; antennomere III about as long as the combined lengths of IV and V; antennomeres IV–X each as long as wide, subequal, serrate; antennomere XI longer than X.

*Pronotum:* Closely punctate, basal and laterobasal sides granulose; surface shiny; setose; slightly wider than long, with moderate, sharp hind angles; lateral sides arcuate; disc convex; base sinuous.

*Scutellum:* Oblong, quadrate and distally rounded.

*Elytra:* Striae faintly indicated at humeri and apically; interstices flattened; surfaces sparsely punctate, setose.

*Legs:* First tarsomere longer than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV simple; metathoracic tarsomere V elongate with simple claws.

*Venter:* Punctate, with short, yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum parallel-sided; metathoracic coxal plates medially 3.00–6.00 times wider than laterally.

**Differential diagnosis.** Presence of weak striae on the elytra will distinguish *P. striatus* from *P. cordieri*. Absence of median carina on the base of the pronotum will further distinguish *P. striatus* from *P. piceus*.

**Distribution.** A very rare eucnemid species previously found in Vietnam. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a tropical montane deciduous forest.

### Tribe Galbitini Muona, 1991

**Diagnosis.** Form cylindrical; frons originally with median keel; tarsomere IV simple; male prothoracic tarsomere 1 without sex combs; tarsomeres I–IV with ventral lobes; antennomeres III–XI originally flattened, serrate, gradually more so towards apex; metathoracic sternum originally with tarsal grooves; metathoracic coxal plates parallel-sided; median divided in apical and basal parts; ventral basal struts apically fused; fused basal portion of lateral lobes dorsally attached to basal piece; lateral lobes transversely divided dorsally, apices turned dorsocaudad, with basally placed apical tooth; bursa simple, divided; spermatheca sclerotized, divided, globular.

**Note.** All species within the tribe was identified through a number of identification keys provided in MUONA (1991b). Types of most *Galbimorpha* species and an authoratively identified specimen of *Galbimorpha agasterceroides* (Fleutiaux) were examined from loans provided by the MNHN and the BMNH.

#### Key to the genera within the tribe Galbitini

- 1 Antennomeres III–XI serrate in both sexes. .... 2
- Antennomeres III–XI at least pectinate in both sexes. ....  
..... *Galbites* Fleutiaux, 1918
- 2 Metathoracic sternum with defined tarsal grooves. ....  
..... *Agastocerus* Bonvouloir, 1871
- Metathoracic sternum without tarsal grooves. ....  
..... *Galbimorpha* Fleutiaux, 1920

#### *Agastocerus* Bonvouloir, 1871

**Diagnosis.** Galbitini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; last visible ventrite either rounded or truncated; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae either with setae and transverse rows of spine combs or setae and irregularly placed spines.

#### *Agastocerus frontalis* Fleutiaux, 1899

(Fig. 95)

**Material examined.** Eleven specimens were available for study: 9, “LAOS, 1–18.v.2001, Bolikhamxai prov., 18°21′N 105°08′E, Ban Nape (8 km NE), ~600 m, Vít Kubáň leg.” (FSCA, GERP, NHMB); 1, “LAOS, 1–18.v.2001, Boli Kham Xai prov., 18°21′N 105°08′E, BAN NAPE (8 km NE), ~600 m, Vít Kubáň leg.” (GERP); 1, “Collection Naturhistorisches Museum Basel” / “LAOS-N (Louangphrabang), 11–21.v.2002, 19°35′N 101°58′E, THONG KHAN, ~750 m, Vít Kubáň leg.” (NHMB).



**Redescription.** Length, 7.50–10.00 mm. Width, 2.75–3.25 mm. Body cylindrical, elongate; uniformly black with transverse bands of white hairs below mid section of elytra and apices; antennae black; femur and tibiae black; tarsi dark brown; head, pronotum and elytra sparsely clothed with white setae (Fig. 95).

*Head:* Finely punctate and rugose, subspherical; frons convex, with faintly indicated median groove; surface sparsely setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Gradually serrate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.

*Pronotum:* Granulose; surface sparsely setose; as long as wide, with moderate, sharp hind angles; basal 1/2 parallel-sided, apical 1/2 arcuate; disc convex, with median groove and a pair of circular gibbosities near base; base sinuous.

