

**Taxonomic synopsis of the genera**  
***Euhylaeogena* HESPENHEIDE, 2014 and**  
***Hedwigiella* OBENBERGER, 1941**  
**for South America with the description of eight new species.**  
**(Coleoptera: Buprestidae)**

MICHAEL HORNBURG

**Abstract**

In the present paper seven new jewel beetle species are described, belonging to the exclusively Neotropical and recently established genus *Euhylaeogena* HESPENHEIDE, 2014, *Euhylaeogena batesi* sp. nov., *E. guttata* sp. nov., *E. hespenheidei* sp. nov., *E. lucida* sp. nov., *E. orbicularia* sp. nov., *E. remus* sp. nov., *E. romulus* sp. nov., and another species of the genus *Hedwigiella* OBENBERGER 1941, *Hedwigiella hyacinthina* sp. nov. The species are compared with morphologically closely related species.

Lectotypes and accordingly paralectotypes are designated for *Euhylaeogena cognata* (KIRSCH, 1873), *E. compar* (KIRSCH, 1873), *E. lata* (KIRSCH, 1873), *E. nana* (KIRSCH, 1873), *E. planifrons* (KIRSCH, 1873). All described species and species used for comparison in this paper are figured photographically and if possible added with drawings of the male genitalia or anal ventrites.

In the course of the paper and in correlation with recent changes on genera level (HESPENHEIDE, 2014), the following formerly under *Hylaeogena* OBENBERGER, 1923 recorded species will be transferred to *Euhylaeogena* respectively *Hedwigiella* OBENBERGER, 1941:

*Euhylaeogena aeneonitens* (HORNBURG, 2012) **comb. nov.**, *E. alia* (BELLAMY, 1998) **comb. nov.**, *E. alvarengai* (COBOS, 1967) **comb. nov.**, *E. aurata* (OBENBERGER, 1925) **comb. nov.**, *E. aurocephala* (COBOS, 1976) **comb. nov.**, *E. aurulenta* (COBOS, 1959) **comb. nov.**, *E. benardi* (OBENBERGER, 1932) **comb. nov.**, *E. berlandi* (OBENBERGER, 1932) **comb. nov.**, *E. bicolor* (APT, 1954) **comb. nov.**, *E. bordoni* (COBOS, 1967) **comb. nov.**, *E. carbo* (KIRSCH, 1866) **comb. nov.**, *E. chopardi* (OBENBERGER, 1932) **comb. nov.**, *E. chrysocephala* (KERREMANS, 1896) **comb. nov.**, *E. circularis* (KERREMANS, 1899) **comb. nov.**, *E. circumdata* (KERREMANS, 1897) **comb. nov.**, *E. circumscripta* (KERREMANS, 1903) **comb. nov.**, *E. cognata* (KIRSCH, 1873) **comb. nov.**, *E. cognathoides* (COBOS, 1969) **comb. nov.**, *E. compar* (KIRSCH, 1873) **comb. nov.**, *E. confusa* (COBOS, 1958) **comb. nov.**, *E. curtula* (BOHEMANN, 1858) **comb. nov.**, *E. cyaneaurata* (COBOS, 1956) **comb. nov.**, *E. diabolica* (COBOS, 1959) **comb. nov.**, *E. dilatata* (GORY, 1841) **comb. nov.**, *E. dormitzeri* (OBENBERGER, 1925) **comb. nov.**, *E. elliptica* (OBENBERGER, 1925) **comb. nov.**, *E. ephippia* (FABRICIUS, 1801) **comb. nov.**, *E. episcopalis* (OBENBERGER, 1925) **comb. nov.**, *E. grossei* (OBENBERGER, 1938) **comb. nov.**, *E. gyoerfii* (APT, 1954) **comb. nov.**, *E. helferi* (OBENBERGER, 1925) **comb. nov.**, *E. iridea* (APT, 1954) **comb. nov.**, *E. jeanelli* (OBENBERGER, 1932) **comb. nov.**, *E. joukli* (OBENBERGER, 1925) **comb. nov.**, *E. jousselini* (GORY, 1841) **comb. nov.**, *E. klapaleki* (OBENBERGER, 1925) **comb. nov.**, *E. laenis* (GORY, 1841) **comb. nov.**, *E. lata* (KIRSCH, 1873) **comb. nov.**, *E. lesnei* (OBENBERGER, 1932) **comb. nov.**, *E. mariae* (COBOS, 1990) **comb. nov.**, *E. mequignoni* (OBENBERGER, 1932) **comb. nov.**, *E. metallica* (GORY, 1841) **comb. nov.**, *E. metzi* (OBENBERGER, 1925) **comb. nov.**, *E. micromegas* (OBENBERGER, 1925) **comb. nov.**, *E. nana* (KIRSCH, 1873) **comb. nov.**, *E. nickerli* (OBENBERGER, 1925) **comb. nov.**, *E. nigerrima* (KERREMANS, 1903) **comb. nov.**, *E. nigromicans* (COBOS, 1967) **comb. nov.**, *E. ogloblini* (OBENBERGER, 1932) **comb. nov.**, *E. onorei* (COBOS, 1990) **comb. nov.**, *E. opaca* (COBOS, 1978) **comb. nov.**, *E. ovoidea* (OBENBERGER, 1925) **comb. nov.**, *E. ovulum* (OBENBERGER, 1925) **comb. nov.**, *E. paraguayensis* (OBENBERGER, 1923) **comb. nov.**, *E. pauligena* (OBENBERGER, 1925) **comb. nov.**, *E. pauperula* (THOMSON, 1879) **comb. nov.**, *E. planifrons* (KIRSCH, 1873) **comb. nov.**, *E. rugifrons* (COBOS, 1967) **comb. nov.**, *E. seguyi* (OBENBERGER, 1932) **comb. nov.**, *E. semenovi* (OBENBERGER, 1932) **comb. nov.**, *E. semilunaris* (KERREMANS, 1900) **comb. nov.**, *E. sepulchralis* (OBENBERGER, 1925) **comb. nov.**, *E. silverioi* (COBOS, 1956) **comb. nov.**, *E. sororcula* (OBENBERGER, 1932) **comb. nov.**, *E. splendida* (APT, 1954) **comb. nov.**, *E. submetallica* (COBOS, 1967) **comb. nov.**, *E. szekessyi* (APT, 1954) **comb. nov.**, *E. tesari* (OBENBERGER, 1938) **comb. nov.**, *E. testudinaria* (GORY, 1841) **comb. nov.**, *E. tristis* (COBOS, 1956) **comb. nov.**, *E. unicolor* (KERREMANS, 1896) **comb. nov.**, *E. viridifrons* (COBOS, 1967) **comb. nov.**, *E. zoufali* (OBENBERGER, 1925) **comb. nov.**

Finally *Hedwigiella cbellamyi* HESPENHEIDE, 2014: 25 **syn. nov.** is a younger synonym of *Hedwigiella anniae* (OBENBERGER, 1932) **comb. nov.**

## Introduction

Currently only three species remain in the genus *Hylaeogena* OBENBERGER, 1923. The recent work by HESPENHEIDE (2014) placing *Hedwigiella* OBENBERGER, 1941 at the generic level and introducing the new genus *Euhylaeogena* HESPENHEIDE, 2014 for the majority of the species, formerly recorded under *Hylaeogena* OBENBERGER, 1923, is the result of detailed study of characters. HESPENHEIDE (2014) additionally presents a generic key to the subtribe Pachyschelidina. He indicates that *Hylaeogena speculum* (Klug, 1825) as the generic type and *H. capitata* (Kerremans, 1903) (Figs. 1, 2, 3) are distinguished not just morphologically, but also on the basis of male genitalia structure from the other species previously affiliated with the genus *Hylaeogena*. In his work HESPENHEIDE (2014) discusses mainly representatives of Central America. Since most of the species previously included in *Hylaeogena* are native to South America and having not received any consideration, all remaining species are herein examined for their generic affiliation and transferred to the appropriate genus, to reinstate taxonomic homogeneity. Almost all type specimens were examined directly. For evaluation of a small number of species photos were used, whose quality was sufficient to recognize the important diagnostic characters. In some species, however, assignment to genus could be made only on the basis of the original description in addition with analysis of the morphological characters pointed out by the authors or by means of later published works. In the present listing a comment is given to these species in question.

Types of Theodor F. W. KIRSCH (1818-1889), preserved in the SMTD, were found sorted below ground labels. By means of the collecting-labels of the specimens, no species affiliation could be defined; all labels share the same data, except for some "Typus" labels without specification. To avoid confusion and misinterpretation, the respective specimens were examined for determination of species level and designated as lecto-, respectively paralectotypes.

Furthermore the investigation of specimens collected in Venezuela and specimens examined from institutional and private collections lead to the identification of a number of new species. These are herein described and figured photographically together with previously described species used for comparison. In addition, drawings of the male genitalia or anal ventrite of most species are added and shown for the first time. Including the recent listings and descriptions of HESPENHEIDE (2014), the genus *Hedwigiella* comprises four species and the genus *Euhylaeogena* includes a total of 103 species.

