

**SOME LECTOTYPE DESIGNATIONS IN THE
AMPHISTERNINI AND A NEW SPECIES OF
CACODAEMON (COLEOPTERA: ENDOMYCHIDAE)**

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Abstract. Lectotypes are designated for the original combinations *Brachytrycherus perotetti*, *Stictomela chrysomeloides*, *Spathomeles inflatus*, *Sp. insuspectus*, *Sp. pyramidalis*, *Sp. darwinista*, *Sp. anaglyptus*, *Amphisternus sordidus*, *A. bellicosus laotinus*, *A. eruptus*, *A. spinosus*, *A. vomeratus*, *A. papulatus*, *A. verrucosus*, *A. corallifer*, *A. mucronatus*, *A. auriculatus*, *Cacodaemon hamatus*, *C. hopei*. The single types of *Eumorphus satanas* and *E. hamatus* are noted. *Spathomeles pyramidalis* is raised from synonymy to subspecific status under *Sp. darwinista*. *Eumorphus hamatus* is replaced by *Cacodaemon inaequalis*. *Cacodaemon beliar*, a new species from Sabah, is described.

In my synopsis of the Amphisternini (Strohecker 1964) some choices of single types were made but many lectotypes remain undesignated. Gilbert Arrow has attached "Type" labels to many specimens studied by Gerstaecker and Gorham, as well as to examples of his own description, but without precise citation in the literature.

Lectotype assignments made herein involve specimens in the British Museum (Natural History) in London (BMNH), Muséum National d'Histoire Naturelle in Paris (MNHP), Institut Zoologique in Warsaw (ZMPA), Museum für Naturkunde in Berlin (MFNB) and Zoologisk Museum in Copenhagen (UZMC). Specimens now in Warsaw were formerly in the Stettin Museum.

Two changes in the nomenclature used by Strohecker (1964) are made here. *Spathomeles pyramidalis* Gorham is brought from synonymy to subspecific status, and the name *Cacodaemon hamatus* (Guérin) is replaced by *C. inaequalis* (Germar).

A slash (/) is used to separate the cited labels. Added information is enclosed in brackets.

Brachytrycherus perotetti Arrow

Brachytrycherus perotetti Arrow, 1920b: 13. Lectotype ♀ (BMNH), here designated. Labels: "Type/ 834/ Nilgiri Hills, A. K. Weld Downing/ *Brachytrycherus perotetti* Arrow type." 1 ♀ paralectotype (BMNH). Labels [partly illegible]: "*homalosternus perotetti* mater—p Monogr Eumorph neelghr (type)/ neelgh/ 347/ type Guérin."

Stictomela chrysomeloides Gorham

Stictomela chrysomeloides Gorham, 1886: 156. Lectotype ♂ (BMNH), here designated. Labels: "Type/ Dikoya 3800-4200 ft, 25-27.ii.82/ Ceylon G. Lewis 1910-320/ *Stictomela chrysomeloides* Gorh." 1 paralectotype (BMNH) with same collection and accession labels.

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Stictomela inflata (Gorham)

Spathomeles inflatus Gorh., 1886: 154. Lectotype ♂ (BMNH), here designated. Labels: "Type/ Dikoya 3800-4200 ft/ 25-27.ii.82/ Ceylon, G. Lewis 1910-320/ *S. inflatus* Gorh. type." 1 paralectotype (BMNH). Labels: "Dikoya Ceylon/ Gorham 91-50/ *S. inflatus* Gorh. type."

Spathomeles anaglyptus anaglyptus Gerstaecker

Spathomeles anaglyptus Gerst., 1857: 219. Lectotype ♂ (MFNB), here designated. Labels: "21725/ Pulo Penang/ *Spathomeles anaglyptus* Gerst." Paralectotypes: 1 ♂ (UZMC). Labels: "Pulo Penang, v. Teyl, *Spathomeles anaglyptus*"; 1 ♀ (UZMC). Label: "Pulo Penang."

Cacodaemon hopei Thomson, 1857: 154. Lectotype ♂ (BMNH), here designated. Label: "*Eumorphus hopei* Guér Singapore ♂ Ceylan (type)."

Thomson attributed the specific name to Guérin, citing 4 specimens in Guérin's collection. Guérin (1857: 255) treated the same specimens as *E[umorphus] hopei* Thomson. Both combinations were synonymized by Gerstaecker (1858: 62).

Spathomeles anaglyptus insuspectus Gorham

Spathomeles insuspectus Gorh., 1873: 31. Lectotype ♂ (BMNH), here designated. Labels: "Type/ Borneo/ Gorham type *insuspectus*/ Gorham 91-50." 1 ♀ paralectotype (BMNH) with labels: "Type/ Borneo/ Gorham type [on reverse] *insuspectus* Gorh. ♀/ Gorham 91-50."