*Scutellum:* Sparsely setose, oblong, sub-trapezoid and distally rounded.

*Elytra:* Striae faintly indicated; interstices slightly elevated, finely and closely rugose; sparsely setose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter:* Finely punctate and rugose, black with white recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Faintly indicated median groove on the frons, along with conspicuous band of white setae across the elytra will distinguish *A. frontalis* from *Agastocerus confusus* Fleutiaux, 1899 currently distributed in Indonesia and Penninsular Malaysia.

**Distribution.** A rare, widespread Asian eucnemid species have been taken in India, Indonesia, Laos, Malaysia, Philippines, Singapore and Thailand. In Laos, *A. frontalis* were taken at Ban Van Heue and Houei-Sai (MUONA 1991b). Recently, eleven specimens have been taken in central and northeastern Laos.

**Ecoregion(s).** Luang Prabang montane rain forests, Northern Annamites rain forests, Northern Indochina subtropical forests, Northern Thailand-Laos moist deciduous forests.

**Biology.** Developmental stages remain unknown. Adults were taken from a dry evergreen forest and lowland semi-evergreen forest.

### ***Galbites* Fleutiaux, 1918**

(=*Pterotarsus* auct., not Guérin-Méneville, 1831: 67)

(=*Galba* Latreille, 1829: 451, not Schrank, 1803)

**Diagnosis.** Galbitini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; metathoracic coxal plates either parallel-sided or wider laterally than medially; last visible ventrite either rounded

or truncated; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae either with setae and transverse rows of spine combs or setae and irregularly placed spines.

#### Key to the species of *Galbites*

- 1 Median ridge present on frons. .... 2
- Median groove present on frons. .... 5
- 2 Pronotal vestitures on dorsum dense. .... 3
- Pronotal vestitures on dorsum sparse. ....  
..... *Galbites fulva* (Fleutiaux, 1923)
- 3 Exoskeletal coloration black. .... 4
- Exoskeletal coloration dark reddish-brown. ....  
..... *Galbites australiae* (Lea, 1919)
- 4 Vestitures usually copper and brown, rarely with white. ....  
..... *Galbites chrysocoma* (Hope, 1845)
- Vestitures usually white and silvery. ....  
..... *Galbites albiventris* (Chevrolat, 1856)
- 5 Antennomere II triangular, ramus much shorter than III. .... 6
- Antennomere II with ramus about 1/2 the length of III. ....  
..... *Galbites funebris* (Chevrolat, 1856)
- 6 Frontoclypeal region with divergent lateral keels. ....  
..... *Galbites tuberculata* (Redtenbacher, 1867)
- Frontoclypeal region with parallel lateral keels. ....  
..... *Galbites nigrita* Muona, 1991

#### *Galbites albiventris* (Chevrolat, 1856)

(Fig. 96)

*Galba albiventris* Chevrolat, 1856: 85–86

**Material examined.** Six specimens were available for study: 1, “LAOS, 1–18.v.2001, Boli Kham Xai prov., 18°21′N 105°08′E, BAN NAPE (8 km NE), ~600 m, Vít Kubáň leg.” (NHMB); 5, “LAOS, Bokeo Prov., 5 km W Ban Toup, Bokeo Nature Reserve, 500–700 m, 20°27′–28′N/100°45′E, 4.–18.v.2011” / “NHMB Basel, Laos 2011 Expedition, M. Brancucci, M. Geiser, D. Hauck, Z. Kraus, A. Phantala & E. Vongphachan” (FSCA, NHMB).

**Redescription.** Length, 9.50–11.50 mm. Width, 3.00–4.00 mm. Body robust, elongate; uniformly black; antennae and legs black; tarsi dark brown; head, pronotum and elytra clothed with white to silvery dense setae, especially along lateral sides and scutellum (Fig. 96).

*Head:* Closely punctate to finely rugose, subspherical; frons convex, with median carina; surface setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Pectinate from antennomeres III–X, reaching as far back as the hind angles of the pronotum; antennomere III elongate, sharply serrate in females, slightly pectinate in males.

*Pronotum*: Finely rugose; surface setose; as long as wide, with moderate, sharp hind angles; basal 1/2 parallel-sided, apical 1/2 arcuate; disc convex, gibbose, with median groove and a pair of triangularly-shaped gibbosities near base; base sinuous, with basal carina above scutellum.