## Material and Methods

This study is based on the examination of specimens, deposited in the collections mentioned below.

BMNH	Natural History Museum, London, United Kingdom
CHAH	Henry A. HESPENHEIDE collection, Los Angeles, United States
DAFF	Department of Agriculture, Fisheries and Forestry, Queensland, Australia
MIZA	Museo del Instituto de Zoología Agrícola de la Facultad de Agronomía de la Universidad Central de Venezuela, Maracay, Venezuela
MNCN	Museo Nacional de Ciencias Naturales, Madrid, Spain
MNHN	Muséum National d'Histoire Naturelle, Paris, France
MHCB	Michael HORNBERG collection Berlin, Germany
NHRS	Naturhistoriska Riksmuseet, Stockholm, Sweden
NMPC	Národní Muzeum, Prague, Czech Republic
SMTD	Senckenberg Naturhistorische Sammlungen Dresden, Germany
UNMSM	Museo de Historia Natural, Lima, Peru
ZMHB	Museum für Naturkunde – Leibniz-Institut für Evolutions- und Biodiversitätsforschung an der Humboldt-Universität zu Berlin, Germany
ZSMC	Zoologische Staatssammlung München, Germany

Personal remarks are in square brackets [ ], other symbols used are for /: next line, same label, |: next label **p**: printed, **h**: handwritten

The images were prepared by using the photographic equipment of the ZMHB, a Canon EOS 450D with macro lens MP-E, 65mm, f/1:2.8 and Allen Hadley's free image stacking software Combine ZP.

For an exact reproduction of the natural genitalia structures with all the soft parts, the drawings were made after soaking the specimen and/or male genitalia in standard glass cleaner (water, alcohol, tenside), which turned out to be a very convenient medium.

## Nomenclatural changes and lectotype designation

The main distinguishing characters separating *Euhylaeogena* from the genera *Hylaeogena* and *Hedwigiella* are the narrowly arranged antennal insertions and the absence of keels in the posterior angles of the pronotum (see HESPENHEIDE, 2014:28).

***Euhylaeogena aeneonitens* (HORNBERG, 2012) comb. nov.**

*Hylaeogena aeneonitens* HORNBERG, 2012: 59.

***Euhylaeogena alia* (BELLAMY, 1998) comb. nov.**

*Hylaeogena modesta* COBOS, 1967: 227.

*Hylaeogena alia* BELLAMY, 1998: 96.

***Euhylaeogena alvarengai* (COBOS, 1967) comb. nov.**

*Hylaeogena alvarengai* COBOS, 1967: 232.

***Euhylaeogena aurata* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena aurata* OBENBERGER, 1925: 129.

***Euhylaeogena aurocephala* (COBOS, 1976) comb. nov.**

*Hylaeogena aurocephala* COBOS, 1967: 229.

***Euhylaeogena aurulenta* (COBOS, 1959) comb. nov.**

*Hylaeogena aurulenta* COBOS, 1959: 42.

***Euhylaeogena benardi* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena benardi* OBENBERGER, 1932: 127.

***Euhylaeogena berlandi* (OBENBERGER, 1932) comb. nov. (Figs. 19, 20, 21)**

*Hylaeogena berlandi* OBENBERGER, 1932: 129.

***Euhylaeogena bicolor* (APT, 1954) comb. nov.**

*Hylaeogena bicolor* APT, 1954: 237.

Note: The analysis of the original description in comparison with diagnostic generic characters suggests that this species should be listed under *Euhylaeogena*.

***Euhylaeogena bordoni* (COBOS, 1967) comb. nov.**

*Hylaeogena bordoni* COBOS, 1967: 236.

***Euhylaeogena carbo* (KIRSCH, 1866) comb. nov.**

*Brachys carbo* KIRSCH, 1866: 179.

*Hylaeogena carbo*: OBENBERGER, 1925: 24, 131, 139.

Note: This species remains untraceable. The description cannot be associated with established species, except that this species certainly belongs to the genus *Euhylaeogena*.

***Euhylaeogena chopardi* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena chopardi* OBENBERGER, 1932: 126.

***Euhylaeogena chrysocephala* (KERREMANS, 1896) comb. nov.**

*Pachyschelus chrysocephalus* KERREMANS, 1896: 322.

*Hylaeogena chrysocephala*: HESPENHEIDE, 1979: 112.

***Euhylaeogena circularis* (KERREMANS, 1899) comb. nov.**

*Pachyschelus circularis* KERREMANS, 1899: 354.

*Hylaeogena circularis*: HESPENHEIDE, 1979: 112.

*Pachyschelus bruchi* KERREMANS, 1903: 318.

*Hylaeogena bruchi*: OBENBERGER, 1925: 143; HORNBERG, 2012: 56.

*Hylaeogena scutellaris* OBENBERGER, 1925: 146; HORNBERG, 2012: 56.

***Euhylaeogena circumdata* (KERREMANS, 1897) comb. nov.**

*Pachyschelus circumdatus* KERREMANS, 1897: 126.

*Hylaeogena circumdata*: HORNBERG, 2012: 56.

*Hylaeogena achari* OBENBERGER, 1925: 145; HORNBERG, 2012: 56.

***Euhylaeogena circumscripta* (KERREMANS, 1903) comb. nov.**

*Pachyschelus circumscriptus* KERREMANS, 1903: 318.

*Hylaeogena circumscripta*: HESPENHEIDE, 1979: 112.

*Hylaeogena bryanti* Théry, 1940: 164; HORNBERG, 2012: 56.

***Euhylaeogena cognata* (KIRSCH, 1873) comb. nov.** (Figs. 4, 5, 63)

*Brachys cognatus* KIRSCH, 1873: 364.

*Hylaeogena cognata*: OBENBERGER, 1925: 48, 49, 134, 142.

The single specimen below was compared with the original description and could be unambiguously assigned to *E. cognata*.

SMTD: 1 ♀, lectotype (**designated herein**): Pozuzu/ KIRSCH [h, green label] | Typus [p, red label] | Staatl. Museum für/ Tierkunde Dresden [p].

***Euhylaeogena cognathoides* (COBOS, 1969) comb. nov.**

*Hylaeogena cognathoides* COBOS, 1969: 36.

***Euhylaeogena compar* (KIRSCH, 1873) comb. nov.** (Figs. 6, 7, 64)

*Brachys compar* KIRSCH, 1873: 365.

*Hylaeogena compar*: OBENBERGER, 1925: 49, 134, 143.

The two specimens below were compared with the original description and could be unambiguously assigned to *E. compar*.

SMTD: 1 ♀, lectotype (**designated herein**): Pozuzu/ KIRSCH [h, green label] | Typus! [p, red label] | Staatl. Museum für/ Tierkunde Dresden [p].

SMTD: 1 ♀, paralectotype (**designated herein**): Pozuzu/ KIRSCH [h, green label] | Staatl. Museum für/ Tierkunde Dresden [p].

***Euhylaeogena confusa* (COBOS, 1958) comb. nov.**

*Hylaeogena confusa* COBOS, 1958: 97.

***Euhylaeogena curtula* (BOHEMANN, 1858) comb. nov.** (Fig. 8)

*Trachys curtulus* BOHEMANN, 1858: 65.

*Pachyschelus curtulus*: SAUNDERS, 1871: 135.

*Hylaeogena curtula*: BLACKWELDER, 1944: 337.

Note: OBENBERGER (1925: 28) lists these species under the genus *Pachyschelus*. His interpretation here refers to the original description. Blackwelder's uncommented rearrangement to *Hylaeogena* was probably based on OBENBERGER'S footnote-suggestion, since he was not a specialist in Buprestidae. Recently sent photos of the type specimen from the NHRS show, that this species was correctly associated with the genus *Hylaeogena*. Due to its diagnostic generic characters this species is transferred hereby to *Euhylaeogena*.

Using the original description, it cannot be recognized whether this species was described after a single type or a type series. The collection of NHRS (personal communication) keeps a series of six specimens under this name with identical locality labels (Rio Jan). The one with the type label and two other specimens were collected by KINBERG (Hjalmar KINBERG, 1820-1908) during the Eugenie-expedition between the years 1851-1853. The other collectors R. F. SAHLBERG (1 specimen) and A. FRY (2 specimen) were not members of the same expedition. But it also cannot be excluded, that these three specimens also were part of a syntype series, since SAHLBERG and FRY lived and worked in the same period.

NHRS: Rio Jan | Kinb. | Type | NHRS-JLKB/ 000022931 [p] | Typus [p, red label].

***Euhylaeogena cyaneoaurata* (COBOS, 1956) comb. nov.**

*Hylaeogena cyaneoaurata* COBOS, 1956: 93.

***Euhylaeogena diabolica* (COBOS, 1959) comb. nov.**

*Hylaeogena diabolica* COBOS, 1959: 43.

***Euhylaeogena dilatata* (GORY, 1841) comb. nov.**

*Brachys dilatatus* GORY, 1841: 347.

*Hylaeogena dilatata*: OBENBERGER, 1925: 132, 141.