Spathomeles decoratus decoratus Gerstaecker

Spathomeles decoratus Gerst., 1857: 219.

Cacodaemon hamatus (in part) Thomson, 1857: 154. Lectotype ♂ (MNHP), here designated. Labels: "*hamatus* Thoms, Typus, Java/ ♂ *Spathomeles decoratus* Gerst./ *decoratus* G. 66/ Holotype/ ex museo J. Thomson."

Six specimens were cited by Thomson without designation of single type. Specimens other than the lectotype are of species described as *Eumorphus hamatus* by Guérin (1844: 316).

Spathomeles darwinista darwinista Dohrn

Fig. 8

Spathomeles darwinista Dohrn, 1873: 323. Lectotype ♂ (ZMPA), here designated. Labels: "Luzon" + name label. 2 ♀ paralectotypes (ZMPA). Label: "Luzon."

Spathomeles darwinista pyramidalis Gorham, **new status**

Fig. 9

Spathomeles pyramidalis Gorham, 1873: 31. Lectotype ♂ (BMNH), here designated. Labels: "Type/ 42346/ Philip Islands [on reverse] Bohar Semper/ Type/ Fry Coll. 1905-100/ *Spathomeles pyramidalis* Gorh." 1 ♂ paralectotype (BMNH). Labels: "Phil Isla 42 22/ *Spathomeles pyramidalis* Gorh."

Amphisternus corallifer Gerstaecker

Amphisternus corallifer Gerst., 1857: 216. Lectotype ♂ (ZMPA), here designated. Labels: "Birma/ Birma, Helfer" + name label. Paralectotypes: 2♂ (ZMPA) with label "Birma"; 1♂ (MFNB) with labels "21723/ Typus/ Birma" + name label.

In choice of single type I follow Arrow's (1925: 285) note.

Amphisternus mucronatus Gerstaecker

Amphisternus mucronatus Gerst., 1857: 217. Lectotype ♀ (ZMPA), here designated. Labels: "SAR" + name label.

Amphisternus eruptus Gorham

Amphisternus eruptus Gorh., 1901: 196. Lectotype ♂ (ZMPA), here designated. Labels: "Sumatra: Soekaranda, januar 1894, Dohrn" + name label. 1♀ paralectotype (ZMPA) with same capture data.

Amphisternus vomeratus Gorham

Fig. 6, 7

Amphisternus vomeratus Gorh., 1901: 197. Lectotype ♂ (MNHP), here designated. Labels: "Sumatra: Soekaranda, januar 1894, Dohrn/ *Amphisternus vomeratus* Gorh./ ex museo H. S. Gorham 1920." Paralectotypes: 1♀ (MNHP) with same capture data; 2♀ (ZMPA) with same capture data.

In synopsis (Strohecker 1964) fig. 90, 91 are of male. Discal elytral prominence of female is conoid.

Amphisternus verrucosus Gorham

Amphisternus verrucosus Gorh., 1897: 456. Lectotype ♂ (MNHP), here designated. Labels: "Gorham type ♂ Java, Fruhstorfer/ sp. figured/ *Amphisternus verrucosus*/ ex museo H. S. Gorham 1920." Paralectotypes: 1♀ (MNHP) with labels "Java, Fruhstorfer/ *Amphisternus verrucosus*/ femelle/ ex museo H. S. Gorham 1920"; 2♂ (MNHP) with same labels except that of sex.

Amphisternus sordidus Arrow

Amphisternus sordidus Arrow, 1928: 342. Lectotype ♂ (BMNH), here designated. Labels: "Type/ Annam: Dalat, 9.iv.1924, R. V. de Salvaza/ Indo China B. M. 1924-315/ *Amphisternus sordidus* Arrow, type." Paralectotypes: 1♂ (BMNH) with same capture and accession data; 1♂ (MNHP) with same capture data and label "*Amphisternus sordidus* det. Arrow."

Cacodaemon bellicosus (Gerstaecker)

Amphisternus bellicosus Gerst., 1857: 218.

Amphisternus papulatus Gorham, 1901: 195. Lectotype ♂ (MNHP), here designated (Fig. 3, 4). Labels: "Sumatra: Liangagas, Dohrn/ male/ type/ *A. papulatus* Gorham/ ex

museo H. S. Gorham 1920." Paralectotypes: 1 ♀ (MNHP) with labels "Sumatra: Soekaranda, januar 1894, Dohrn/ *A. papulatus* Gorham/ ex museo H. S. Gorham 1920"; 1 ♀ (MNHP) with labels "Borneo: Sarawak, 1865-66 Coll S. Doria/ *Amphisternus papulatus* Gh/ ex museo H. S. Gorham 1920"; 1 ♂ (ZMPA) with labels "328/ Sumatra: Soekaranda, januar 1894, Dohrn" + name label; 2 ♀ (ZMPA) no. 326 and 330, "Sumatra: Soekaranda, Dohrn."