*Scutellum*: Setose, oblong, sub-triangular and distally rounded.

*Elytra*: Striae feebly indicated; interstices slightly elevated, finely and closely punctate to slightly rugose; setose.

*Legs*: First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter*: Finely punctate and rugose, black with cream colored recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Black colored exoskeleton with dense vestitures of white and silvery setae, especially along lateral sides and scutellum will distinguish *G. albiventris* from all other *Galbites* species in Laos.

**Distribution.** An uncommon, widespread eucnemid species previously found in India, Indonesia, Malaysia and Philippines. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Indochina subtropical forests.

**Biology.** Developmental stages remain unknown. All adults were taken from a lowland semi-evergreen forest.

### *Galbites australiae* (Lea, 1919)

(Fig. 97)

*Galba australiae* Lea, 1919: 741–742

(= *Pterotarsus mouhoti* Fleutiaux, 1924: 305)

(= *Pterotarsus bakeri* Fleutiaux, 1926: 36–37)

**Material examined.** Two specimens were available for study: 1, “PAPUA NEW GUINEA, Gulf, Ivimka Res., Station, Lakekamu, Basin, 120m, 7° 44’S, 146° 30’E, 22.II., I.III.2000, TSears” (GERP); 1, “PAPUA NEW GUINEA, Gulf, Ivimka Res., Station, Lakekamu, Basin, 120m, 7° 44’S, 146° 30’E, 14.IV., 2000, TSears” (GERP). No specimens from Laos were available for study during the course of this research.

**Redescription.** Length, 13.00–18.00 mm. Width, 4.00–5.00 mm. Body robust, elongate; uniformly dark reddish-brown; antennae and legs reddish-brown; head, pronotum and elytra clothed with gold and brown dense setae, often forming patterns on elytra (Fig. 97).

*Head*: Finely granulose, subspherical; frons convex, with median carina; surface setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Pectinate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.

*Pronotum*: Finely granulose; surface setose; as long as wide, with moderate, sharp hind angles; lateral sides arcuate; disc convex, with median furrow and a pair of triangularly shaped gibbosities near base; base sinuous, with basal keel present above scutellum.

*Scutellum*: Setose, oblong, sub-triangular and distally rounded.

*Elytra*: Striae indicated; interstices slightly elevated, finely and closely punctate; setose.

*Legs*: First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter*: Finely punctate and rugose, black with cream colored recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Dark reddish-brown exoskeleton with dense vestitures of gold and brown setae will distinguish *G. australiae* from all other *Galbites* species in Laos.

**Distribution.** An uncommon, widespread eucnemid species has been taken in Australia, Bhutan, India, Indonesia, Japan, Laos, Papua New Guinea, Philippines, Solomon Islands and Thailand. In Laos, *G. australiae* was taken in Nom Mia (MUONA, 1991b).

**Ecoregion(s).** Unknown.

**Biology.** Developmental stages remain unknown.

### *Galbites chrysocoma* (Hope, 1845)

(Fig. 98)

*Galba chrysocoma* Hope, 1845: 14

(=*Pterotarsus chrysocomus* sensu Fleutiaux, 1924: 303,305)

(= *Pterotarsus chrysocomus* var. *puniceus* Fleutiaux, 1924: 305)

**Material examined.** Four specimens were available for study: 1, "TAMEN NEGARA NP, 22.–25.2.1998, MALAYSIA, leg. Cempirek" (GERP); 1, "SUMATRA:, Mt. Singgalang, Annai Valley N.R., 500 m.a.s.l., 3 February 2003" (GERP); 1, "INDONESIA: Mentawai Is., Siberut Is., Salappa vill. env., 50m, 3.2006, St. Jakl lgt." (GERP); 1, "N. MALAYSIA, Cameron Highlands, Tanah Rata dist., 1500m, May 2009" (GERP). No specimens from Laos were available for study during the course of this research.

**Redescription.** Length, 14.00–16.00 mm. Width, 5.00 mm. Body robust, elongate; uniformly black; antennae and legs reddish-brown; head, pronotum and elytra clothed either with uniformly copper and brown dense setae or with copper and brown dense setae with cream colored setae present at humeral region, mid-section as well as lateral areas of pronotum (Fig. 98).