***Euhylaeogena dormitzeri* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena dormitzeri* OBENBERGER, 1925: 138.

***Euhylaeogena elliptica* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena elliptica* OBENBERGER, 1925: 140.

***Euhylaeogena ephippium* (FABRICIUS, 1801) comb. nov.**

*Trachys ephippium* FABRICIUS, 1801: 218.

*Brachys ephippium*: SAUNDERS, 1870: 36.

*Pachyschelus ephippium*: SAUNDERS, 1871: 134.

*Hylaeogena ephippium*: OBENBERGER, 1925: 134, 143.

Note: The classification of OBENBERGER (1925) would exclude this species from *Hylaeogena* or *Hedwigiella* and leads to the proposal that this species should be listed under *Euhylaeogena* for now.

***Euhylaeogena episcopalis* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena episcopalis* OBENBERGER, 1925: 129.

***Euhylaeogena grossei* (OBENBERGER, 1938) comb. nov.**

*Hylaeogena grossei* OBENBERGER, 1938: 20.

***Euhylaeogena gyoerfii* (APT, 1954) comb. nov.**

*Hylaeogena gyoerfii* APT, 1954: 234.

Note: The analysis of the original description in comparison with diagnostic generic characters suggests that this species should be listed under *Euhylaeogena*.

***Euhylaeogena helferi* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena helferi* OBENBERGER, 1925: 136.

***Euhylaeogena iridea* (APT, 1954) comb. nov.**

*Hylaeogena iridea* APT, 1954: 235.

Note: The analysis of the original description in comparison with diagnostic generic characters suggests that this species should be listed under *Euhylaeogena*.

***Euhylaeogena jeanelli* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena jeanelli* OBENBERGER, 1932: 125.

***Euhylaeogena joukli* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena joukli* OBENBERGER, 1925: 140.

***Euhylaeogena jousselini* (GORY, 1841) comb. nov.**

*Brachys jousselini* GORY, 1841: 349.

*Hylaeogena jousselini*: HESPENHEIDE, 1979: 112.

***Euhylaeogena klapaleki* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena klapaleki* OBENBERGER, 1925: 141.

***Euhylaeogena laenis* (GORY, 1841) comb. nov.** (Figs. 28, 29, 30, 36)

*Brachys laenis* GORY, 1841: 349.

*Hylaeogena laenis*: HESPENHEIDE, 1979: 112.

*Hylaeogena analis* OBENBERGER, 1925: 145; HESPENHEIDE, 1979: 112.

***Euhylaeogena lata* (KIRSCH, 1873) comb. nov.** (Figs. 9, 10)

*Brachys latus* KIRSCH, 1873: 363.

*Hylaeogena lata*: OBENBERGER, 1925: 24, 131, 139.

The single specimen below was compared with the original description and could be unambiguously assigned to *E. lata*.

SMTD: 1 ♂, lectotype (**designated herein**): Pozuzu/ KIRSCH [h, green label] | Typus [p, red label]/ Staatl. Museum für/ Tierkunde Dresden [p].

***Euhylaeogena lesnei* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena lesnei* OBENBERGER, 1932: 126.

***Euhylaeogena mariae* (COBOS, 1990) comb. nov.** (Figs. 34, 35)

*Hylaeogena mariae* COBOS, 1990: 58.

***Euhylaeogena mequignoni* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena mequignoni* OBENBERGER, 1932: 128.

***Euhylaeogena metallica* (GORY, 1841) comb. nov.**

*Pachyschelus metallicus* GORY, 1841: 349.

*Hylaeogena metallica*: HESPENHEIDE, 1979: 112.

***Euhylaeogena metzi* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena metzi* OBENBERGER, 1925: 138.

***Euhylaeogena micromegas* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena micromegas* OBENBERGER, 1925: 143.





**Plate I (Figs. 1 – 7)**

1: *Hylaeogena capitata* (KERREMANS), paratype, dorsal view; 2: *H. capitata*, paratype, ventral view; 3: *H. capitata*, paratype aedeagus; 4: *Euhylaeogena cognata* (KIRSCH), lectotype, dorsal view; 5: *E. cognata*, lectotype, ventral view; 6: *Euhylaeogena compar* (KIRSCH), lectotype, dorsal view; 7: *E. compar*, lectotype, ventral view.



**Plate II (Figs. 8 – 15)**

8: *Euhylaeogena curtula* (BOHEMANN), type, dorsal view; 9: *Euhylaeogena lata* (KIRSCH), lectotype, dorsal view; 10: *E. lata*, lectotype, aedeagus; 11: *Euhylaeogena nana* (KIRSCH), lectotype, dorsal view; 12: *E. nana*, lectotype, ventral view; 13: *E. nana*, lectotype, aedeagus; 14: *Euhylaeogena planifrons* (KIRSCH), lectotype, dorsal view; 15: *E. planifrons*, lectotype, ventral view.

***Euhylaeogena nana* (KIRSCH, 1873) comb. nov.** (Figs. 11, 12, 13)

*Brachys nanus* KIRSCH, 1873: 366.

*Hylaeogena nana*: OBENBERGER, 1925: 27, 30, 132, 133, 141.

The six specimens below were compared with the original description and could be unambiguously assigned to *E. nana*.

SMTD: 1 ♂, lectotype (**designated herein**): Pozuzu/ KIRSCH [h, green label] | Typus! [p, red label] | Staatl. Museum für/ Tierkunde Dresden [p].

SMTD: 2 ♂, 3 ♀, paralectotypes (**designated herein**): Pozuzu/ KIRSCH [h, green label] | Staatl. Museum für/ Tierkunde Dresden [p].

***Euhylaeogena nickerli* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena nickerli* OBENBERGER, 1925: 139.

***Euhylaeogena nigerrima* (KERREMANS, 1903) comb. nov.**

*Pachyschelus nigerrimus* KERREMANS, 1903: 320.

*Hylaeogena nigerrima*: OBENBERGER, 1925: 26, 132, 141.

***Euhylaeogena nigromicans* (COBOS, 1967) comb. nov.**

*Hylaeogena nigromicans* COBOS, 1967: 231.

***Euhylaeogena ogloblini* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena ogloblini* OBENBERGER, 1932: 129.

***Euhylaeogena onorei* (COBOS, 1990) comb. nov.**

*Hylaeogena onorei* COBOS, 1990: 57.

***Euhylaeogena opaca* (COBOS, 1978) comb. nov.**

*Hylaeogena opaca* COBOS, 1978: 52.

***Euhylaeogena ovoidea* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena ovoidea* OBENBERGER, 1925: 140.

***Euhylaeogena ovulum* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena ovulum* OBENBERGER, 1925: 144.

***Euhylaeogena paraguayensis* (OBENBERGER, 1923) comb. nov.**

*Hylaeogena paraguayensis* OBENBERGER, 1923: 44.

***Euhylaeogena pauligena* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena pauligena* OBENBERGER, 1925: 137.

***Euhylaeogena pauperula* (THOMSON, 1879) comb. nov.**

*Pachyschelus pauperulus* THOMSON, 1879: 81.

*Hylaeogena pauperula*: HESPENHEIDE, 1979: 112.

Note: The classification of OBENBERGER (1925: 78) excludes this species from *Hylaeogena* or *Hedwigiella*. The previous transfer to *Hylaeogena* (HESPENHEIDE, 1979) leads to the conclusion that this species should be listed under *Euhylaeogena*.

***Euhylaeogena planifrons* (KIRSCH, 1873) comb. nov.** (Fig. 14, 15, 65)

*Brachys planifrons* KIRSCH, 1873: 364.

*Hylaeogena planifrons*: OBENBERGER, 1925: 27, 132, 141.

The single specimen below was compared with the original description and could be unambiguously assigned to *E. planifrons*.

SMTD: 1 ♀, lectotype (**designated herein**): Pozuzu/ KIRSCH [h, green label] | Typus! [p, red label] | Staatl. Museum für/ Tierkunde Dresden [p].

***Euhylaeogena rugifrons* (COBOS, 1967) comb. nov.**

*Hylaeogena rugifrons* COBOS, 1967: 226.

***Euhylaeogena seguyi* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena seguyi* OBENBERGER, 1932: 127.

***Euhylaeogena semenovi* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena semenovi* OBENBERGER, 1932: 127.



***Euhylaeogena semilunaris* (KERREMANS, 1900) comb. nov.**

*Pachschelus semilunaris* KERREMANS, 1900: 346.

*Hylaeogena semilunaris*: HESPENHEIDE, 1979: 112.

Note: The classification of OBENBERGER (1925: 83) excludes this species from *Hylaeogena* or *Hedwigiella*. The previous transfer to *Hylaeogena* (HESPENHEIDE, 1979) leads to the conclusion that this species should be listed under *Euhylaeogena*.

***Euhylaeogena sepulchralis* (OBENBERGER, 1925) comb. nov.**

*Hylaeogena sepulchralis* OBENBERGER, 1925: 138.

***Euhylaeogena silverioi* (COBOS, 1956) comb. nov.**

*Hylaeogena silverioi* COBOS, 1956: 92.