The aedeagus of the lectotype is not sclerotized.

Cacodaemon auriculatus (Gerstaecker)

Fig. 5

Amphisternus auriculatus Gerst., 1857: 218. Lectotype ♂ (ZMPA), here designated. Labels: "Borneo, Snellen" + name label.

The specimen considered by Gerstaecker to be the female of this species is a male of *C. freudei* Strohecker.

Cacodaemon spinosus (Gorham)

Amphisternus spinosus Gorh., 1901: 199. Lectotype ♂ (ZMPA), here designated. Labels: "Sumatra: Soekaranda, januar 1894, Dohrn" + name label. 1 ♀ paralectotype (MNHP) with labels "Sumatra: Liangagas, juni, Dohrn/ *Amphisternus spinosus* Gh/ ex museo H. S. Gorham 1920."

Cacodaemon laotinus (Arrow)

Amphisternus bellicosus var. *laotinus* Arrow, 1920a: 322. Lectotype ♀ (BMNH), here designated. Labels: "Type/ Haut Mekong, Nam Mat, 15.iv.1918, R. V. de Salvaza/ Indo China, R. V. de Salvaza 1918-1/ *Amphisternus laotinus* Arrow, type."

Arrow, in the original brief description, cited only the locality Nam Mat, hence the specimen from there should probably be considered a holotype. BMNH has, however, a pair of specimens taken by R. V. de Salvaza at Laos: Xieng Khouang, 6.V.1918, which have the same accession data as the Nam Mat specimen and were probably in Arrow's hands in 1920.

Cacodaemon satanas (Thomson)

Eumorphus satanas Thomson, 1856: 476. Holotype ♀ (MNHP). Labels: "satanas Thoms. R. M. Z. 56, Arch. ent. 1. 155 gerst 52 Typus Borneo/ Type J. Thoms/ ex museo J. Thomson."

Cacodaemon inaequalis (Germar), **new combination**

Amphisternus inaequalis Germar, 1843: 85. I have not been able to find type material. *Eumorphus hamatus* Guérin, 1844: 316, pl. 50, fig. 7; 1857: 258. Holotype ♀ (MNHP). Labels: "*Eumorphus hamatus* Guér., ic. r. a. (type) Java/ ex museo Guér. Ménev."

New synonymy.