*Head*: Finely rugose, subspherical; frons convex, with median carina; surface setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Pectinate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.

*Pronotum*: Finely granulose to rugose; surface setose; as long as wide, with moderate, sharp hind angles; basal 3/4 parallel-sided, apical 1/4 arcuate; disc convex, with median groove and series of gibbositities; base sinuous, with basal keel above scutellum.

*Scutellum*: Setose, oblong, sub-triangular and distally rounded.

*Elytra*: Striae indicated, punctate; interstices slightly elevated, finely and closely punctate; setose.

**Legs:** First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

**Venter:** Finely punctate and rugose, black with cream colored recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Black exoskeleton along with dense vestitures of copper and brown setae, rarely with cream color setae will distinguish *G. chrysocoma* from other *Galbites* in Laos.

**Distribution.** An uncommon, widespread eucnemid species have been taken in China, Indonesia, Laos, Malaysia, Papua New Guinea, Philippines and Singapore (MUONA 1991b). In Laos, *G. chrysocoma* were taken at Nhat-Oai and Pahia.

**Ecoregion(s).** Unknown.

**Biology.** Developmental stages remain unknown.

### *Galbites fulva* (Fleutiaux, 1923)

(Fig. 99)

*Pterotarsus wallacei* var. *fulvus* Fleutiaux, 1923: 303, 307  
 (= *Galba wallacei* sensu Fleutiaux, 1918: 176; partly Fleutiaux, 1924: 307)  
 (= *Pterotarsus wallacei* var. *fulvus* Fleutiaux, 1924: 16)  
 (= *Pterotarsus fulvus* Fleutiaux, 1947: 19 (as new status))

**Material examined.** Three specimens were available for study: 1, “Solomon Islands, Guadalcanal, 1944, D. Elden Bock” / “611” (handwritten) (GERP); 1, “Solomon Islands, Guadalcanal, 1944, D. Elden Bock” / “232” (GERP); 1, “MALAYSIA-W. Perak, 25 km NE of IPOH, 1200 m, Banjaran TitiWangsa mts., KoRBU mt., 1–5.iv.2000, P. Cechovský leg.” (GERP). No specimens from Laos were available for study during the course of this research.

**Redescription.** Length, 7.00–11.00 mm. Width, 2.00–3.50 mm. Body robust, elongate; uniformly dark reddish-brown and black; antennae and legs reddish-brown; head, pronotum and elytra clothed with sparse cream and orange setae, often forming a tight pattern on elytra (Fig. 99).

**Head:** Finely granulose, subspherical; frons convex, with median carina; surface sparsely setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

**Antennae:** Pectinate from antennomeres IV–X, reaching as far back as the hind angles of the pronotum.

**Pronotum:** Finely rugose; surface sparsely setose; as long as wide, with moderate, sharp hind angles; basal 3/4 parallel-sided, apical 1/4 arcuate; disc convex, with shallow median groove and two pairs of circular shaped gibbositities; base sinuous, with basal keel above scutellum.

**Scutellum:** Setose, oblong, sub-triangular and distally rounded.

**Elytra:** Striae indicated; interstices flattened, closely and deeply punctate; sparsely setose.

**Legs:** First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter*: Finely punctate and rugose, black with either silver-white or yellowish recumbent setae; hypomerion with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Sparse vestitures of setae on the pronotal dorsum will distinguish *G. fulva* from all other *Galbites* in Laos.

**Distribution.** An uncommon, widespread eucnemid species were taken from Indonesia, Laos, Malaysia, Papua New Guinea, Philippines and Solomon Islands (MUONA 1991b). In Laos, *G. fulva* were taken at Pak Lay (FLEUTIAUX 1947).

**Ecoregion(s).** Luang Prabang montane rain forests.

**Biology.** BEESON (1941) reported the species bores in the decaying wood of *Crataeva unilocularis* Buchanan-Hamilton (Capparidaceae).

### *Galbites funebris* (Chevrolat, 1856)

(Fig. 100)

*Galba funebris* Chevrolat, 1856: 84–85

**Material examined.** Two specimens were available for study: “LAOS, 1–18.v.2001, Boli Kham Xai prov., 18°21′N 105°08′E, BAN NAPE (8 km NE), ~600 m, Vít Kubáň leg.” (NHMB).