***Euhylaeogena sororcula* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena sororcula* OBENBERGER, 1932: 125.

***Euhylaeogena splendida* (APT, 1954) comb. nov.**

*Hylaeogena splendida* APT, 1954: 236.

Note: The analysis of the original description in comparison with diagnostic generic characters suggests that this species should be listed under *Euhylaeogena*.

***Euhylaeogena submetallica* (COBOS, 1967) comb. nov.**

*Hylaeogena submetallica* COBOS, 1967: 235.

***Euhylaeogena szekessyi* (APT, 1954) comb. nov.**

*Hylaeogena szekessyi* APT, 1954: 237.

Note: The analysis of the original description in comparison with diagnostic generic characters suggests that this species should be listed under *Euhylaeogena*.

***Euhylaeogena tesari* (OBENBERGER, 1938) comb. nov.**

*Hylaeogena tesari* OBENBERGER, 1938: 49.

***Euhylaeogena testudinaria* (GORY, 1841) comb. nov. (Figs. 45, 46, 47)**

*Pachyschelus testudinarius* GORY, 1841: 341.

*Hylaeogena testudinaria*: HESPENHEIDE, 1979: 113.

***Euhylaeogena tristis* (COBOS, 1956) comb. nov.**

*Hylaeogena tristis* COBOS, 1956: 90.

***Euhylaeogena unicolor* (KERREMANS, 1896) comb. nov.**

*Leiopleura unicolor* KERREMANS, 1896: 28.

*Hylaeogena unicolor*: HESPENHEIDE, 1979: 113.

Note: The transfer to *Hylaeogena* (HESPENHEIDE, 1979) leads to the conclusion that this species should be listed under *Euhylaeogena*.

***Euhylaeogena viridifrons* (COBOS, 1967) comb. nov.**

*Hylaeogena viridifrons* COBOS, 1967: 224.

***Euhylaeogena zoufali* (OBENBERGER, 1925) comb. nov.**

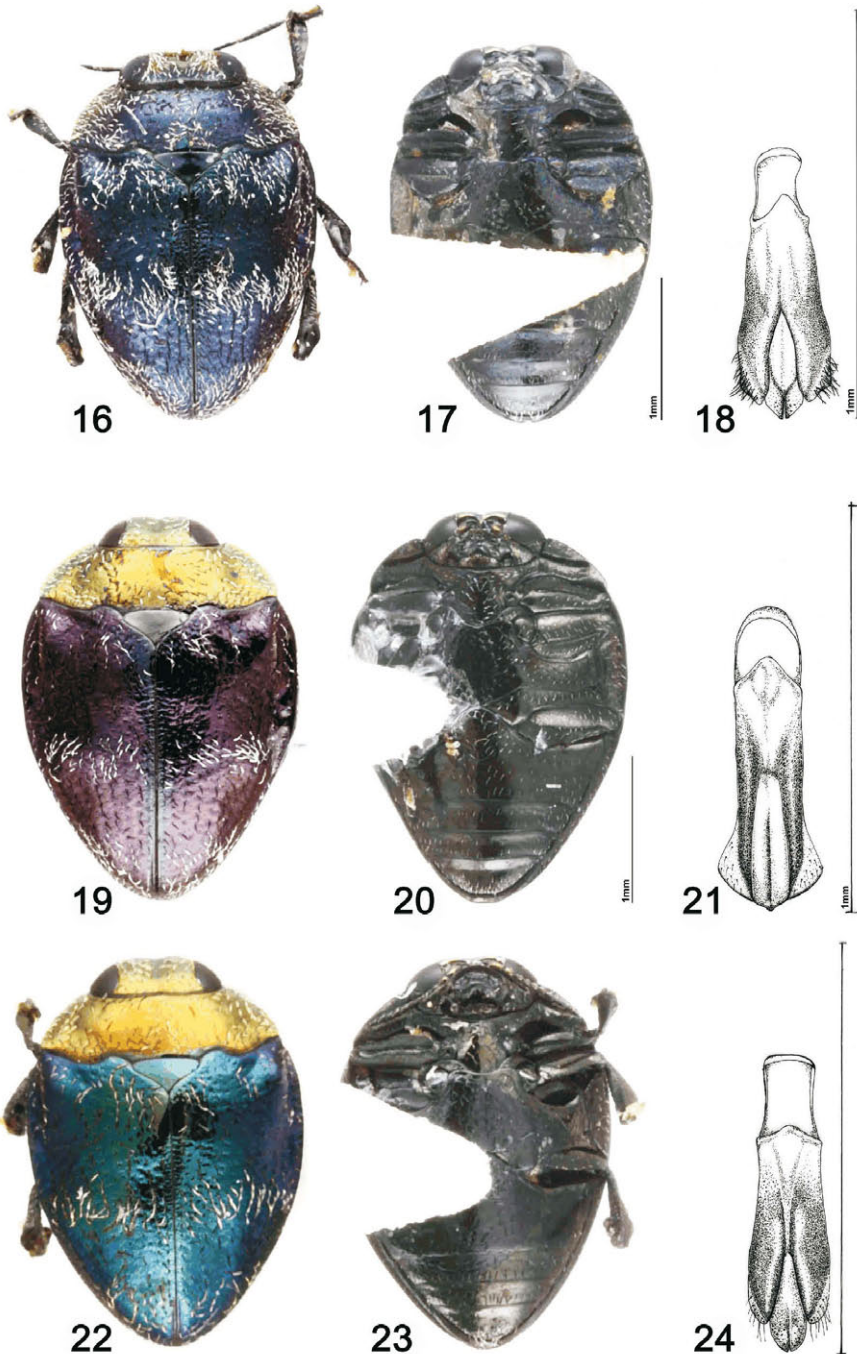
*Hylaeogena zoufali* OBENBERGER, 1925: 141.

***Hedwigiella anniae* (OBENBERGER, 1932) comb. nov.**

*Hylaeogena anniae* OBENBERGER, 1932: 128.

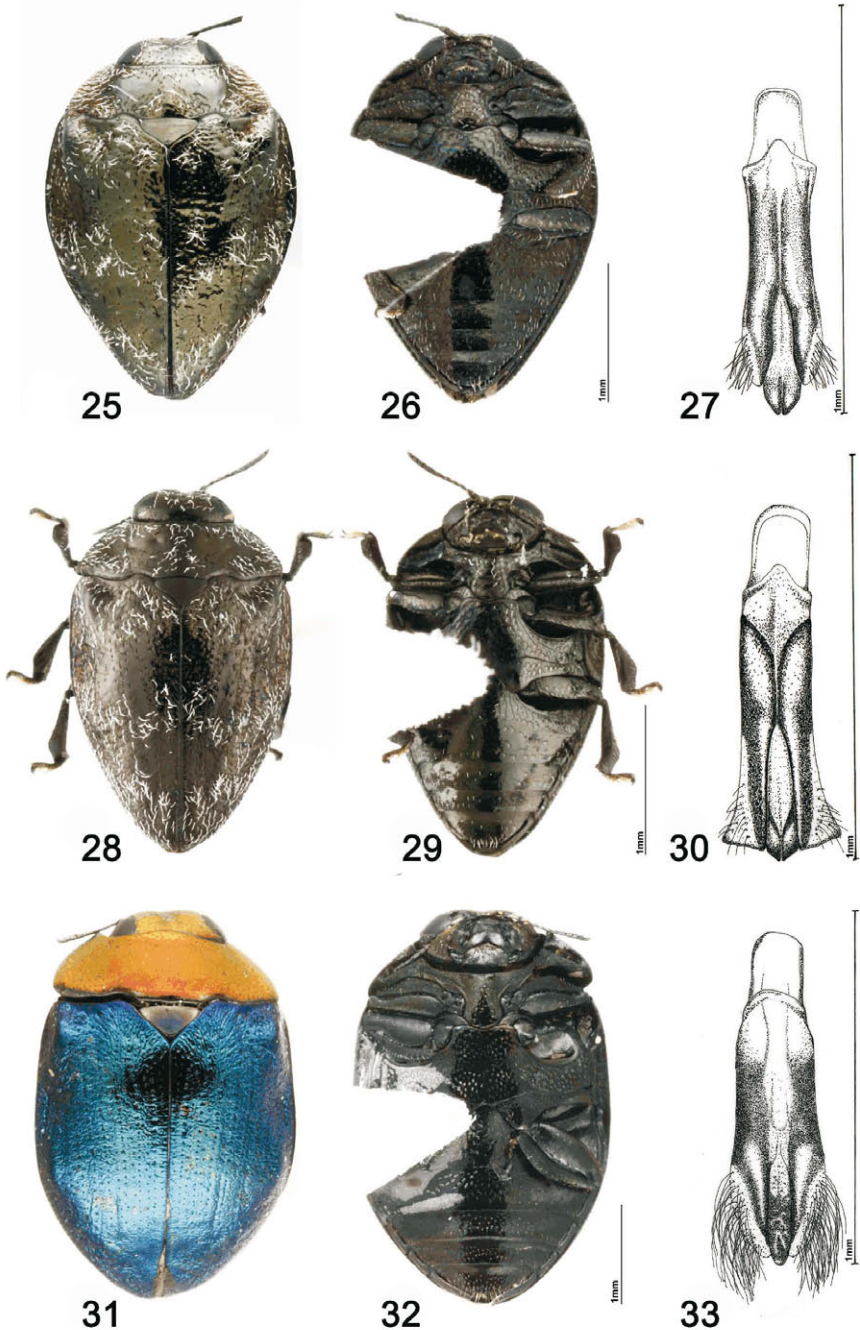
*Hedwigiella cbellamyi* HESPENHEIDE, 2014: 25 **syn. nov.**

Note: After analysis of photographs of the holotype of *H. anniae* (NMPC) with the label data Paraguay/ Sta. Trinidad and comparison with *H. cbellamyi*, described from Honduras, Costa Rica and Panama, HESPENHEIDE (personal communication) and HORNBERG are convinced that all specimens are conspecific. Shape, size and setal patterns are consistent in great detail. For the species *H. anniae* it might have been a mix-up of locality data, since no further data from Paraguay are known and OBENBERGER received plenty material from collectors in Costa Rica. A distribution range of more than 5000 km including crossing the Andes to Central America is very unusual. But finally we now have a very comprehensive description with a drawing of the male genitalia and reliable data.