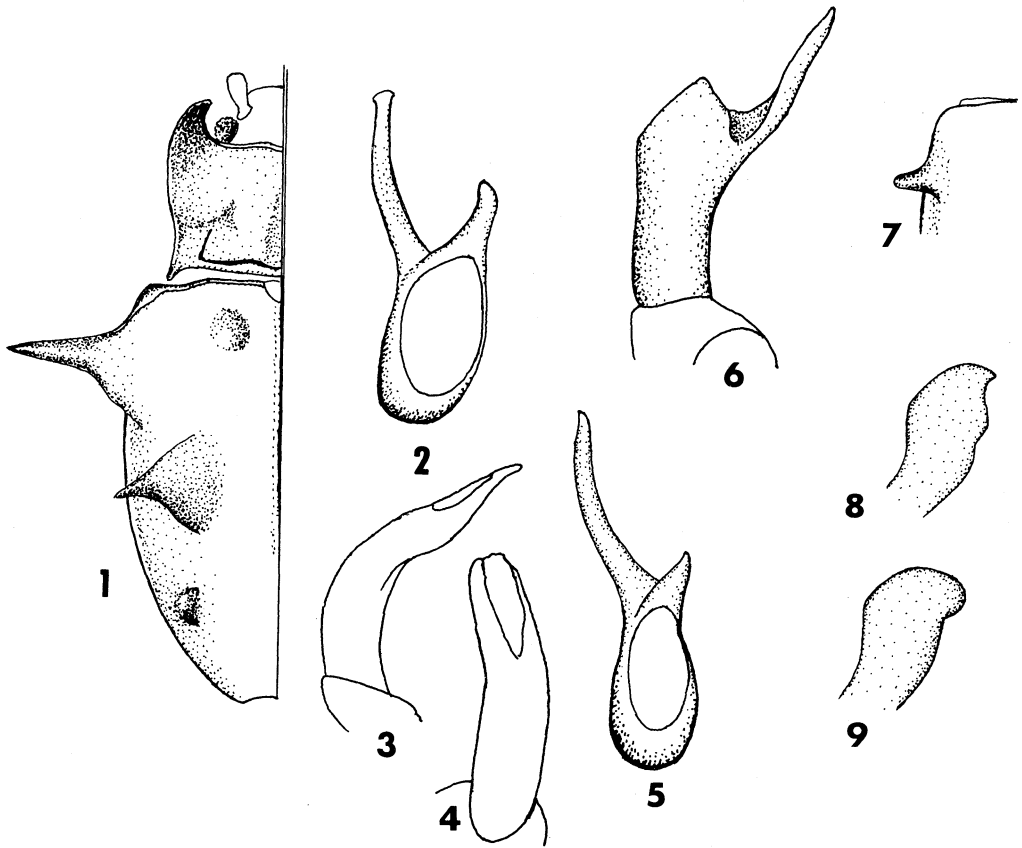


FIG. 1-9. 1-2. *Cacodaemon beliar*, holotype: 1, habitus; 2, aedeagus, apical view. 3-4. *Amphisternus papulatus*, paralectotype, aedeagus: 3, left side; 4, dorsal face. 5. *A. auriculatus*, lectotype, aedeagus, apical view. 6-7. *A. vomeratus*, lectotype: 6, aedeagus; 7, posthumeral spine. 8. *Spathomeles d. darwinista*, lectotype, apex of aedeagal ramus. 9. *S. darwinista pyramidalis*, lectotype, apex of aedeagal ramus.

Amphisternus hamatus: Gerstaecker, 1857: 216.—1858: 47.

Cacodaemon hamatus (in part) Thomson, 1857: 154.—Strohecker, 1964: 347.

Gerstaecker (ll. c.), indicating that he had examined Germar's type, synonymized *A. inaequalis* and has been followed in the few subsequent citations. The date to be assigned to *Eumorphus hamatus* Guérin is a problem. Sherborn's *Index Animalium* (sectio 2, 1: lxiii) has the following note: "Guérin-Méneville, F. E.—Iconographie du Règne Animal, 50 pts. 8vo Paris, 1829-44. All the text was issued in one block as livr. 45-50 in Sept 1844. Proofsheets were no doubt circulated as the text is often quoted between 1836 and 1842."

Plates were also probably distributed before 1844. Hull (1973: 602) lists the Guérin

plates bound as an atlas with date 1835; I have not seen this. George Steyskal writes me that the William Schaus copy of this work of Guérin has on plate 50 a pencilled notation "jan. 1835"; authorship of this note is unknown.

Thomson's intention in describing *Cacodaemon hamatus* is not clear. He identified it with *Eumorphus hamatus* of Dejean cat. 3: 463, but Guérin's (1844) figure and description probably represent the form listed by Dejean; Gerstaecker (1858: 47) so considered it. In what Arrow (1925: vii) calls "the extraordinary treatment of his contributor's manuscript" Thomson also described *Cacodaemon hopei*, attributing the name to Guérin and citing only material in Guérin's collection. Gerstaecker (1858: 68) examined Thomson's material of *C. hamatus*, finding the specimen on which the description was based to be *Spathomeles decoratus* Gerst. Moreover, this specimen was mixed with examples of "*Amphisternus hamatus Guérin*," to which the provenance "Java" cited by Thomson applied.

A male specimen of *Amphisternus hamatus* (Guérin) in BMNH bears a museum "Type" label. This and another male labeled as cotype are probably from Guérin's 1857 study. In the 1844 description and figures no mention of the striking features of the male was made; these were subsequently described and figured by Guérin in 1857.

***Cacodaemon beliar* Strohecker, new species**

Fig. 1, 2

Dull black, elytron with 2 red pustules and 2 spines, 1 pustule near scutellum, 1 on apical slope; spines discal and posthumeral. Length 8 mm.

Antenna slender, articles 3–8 elongate, 3 almost equal to 4–5 together, club wide, much flattened. Pronotum with front angles long, turned upward and slightly inward, apex sharp; hind angles short-spiniform; disc with shallow median groove in basal $\frac{1}{2}$, lateral sulci linear, basal transverse sulcus sharply inscribed. Posthumeral spine of elytron subequal in length to basal width of elytron, discal cone and spine slightly longer; surface opaque, punctures scattered and shallow, apex truncate.

Holotype ♂ (BPBM 12,590), N Borneo [MALAYSIA: SABAH]: forest camp, 19 km N of Kalabakan, 7–10.II.1962, malaise trap, Y. Hirashima. Deposited in the Bishop Museum, Honolulu.

Remarks. *C. beliar* is similar in pronotal structure to *C. auriculatus* (Gerstaecker) but its front angles are wider and less attenuate. The elytra are similar to those of *C. bakeri* (Strohecker); the aedeagus is also similar but the apex and ramus are relatively shorter in the new species. The specific name is a variant of Belial and is of demonological origin.

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