**Redescription.** Length, 6.00–17.00 mm. Width, 2.25–5.00 mm. Body robust, elongate; uniformly black; antennae and legs black; tarsi dark brown; head, pronotum and elytra very inconspicuously clothed with white setae; dense yellow setae present at pronotal base and scutellum; dull, inconspicuous black patches present along lateral sides and near apices of elytra (Fig. 100).

*Head*: Rugose, subspherical; frons with median groove, deeply impressed above clypeus; surface sparsely setose; frontoclypeal region with diverging lateral keels; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Pectinate from antennomeres II–X, reaching as far back as the hind angles of the pronotum; antennomere II ramus about 1/2 as long as III.

*Pronotum*: Rugose; as long as wide, with moderate, sharp hind angles; lateral sides arcuate; disc gibbose, with median groove and a pair of triangularly shaped gibbositities near base; base sinuous, with enlarged basal ridge above scutellum.

*Scutellum*: Setose, oblong, sub-triangular and distally rounded.

*Elytra*: Striae indicated; interstices slightly elevated, finely and closely rugose; sparsely setose.

*Legs*: First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter*: Finely punctate and rugose, black with cream colored recumbent setae; hypomerion with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Black colored exoskeleton with inconspicuous vestitures of white setae on dorsum, along with divergent lateral keels on frontoclypeal region will distinguish *G. funebris* from all other *Galbites* species in Laos.

**Distribution.** An uncommon, widespread eucnemid species previously collected in India, Indonesia, Malaysia, Philippines, Solomon Islands, Thailand and Vietnam. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Annamites rain forests.

**Biology.** Developmental stages remain unknown. Two adults were taken from a lowland semi-evergreen forest.

***Galbites nigrita* Muona, 1991**

(Fig. 101)

**Material examined.** One specimen was available for study: "LAOS, 1–18.v.2001, Bolikhamxai prov., 18°21'N 105°08'E, Ban Nape (8 km NE), ~600 m, Vít Kubáň leg." (NHMB).

**Redescription.** Length, 3.50–10.00 mm. Width, 1.50–3.50 mm. Body robust, elongate; uniformly black; antennae and legs dark brown; tarsi medium brown; head, pronotum and elytra very inconspicuously clothed with white setae (Fig. 101).

*Head:* Rugose, subspherical; frons with median groove, deeply impressed above clypeus; surface inconspicuously setose; frontoclypeal region with parallel lateral keels; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Pectinate from antennomeres III–X, reaching as far back as the hind angles of the pronotum; antennomere II triangular, much shorter than III.

*Pronotum:* Rugose; as long as wide, with moderate, sharp hind angles; basal 1/2 parallel-sided, apical 1/2 arcuate; disc gibbose, with median groove and a pair of triangularly shaped gibbositities near base; base sinuous, with enlarged basal ridge above scutellum.

*Scutellum:* Oblong, sub-triangular and distally rounded.

*Elytra:* Striae indicated; interstices slightly elevated, finely and closely rugose; inconspicuously setose.

*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter:* Finely punctate and rugose, black with sparse, cream colored setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Black colored exoskeleton with inconspicuous vestitures of white setae on dorsum, along with straight lateral keels on frontoclypeal region will distinguish *G. nigrita* from all other *Galbites* species in Laos. Short triangular antennomere II will also distinguish *G. nigrita* from *G. funebris*.

**Distribution.** An uncommon, widespread eucnemid species previously collected in India, Indonesia, Malaysia, Philippines and Solomon Islands. The species was taken for the first time in Laos.

**Ecoregion(s).** Northern Annamites rain forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a lowland semi-evergreen forest.