**Plate III (Figs. 16 – 24)**

16: *Euhylaeogena batesi* sp. nov., paratype, dorsal view; 17: *E. batesi* sp. nov., paratype, ventral view; 18: *E. batesi* sp. nov., paratype, aedeagus; 19: *Euhylaeogena berlandi* (OBENBERGER), holotype, dorsal view; 20: *E. berlandi*, holotype, ventral view; 21: *E. berlandi*, holotype, aedeagus; 22: *Euhylaeogena festiva* (FISHER), dorsal view; 23: *E. festiva*, ventral view; 24: *E. festiva*, aedeagus



**Plate IV (Figs. 25 – 33)**

25: *Euhylaeogena guttata* sp. nov., holotype, dorsal view; 26: *E. guttata* sp. nov., holotype, ventral view; 27: *E. guttata* sp. nov., holotype, aedeagus; 28: *Euhylaeogena laenis* (GORY), dorsal view; 29: *E. laenis*, ventral view; 30: *E. laenis*, aedeagus; 31: *Euhylaeogena hespenheidei* sp. nov., holotype, dorsal view; 32: *E. hespenheidei* sp. nov., holotype, ventral view; 33: *E. hespenheidei* sp. nov., holotype, aedeagus.

## Taxonomy

### *Euhylaeogena batesi* sp. nov.

(Figs. 16, 17, 18)

**Holotype:** ♂ (BMNH): Santarem/ BATES [h, round label] | 41. [p, green label] | SAUNDERS/ 74.18. [p]. **Paratypes:** 1 ♂ (BMNH): Brasil/ Santarem | 52/ 96 [h, round label]; 2 ♀ (BMNH): Santarem/ BATES [h, round label] | SAUNDERS/ 74.18. [p]; 2 ♂, 1 ♀ (MNHN): Para/ Brasilia [h] | Coll./ Janson [p]; 1 ♂ (SMTD): Santarem/ BATES [h, green label] | Oscar/ LOEBEL. [p]; 1 ♂, 1 ♀ (SMTD): Amer. M./ BATES [h, green label] | Oscar/ LOEBEL. [p].

#### **General diagnosis:**

Small species, less than 3 mm. View from above oval, dorsal surface shiny dark bluish, partially white pilose.

#### **Description of holotype.**

Measurements: total length: 2.85 mm; width: 1.90 mm.

Head black-bluish from above, in frontal view with golden frons; longitudinal medial furrow distinct, but moderate; eyes convex; white pilosity short and close-fitting; surface microsculptured, interrupted by larger punctures.

Antennae black; 11-jointed; antennomere 7-11 broadened and of coarser sculpture.

Pronotum black-bluish from above, in frontal view with golden lustre antero-laterally; 3.4 times as broad as long, measured at the base and along the body axis; lateral margins regularly arcuate, converging towards head; anterior margin feebly bisinuate; surface very finely microsculptured; white pilosity on the disc sparse, laterally more dense and longer.

Scutellum 1.5 times broader than along body axis, shining, microsculptured like pronotum, glabrous.

Elytra black-bluish; surface smooth, without microsculpture, broadest in anterior third, bearing weak longitudinal puncture rows; punctuation in anterior third slightly wrinkled and irregular; elytra with three transversal irregularly shaped fasciae of white hairs; first fascia at the base, second posterior to the middle, and the third covering the apices; lateral margins also pilose; pilosity close fitting and of same length as pronotal margins.

Ventral side black; thorax smooth and glabrous, reticulation roundish and shallow; abdominal segments microsculptured and apically short, white pilose; last ventrite slightly concave truncated; legs black with strongly flattened and broadened tibiae.

Male genitalia claviform, penis longitudinally incised, parameres lateral-apically with small lobes, setose. (Fig. 18).

**Etymology.** The species is named in tribute to the late collector and famous naturalist and scientist Henry Walter BATES (1825- 1892), who lived and worked in Brazil between the years 1848 and 1859.

**Distribution.** Santarem, probably more widely distributed in the Amazon Valley.

**Differential diagnosis.** *Euhylaeogena batesi* sp. nov. belongs morphologically in one group with *E. festiva* (FISHER) (Figs. 22, 23, 24) and *E. berlandi* (OBENBERGER) (Figs. 19, 20, 21). From *E. festiva* it can be distinguished by comparing the male genitalia. The proportions are slightly different, especially the pit of the penis is more pointed and segmented in *E. batesi*, by having an analogical incision. Another diagnostic character can be found in comparing the pronotum. At *E. festiva* it is smooth and shiny, whereas that of *E. batesi* appears duller because of its microsculpture. The anterior margin of the pronotum of *E. berlandi* is simply rounded and the male genitalia show laterally broadly enlarged parameres and a simple shape of the penis. From *E. berlandi* the species differs generally in the more regularly elliptical shape and broader head in proportion to the pronotum. Furthermore, the sexual dimorphism in *E. batesi* is not as much developed as in the other two compared species; the head and pronotum of males only show their shiny colours under special lighting.

#### **Additional specimens examined:**

*E. berlandi* (OBENBERGER, 1932): holotype, NMPC.

*E. festiva* (FISHER, 1922): specimens from various localities in Panama (compared with type by HESPEHHEIDE), CHAH, NMPC.

### *Euhylaeogena guttata* sp. nov.

(Figs. 25, 26, 27)

**Holotype:** ♂ (MIZA): Venezuela, Aragua/ Tiara, 1290 m/ 12. VI. 1994 | J. L. GARCIA/ (Barrido).

#### **General diagnosis:**

Small species, less than 3 mm. View from above clearly ovoid/drop shaped, dorsal surface shining, dark aeneous, partially white pilose.



**Description of holotype.**

Measurements: total length: 2.80 mm; width: 1.95 mm.

Head viewed from above black with green lustre, frons in frontal view golden; longitudinal medial furrow very moderate; frons microsculptured, with sparse close fitting white pilosity; vertex smooth and shining with widespread loose punctation.

Antennae 11-jointed; first and second antennomere clearly enlarged; broadened from the seventh antennomere.

Pronotum black-aeous, antero-laterally microsculptured and with golden lustre; on the disc smooth and shining; 3.9 times as broad as long along body axis; lateral margins regularly arcuate, converging towards head; anterior margin simply rounded; white pilosity on the disc sparsely, laterally more dense.

Scutellum black, surface smooth and shining; 2.0 times as broad as long along body axis, glabrous.

Elytra black-aeous; surface on the disc smooth and shining, very weak longitudinal puncture rows merge into shallow transverse wrinkles; lateral and prehumeral depression microsculptured and with golden lustre; elytra broadest in frontal third, rearwards middle nearly straight converging toward apices; elytral pilosity white and of same length as on head and pronotum, anteriorly irregular around humeri and rearwards with two irregular transverse fasciae; first fascia posterior to the middle, second before the apices.

Ventral side black; uniformly microsculptured, regularly covered with bigger shallow pores on the entire ventral side; partially short, white pilose; last ventrite slightly impressed; legs black with strongly flattened and broadened tibiae, microsculptured as ventral side.

Male genitalia claviform, penis acuminate and longitudinally incised, parameres latero-apically setose (Fig. 27).

**Etymology.** The species is named after the pronounced drop-like shape.

**Distribution.** Venezuela, Estado Aragua.

**Differential diagnosis.** *Euhylaeogena guttata* **sp. nov.** belongs morphologically to the group including *E. laenis* (GORY) (Figs. 28, 29, 30, 36) and *E. berlandi* (OBENBERGER) (Figs. 19, 20, 21). From *E. laenis* it can be distinguished by being broader in relation to the length, the prehumeral depression in *E. guttata* is larger and colourful. In *E. guttata* the apical fasciae does not cover the elytra apices. On the male genitalia the parameres are laterally enlarged at *E. laenis* whereas the parameres in *E. guttata* are simply rounded. From *E. berlandi* it differs in lacking the well developed sexual dimorphism with very bright colours at the males. The head and pronotum in *E. berlandi* are fully microsculptured, not showing any smooth areas as in *E. guttata*. On the male genitalia the parameres are laterally enlarged at *E. berlandi* whereas the parameres in *E. guttata* are simply rounded.

**Additional specimens examined:**

*E. berlandi* (OBENBERGER, 1932): holotype, NMPC.

*E. laenis* (GORY, 1841): holotype, MNHN and specimens from various localities in south east Brazil (Minas Gerais, Sao Paulo), ZMHB, MHCB.

***Euhylaeogena hespenheidei* sp. nov.**

(Figs. 31, 32, 33)

**Holotype:** ♂ (ZMHB): Venezuela, Aragua/ Rancho Grande [p]/ 30-IV [h] 1973, 1100m. [p]. Paratype: ♂ (MHCB): same data as holotype.

**General diagnosis:**

Larger species, more than 3 mm. View from above long oval, body convex, coccinellid-like. Dorsal surface dichromatic, head and pronotum yellow-red, elytra blue.

**Description of holotype.**

Measurements: total length: 4.05 mm; width: 2.70 mm.

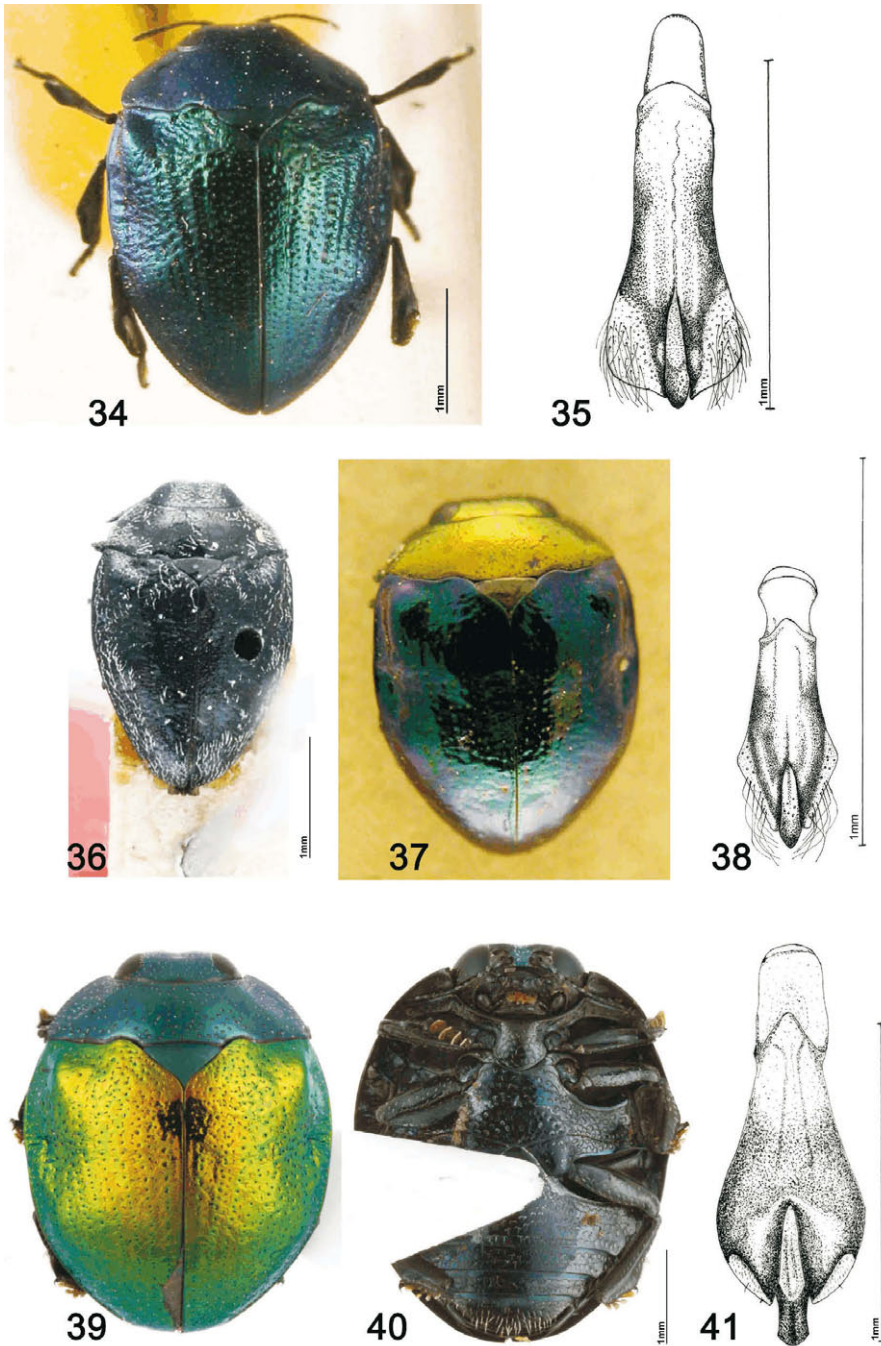
Head yellow-red; longitudinal middle furrow very moderate, but visible; eyes convex; head consistently microsculptured, with sparse and very short white pilosity.

Antennae 11-jointed; first and second antennomere enlarged, third to sixth of same size, clearly broadened from the seventh antennomere.

Pronotum yellow-red, consistently microsculptured; 3.0 times as broad as long along body axis; lateral margins regularly arcuate, converging toward head; anterior margin distinctly bisinuate; regularly covered with single white, extremely short hairs, visible only from side.

Scutellum black, surface smooth and shining; little broader than long, nearly equilateral, glabrous.





**Plate V (Figs. 34 – 41)**

34: *Euhylaeogena mariae* (COBOS), holotype, dorsal view; 35: *E. mariae*, aedeagus; 36: *Euhylaeogena laenis* (GORY) holotype, ventral view; 37: *Euhylaeogena astraea* (Waterhouse), syntype, dorsal view; 38: *E. astraea*, aedeagus; 39: *Euhylaeogena lucida* **sp. nov.**, dorsal view; 40: *E. lucida* **sp. nov.**, ventral view; 41: *E. lucida* **sp. nov.**, aedeagus.

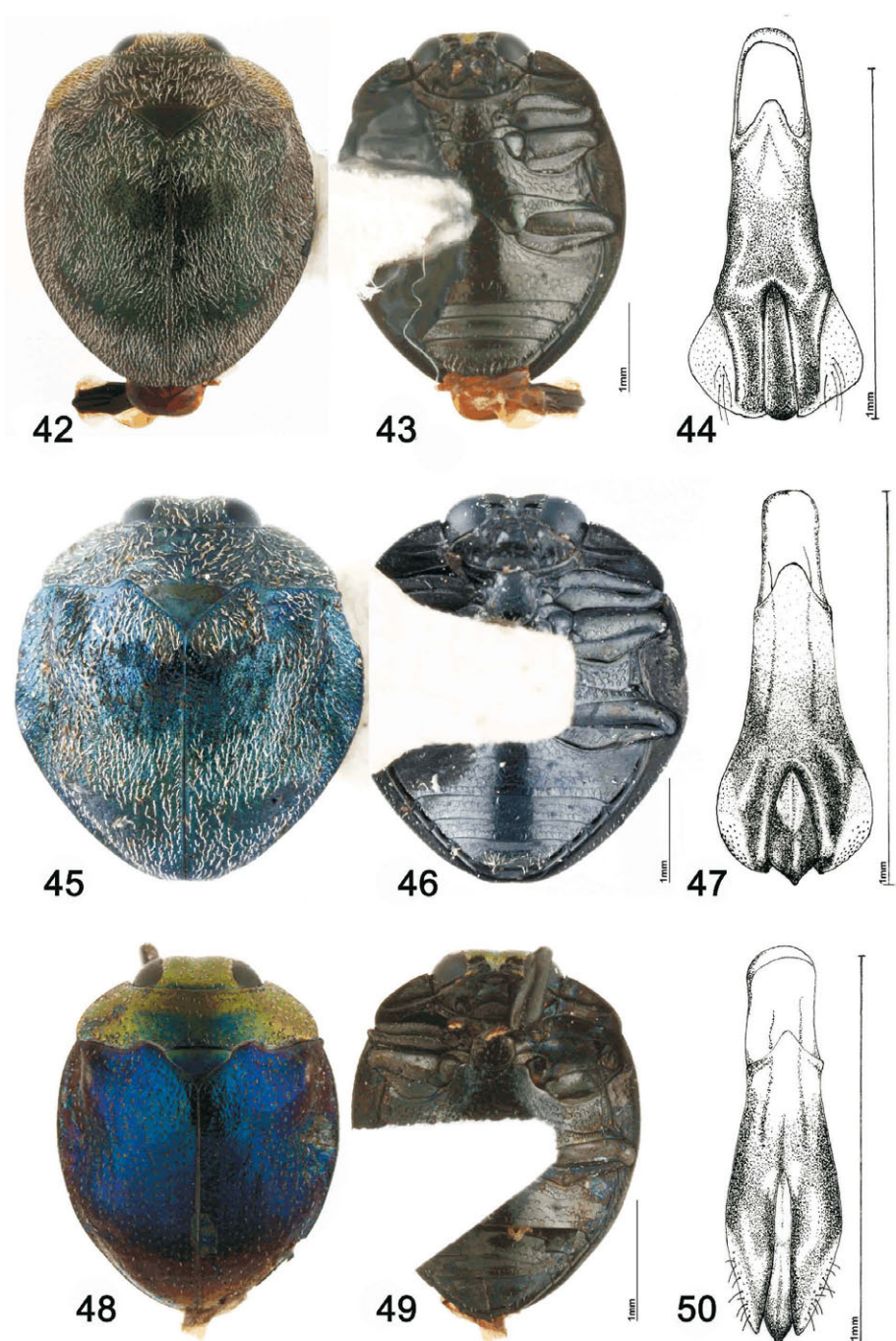


Plate VI (Figs. 42 – 50)