***Galbites tuberculata* (Redtenbacher, 1867)**

(Fig. 102)

*Galba tuberculata* Redtenbacher, 1867: 90(=*Pterotarsus tuberculata* sensu Fleutiaux, 1924: 304 as junior subjective synonym of *Pterotarsus funebris*)(=*Pterotarsus similis* Cobos, 1985: 18)**Material examined.** One specimen was available for study: "LAOS, 1–18.v.2001, Bolikhamxai prov., 18°21'N 105°08'E, Ban Nape (8 km NE), ~600 m, Vít Kubáň leg." (NHMB).**Redescription.** Length, 7.00–10.00 mm. Width, 2.50–3.25 mm. Body robust, elongate; uniformly black; antennae black; femur and tibiae reddish-brown; tarsi medium brown; head, pronotum and elytra sparsely clothed with light yellow setae (Fig. 102).*Head:* Finely granulose, subspherical; frons convex, with median groove above frontoclypeal region; pair of delicate carinae present on frontoclypeal region, extending from antennal socket to apices; surface sparsely setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.*Antennae:* Pectinate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.*Pronotum:* Finely granulose and rugose; surface sparsely setose; as long as wide, with moderate, sharp hind angles; basal 1/2 parallel-sided, apical 1/2 arcuate; disc convex, with series of gibbosities; base sinuous, with very large basal keel above scutellum.*Scutellum:* Setose, oblong, sub-trapezoid and distally rounded.*Elytra:* Striae indicated; interstices slightly elevated, finely and closely punctate; sparsely setose.*Legs:* First tarsomere shorter than the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.*Venter:* Finely rugose, black with silver-white sparse, recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.**Differential diagnosis.** Median groove on the frons above the frontoclypeal region will distinguish *G. tuberculata* from all *Galbites* species in Laos.**Distribution.** An uncommon, widespread eucnemid species were found in Brunei, Indonesia, Laos, Malaysia, Papua New Guinea, Philippines, Solomon Islands, Taiwan and Thailand. In Laos, *G. tuberculata* was taken from an unknown locality (MUONA, 1991b) and recently in central Laos.**Ecoregion(s).** Northern Annamites rain forests.**Biology.** Developmental stages remain unknown. A single adult was taken from a lowland semi-evergreen forest.***Galbimorpha* Fleutiaux, 1920****Diagnosis.** Galbitini, with apical margin of frontoclypeal region evenly rounded and less than twice as wide as the distance between antennal sockets; last visible ventrite either



rounded or truncated; simple tarsal claws; lateral surfaces of mesothoracic and metathoracic tibiae with setae and irregularly placed spines.

### Key to the species of *Galbimorpha*

- 1 Exoskeletal coloration either unicolored dark brown to black or bicolored. .... 2
- Exoskeletal coloration reddish-brown. ....  
..... *Galbimorpha ferruginea* Fleutiaux, 1920
- 2 Dorsum with sparse setae. .... 3
- Dorsum with dense setae. ....  
..... *Galbimorpha quadricollis* Fleutiaux, 1947
- 3 Frons with weakly indicated median carina; antennae stouter. ....  
..... *Galbimorpha agastoceroides* (Fleutiaux, 1896)
- Frons with strongly indicated median carina; antennae slenderer. ....  
..... *Galbimorpha curta* Muona, 1991

### *Galbimorpha agastoceroides* (Fleutiaux, 1896)

(Fig. 103)

*Galba agastoceroides* Fleutiaux, 1896: 543–544

**Material examined.** One specimen was available for study: 1, “67839 (handwritten)” / “Birmah, Karen Mts.” (calligraphic handwriting) / “Carin Checu, 1300–1400, L. Fea II-III-88” (calligraphic handwriting) / “Fry Coll., 1905.100” / “Galba, agastoceroides, Fleut., FLEUTIAUX det.” (genus, species and author handwritten; specific epithet underlined) / “Syntype?” (handwritten) / “Galbimorpha, agastoceroides, (Fleutiaux), J. Muona det. 1984” (specific epithet, author and year handwritten) (BMNH). No specimens from Laos were available for study during the course of this research.

**Redescription.** Length, 6.00 mm. Width, 2.00 mm. Body cylindrical, elongate; black and infuscate reddish; anterior part of pronotum and elytral base and suture reddish; antennae infuscate reddish; legs reddish-brown; head, pronotum and elytra sparsely clothed with white recumbent setae (Fig. 103).

*Head:* Finely rugose, subspherical; frons convex, with faintly indicated median carina; surface sparsely setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Gradually serrate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.

*Pronotum:* Granulose; dull; surface sparsely setose; as long as wide, with moderate, sharp hind angles; basal 3/4 parallel-sided, apical 1/4 arcuate; disc convex, with median carina and a pair of circular gibbosities near base; base sinuous.