42: *Euhylaeogena rotundipennis* (FISHER), dorsal view; 43: *E. rotundipennis*, ventral view; 44: *E. rotundipennis*, aedeagus; 45: *Euhylaeogena testudinaria* (GORY), dorsal view; 46: *E. testudinaria*, ventral view; 47: *E. testudinaria*, aedeagus; 48: *Euhylaeogena orbicularia* **sp. nov.**, holotype, dorsal view; 49: *E. orbicularia* **sp. nov.**, holotype, ventral view; 50: *E. orbicularia* **sp. nov.**, holotype, aedeagus.

Elytra blue; surface shining, longitudinal puncture rows noticeable only on the disc, laterally merging into transverse wrinkles; prehumeral depression shallow; elytra broadest in apical third, then regularly rounded towards apices; very short white apical pilosity, visible only from side.

Ventral side black; uniformly microsculptured, partially with bigger shallow pores and short white pilosity; last ventrite simply rounded, with longer pilosity; legs black with strongly flattened and broadened tibiae, microsculpture ornamentally arranged.

Male genitalia claviform; penis acuminate; parameres latero-apically long setose. (Fig. 33).

**Etymology.** The species is named in honour to Henry HESPENHEIDE (Los Angeles), an engaged explorer of American Agrilini and donor of the specimens.

**Distribution.** So far, only known from the type locality in the Henri Pittier National Park.

**Differential diagnosis.** *Euhylaeogena hespenheidei* sp. nov. belongs morphologically in one group with *E. mariae* (COBOS) (Figs. 34, 35) and *E. astraea* (WATERHOUSE) (Figs. 37, 38). From *E. mariae* it can be distinguished by the dichromatic appearance and less developed pilosity, the coarser microsculpture on the head and pronotum and the male genitalia. *E. astraea* is a dichromatic species too with similar body proportions, but the surface, especially of the head and pronotum is very smooth and shiny. The parameres of the male genitalia are acuminate and feebly setose in *E. astraea* whereas the parameres of *E. hespenheidei* are clearly claviform with very long setae.

**Additional specimens examined:**

*E. astraea* (WATERHOUSE, 1889): syntype, BMNH; syntype, NMPC.

*E. mariae* (COBOS, 1990): holotype, MNCN and specimens from localities in eastern Brazil (Bahia), ZMHB.

***Euhylaeogena lucida* sp. nov.**

(Figs. 39, 40, 41)

**Holotype:** ♂ (MIZA): Venezuela, Aragua/ P. N. Henri Pittier/ Portachuelo, 1100m [p] | 20.-21. III. 1999/ C. J. ROSALES, V. SAVI-/ ni, J. CARABALLO [p].

**General diagnosis:**

Larger species, more than 3 mm. View from above almost round, body convex, coccinellid-like. Dorsal surface shiny dichromatic, head and pronotum blue, elytra green.

**Description of holotype.**

Measurements: total length: 3.75 mm; width: 3.05 mm.

Head black-blue; surface smooth and shining, with sparse and very short white pilosity; longitudinal medial furrow very moderate, but visible; eyes convex.

Antennae 11-jointed; first and second antennomere enlarged, third to sixth of same size, clearly broadened from the seventh antennomere.

Pronotum black-blue; surface of disc smooth and shining, laterally microsculptured; single pores with short white irregularly arranged hairs; 4.0 times as broad as long measured along body axis; lateral margins regularly arcuate, converging toward head; anterior margin simple and deep concave rounded.

Scutellum black-blue, surface smooth and shining; 1.7 times as broad as long along body axis; glabrous.

Elytra yellow-green; strongly convex, surface intensely shining, with weak longitudinal puncture rows on disc, laterally merging into shallow transverse wrinkles, especially around humeri and prehumeral depression; elytra broadest in anterior quarter, then regularly rounded towards apices; together slightly broader than long; very short white apical pilosity, visible only from side.

Ventral side black; microsculptured; partially with bigger shallow pores, laterally more dense; last ventrite simply rounded, with longer pilosity; legs black with strongly flattened and broadened tibiae, microsculpture regularly.

Male genitalia claviform; parameres lateral-apically short setose; shape of penis laterally concave, apically convex. (Fig. 41).

**Etymology.** The species is named in reference to its strongly shining, bright colouring.

**Distribution.** So far, only known from the type locality in the Henri Pittier National Park in Venezuela.

**Differential diagnosis.** *Euhylaeogena lucida* sp. nov. belongs morphologically in a group with *E. rotundipennis* (FISHER) (Figs. 42, 43, 44) and *E. testudinaria* (GORŸ) (Figs. 45, 46, 47). From both of the compared species *E. lucida* can be distinguished by the less developed pilosity and the very shining and smooth



surface. The Parameres of the male genitalia of *E. rotundipennis* showing large lateral lobes, with longer setae, whereas the parameres of *E. lucida* showing very reduced lateral lobes with short and sparse setae. The tip of the penis at *E. testudinaria* is acuminate in an obtuse angle whereas it is convex arcuate at *E. lucida*.

**Additional specimens examined:**

*E. rotundipennis* (FISHER, 1922): specimens from various localities in Panama (compared with type by HES-PENHEIDE), CHAH, NMPC

*E. testudinaria* (GORY, 1841): syntypes, MNHN; specimens from various localities in Brazil, ZMHB, SMTD.

***Euhylaeogena orbicularia* sp. nov.**

(Figs. 48, 49, 50)

**Holotype:** ♂ (ZMHB): 12130 [p] | orbicularis/ mihi/ Caracas, ...[h, partly illegible]. Paratypes: 1 ♂ (ZMHB): 81265 [p] | Caracas/ O. THIEME [p, green label] | Coll. THIEME [p] | \*Caracas [h, green label]; 1 ♀ (ZMHB): Guyane/ Saint-Laurent/ du Maroni [p] | Septembre [p].

**General diagnosis:**

Species around 3 mm. View from above almost round, body convex, coccinellid-like. Dorsal surface dichromatic in males, head and pronotum greenish, elytra blue. Females blue.

**Description of holotype.**

Measurements: total length: 2.85 mm; width: 2.25 mm.

Head black with yellow-green frons; surface of frons microsculptured, vertex smooth and shining, with sparse pores and very short white pilosity; longitudinal medial furrow very weak, but visible; eyes convex.

Antennae 11-jointed; first and second antennomere enlarged, third to sixth of same size, broadened from seventh antennomere.

Pronotum black with iridescent yellow-green lustre; yellow-green colour, laterally more distinct; surface fine and regularly microsculptured; single pores with very short white irregularly arranged hairs; pronotum 4.1 times as broad as long measured along body axis; lateral margins regularly arcuate, converging towards head; anterior margin simple and deep concave rounded.

Scutellum blue-green, surface very weakly microsculptured, almost smooth; 2.0 times as broad as long along body axis; glabrous.

Elytra blue; strongly convex, surface strongly shining, distinct longitudinal puncture rows, laterally merging into shallow transverse wrinkles, especially in vicinity of prehumeral depression; punctures with very short white hairs; elytra broadest in anterior third, then regularly rounded towards the apices; together slightly broader than long.

Ventral side black; regularly microsculptured; partially with bigger shallow pores and white pilosity, longer pilosity only on last simply rounded ventrite; legs black with strongly flattened and broadened tibiae, regularly microsculptured.

Male genitalia claviform; parameres acuminate, lateral-apically slightly setose; penis acuminate; tip truncate (Fig. 50).