*Scutellum:* Sparsely setose, oblong, sub-triangular and distally rounded.

*Elytra:* Striae indicated; interstices elevated, finely and closely rugose; sparsely setose.

*Legs:* First tarsomere as long as the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter*: Finely punctate and rugose, infusate reddish with white, recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Bicolored with infusate reddish at the anterior part of the pronotum, elytral suture and base as well as sparse setae on dorsum will distinguish *G. agastoceroides* from all other *Galbimorpha* in Laos.

**Distribution.** A very rare, widespread eucnemid species have been taken in India, Laos and Myanmar. In Laos, *G. agastoceroides* was taken at Vientiane (MUONA 1991b).

**Ecoregion(s).** Northern Khorat Plateau moist deciduous forests.

**Biology.** GARDNER (1935) described larvae collected from a decaying *Macaranga denticulata* (Blume) (Euphorbiaceae) log in Bengal, India. BEESON (1941) reported the species bores in the decaying wood of *Anthocephalus cadamba* (now *Neolamarkia cadamba* (Roxburgh) Bosser) (Rubiaceae). A single adult was taken from a lowland semi-evergreen forest.

### *Galbimorpha curta* Muona, 1991

(Fig. 104)

**Material examined.** Female holotype was available for study: "Lou-Chot, Luang Prabang, 9-3-18" / "LAOS, Luang Prabang (Environs), VITALIS DE SALVAZA" / "ferruginea Fleut. 1923, collection Fleutiaux" / "Galbimorpha quadricollis Fleut.? 1942, FLEUTIAUX det." / "HOLOTYPE, ♀, *Galbimorpha curta* sp.nov., Muona des. 1983" (MNHN).

**Redescription.** Length, 6.50 mm. Width, 2.00 mm. Body cylindrical, elongate; dark brown to black; antennae dark brown to black, except antennomeres II–XI dark reddish-brown; legs reddish-brown; head, pronotum and elytra clothed with sparse, short recumbent setae (Fig. 104).

*Head*: Finely punctate to granulose, subspherical; frons convex, with delicate median carina; surfaces sparsely setose; apical margin of frontoclypeal region trilobed, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae*: Slender, gradually serrate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.

*Pronotum*: Densely punctate to granulose; dull; surface sparsely setose; as long as wide, with moderate, sharp hind angles; basal 1/4 parallel-sided, apical 3/4 arcuate, wider than basal 1/4; disc convex, with median groove at basal 1/2 and pair of small circular impressions; base sinuous, with pair of small circular impressions.

*Scutellum*: Sparsely setose, oblong, sub-trapezoidal and distally truncate.

*Elytra*: Striae indicated; interstices elevated, finely and closely punctate; with sparse setae.

*Legs*: First tarsomere as long as the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter*: Finely punctate, dark brown with sparse yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum

apically widened; metathoracic coxal plates parallel-sided; abdominal sternum with weak lateral impressions.

**Differential diagnosis.** Stronger presence of median carina on the frons along with deeper median groove on the pronotum and slenderer antennae will distinguish *G. curta* from other *Galbimorpha* in Laos.

**Distribution.** A very rare eucnemid is a precintive species in Laos.

**Ecoregion(s).** Northern Thailand-Laos moist deciduous forest.

**Biology.** Developmental stages remain unknown. A single adult was taken from a tropical montane deciduous forest.

### *Galbimorpha ferruginea* Fleutiaux, 1920

(Fig. 105)

**Material examined.** Lectotype and paralectotype were available for study: 1, "India, Assam, Andrewes" / "Nilgiri Hills H. L. Andrewes" / "Type" / *Galbimorpha ferruginea* Fleut., COLLECTION FLEUTIAUX type" / "LECTOTYPE, *Galbimorpha ferruginea* Fleutiaux, J. Muona des. 1983" (MNHN); 1, "PARA-,LECTO-,TYPE" (blue framed round label) / "H.L. Andrewes, Nilgiri Hills" / "Andrewes, Bequest., B.M. 1922-221" / "*Galbimorpha ferruginea* Fleut., co-type, FLEUTIAUX det." (black framed white label; genus, species and "co-type" handwritten) (BMNH). No specimens from Laos were available for study during the course of this research.

**Redescription.** Length, 8.00 mm. Width, 2.50 mm. Body cylindrical, elongate; entirely reddish-brown, including antennae and legs; head, pronotum and elytra sparsely clothed with yellowish recumbent setae (Fig. 105).

*Head:* Finely rugose, subspherical; frons convex; surface sparsely setose; apical margin of frontoclypeal region evenly rounded, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Gradually serrate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.

*Pronotum:* Granulose; dull; surface sparsely setose; as long as wide, with moderate, sharp hind angles; basal 3/4 parallel-sided, apical 1/4 arcuate; disc convex, with a pair of circular gibbositities near base; base sinuous.

*Scutellum:* Sparsely setose, oblong, sub-trapezoid and distally truncated.

*Elytra:* Striae indicated; interstices elevated, finely and closely rugose; sparsely setose.

*Legs:* First tarsomere presumably as long as the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section.

*Venter:* Finely punctate and rugose, reddish with white, recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum parallel-sided; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Lighter reddish-brown exoskeletal coloration will distinguish *G. ferruginea* from other *Galbimorpha* species in Laos.

**Distribution.** A very rare eucnemid species is distributed in both India and Laos. In Laos, *G. ferruginea* was taken at Vientiane (MUONA 1991b).

**Ecoregion(s).** Northern Khorat Plateau moist deciduous forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a lowland semi-evergreen forest.

**Note.** MUONA (1991b) noted both lectotype and paralectotype were collected in Assam. However, M. Geiser (pers. comm.) informed me the type locality, Nilgiri Hills are a mountain range found in the state of Tamil Nadu, which is located near the southern tip of the Indian subcontinent.

***Galbimorpha quadricollis* Fleutiaux, 1947**

(Fig. 106)

*Galbimorpha ferruginea sensu* Fleutiaux, 1923: 326.

**Material examined.** Lectotype was available for study: “Vang Nham Luang-Prab., 16-3-18” / “LAOS, Luang Prabang (Environs), VITALIS DE SALVAZA” / “*Galbimorpha ferruginea* Fleut. 1923” / “Type” / “*Galbimorpha quadricollis* Fleut., COLLECTION FLEUTIAUX type” / “LECTOTYPE, *Galbimorpha quadricollis*, Muona des. 1983” (MNHN).

**Redescription.** Length, 8.50 mm. Width, 3.00 mm. Body cylindrical, elongate; dark brown to black; antennae dark brown to black, except antennomeres II–XI dark reddish-brown; legs reddish-brown; head, pronotum and elytra clothed with yellowish recumbent setae (Fig. 106).

*Head:* Finely punctate to granulose, subspherical; frons convex, with faintly indicated median carina; surfaces setose; apical margin of frontoclypeal region trilobed, less than 2.00 times wider than base; mandibles stout, bidentate, densely punctate and rugose.

*Antennae:* Gradually and strongly serrate from antennomeres III–X, reaching as far back as the hind angles of the pronotum.

*Pronotum:* Finely punctate to granulose; dull; surface setose; as long as wide, with moderate, sharp hind angles; basal 3/4 parallel-sided, apical 1/4 arcuate; disc convex, with weak groove as well as a pair of circular gibbosities near base and a small pair near anterior; base sinuous, with short carina above scutellum.

*Scutellum:* Sparsely setose, oblong, sub-trapezoidal and distally rounded.

*Elytra:* Striae indicated; interstices elevated, finely and closely punctate; with short setae.

*Legs:* First tarsomere as long as the combined lengths of the remaining four on mesothoracic and metathoracic tarsi; tibiae rounded in cross section; metathoracic tarsomeres I–IV ventrally lobed; metathoracic tarsomere V elongate with simple claws.

*Venter:* Finely punctate, dark brown with yellowish recumbent setae; hypomeron with deep, basally closed lateral antennal grooves; metathoracic episternum apically widened; metathoracic coxal plates parallel-sided.

**Differential diagnosis.** Dense vestitures of setae on the dorsum will distinguish *G. quadricollis* from other *Galbimorpha* species in Laos.

**Distribution.** A very rare eucnemid is a precinctive species in Laos.

**Ecoregion(s).** Northern Thailand-Laos moist deciduous forests.

**Biology.** Developmental stages remain unknown. A single adult was taken from a tropical montane deciduous forest.