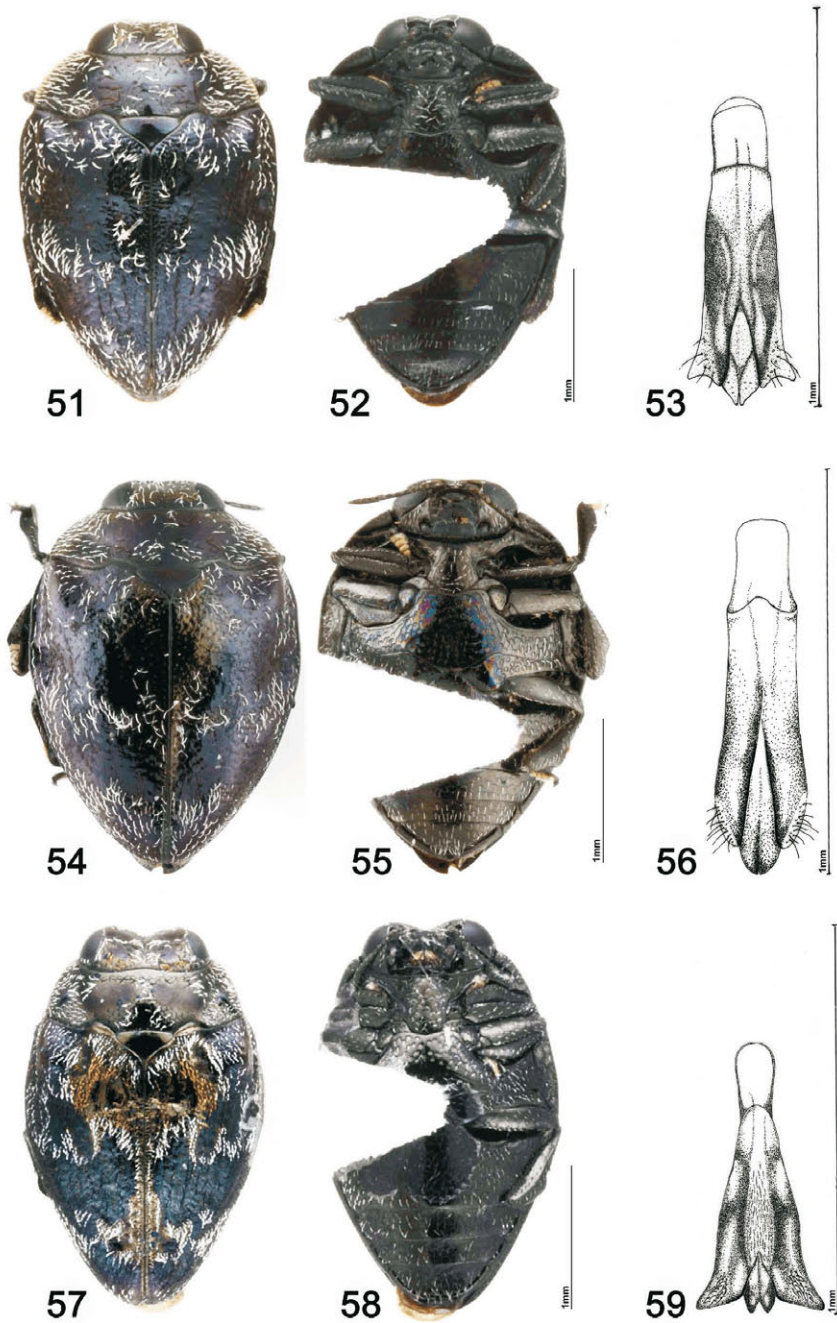
**Etymology.** The species is named after the suggestion of Karl A. MORITZ (1796-1866), probably the collector of this species. MORITZ lived in Colonia Tovar, a village in the coast cordillera of Venezuela near Caracas. During his work on his collected specimens he assigned provisional names, but he never published them. His interests were widespread in botany and zoology. These specimens were found among unclassified material of the historical collection in the ZMHB.

**Distribution.** Venezuela, French Guyana.

**Differential diagnosis.** *Euhylaeogena orbicularia* sp. nov. is morphologically most closely related to *E. testudinaria* (GORY) (Figs. 45, 46, 47). It can be distinguished by the less developed pilosity. The parameres of the male genitalia of *E. orbicularia* are distinctly acuminate apically, whereas it is noticeable expanded in *E. testudinaria*. The previous described *E. lucida* has a uniformly dark blue colour of head and pronotum, whereas it is in *E. orbicularia* yellow-greenish. The elytra of *E. lucida* are yellow-green and in *E. orbicularia* blue. The colouring of head/ pronotum and elytra in these both species is just reverse. The parameres of the male genitalia of *E. lucida* are also broadened and not acuminate as in *E. orbicularia*.

**Additional specimens examined:**

*E. testudinaria* (GORY, 1841): syntypes, MNHN; specimens from various localities in Brazil, ZMHB, SMTD.



**Plate VII (Figs. 51 – 59)**

51: *Euhylaeogena remus* sp. nov., dorsal view; 52: *E. remus* sp. nov., ventral view; 53: *E. remus* sp. nov., aedeagus; 54: *Euhylaeogena romulus* sp. nov., holotype, dorsal view; 55: *E. romulus* sp. nov., holotype, ventral view; 56: *E. romulus* sp. nov., holotype, aedeagus; 57: *Hedwigiella jureceki* OBENBERGER, dorsal view; 58: *H. jureceki*, ventral view; 59: *H. jureceki*, aedeagus.

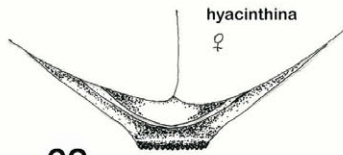




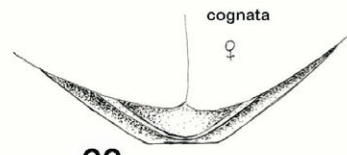
60



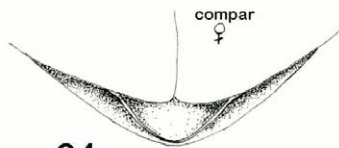
61



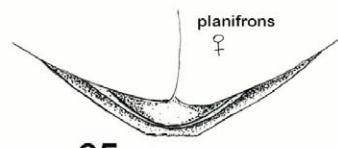
62



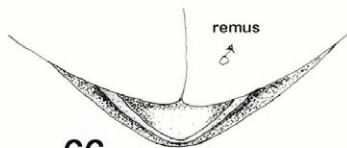
63



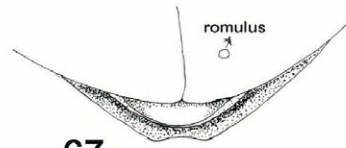
64



65



66



67

**Plate VIII (Figs. 60 – 67)**

60: *Hedwigiella hyacinthina* sp. nov., holotype, dorsal view; 61: *H. hyacinthina* sp. nov., holotype, ventral view; 62: *H. hyacinthina* sp. nov., holotype, anal ventrite; 63: *Euhylaeogena cognata* (KIRSCH), lectotype, anal ventrite; 64: *E. compar* (KIRSCH), lectotype, anal ventrite; 65: *E. planifrons* (KIRSCH), lectotype, anal ventrite; 66: *E. remus* sp. nov., anal ventrite; 67: *E. romulus* sp. nov., holotype, anal ventrite.

***Euhylaeogena remus* sp. nov.**

(Figs. 51, 52, 53, 66)

**Holotype:** ♂ (MIZA): Venezuela, Amazonas/ Yutaje, 200 m/ 2. III. 1995 | J. L. GARCIA/ Exp. Terramar/ (Barrido) [p].

**General diagnosis:**

Small species, less than 3 mm. View from above ovoid, dorsal surface shining, dark aeneous, partially light pilose.

**Description of holotype.**

Measurements: total length: 2.75 mm; width: 1.85 mm.

Head viewed from above black with yellow-green lustre, frons in frontal view golden; surface microsculptured with sparse punctation; white pilosity divergent from longitudinal medial furrow; eyes convex.

Antennae 11-jointed; first and second antennomere clearly enlarged; broadened from seventh antennomere.

Pronotum black with weak red lustre, laterally yellowish; finely microsculptured laterally, nearly smooth on disc; lateral margins regularly arcuate, converging towards head; anterior margin simply rounded; 3.6 times as broad as long along body axis; pilosity white, sparse on disc, laterally more dense; disc with scattered red hairs.

Scutellum black-aeneous; surface shining, microsculpture very weak; 1.8 times as broad as long along body axis, glabrous.

Elytra black with slight red lustre; surface shining with longitudinal puncture rows; microsculptured only laterally; elytra broadest in anterior quarter, converging, weakly curved towards apices; elytra with three transversal irregularly shaped fasciae of white hairs; first fascia at base, second posterior to middle, and third covering apices; punctation between fasciae with short, but distinct red hairs.

Ventral side black-aeneous; uniformly microsculptured, partially bigger shallow pores and white pilose; last ventrite simply rounded (Fig. 66); legs black with strongly flattened tibiae, microsculptured as ventral side.

Male genitalia somewhat claviform; parameres with apical-laterally slender lobes, sparsely setose; penis acuminate and longitudinally incised (Fig. 53).

**Etymology.** The species is named after one of the twins from the Roman mythology because of the occurrence on the same collecting area with another species, morphologically hardly distinguishable from each other.

**Distribution.** Venezuela, Estado Amazonas.

**Differential diagnosis.** *Euhylaeogena remus* sp. nov. belongs morphologically to the group with *E. laenis* (GORY) (Figs. 28, 29, 30, 36) and *E. berlandi* (OBENBERGER) (Figs. 19, 20, 21). From *H. laenis* it can be distinguished by the better developed lateral microsculpture on the elytra and bigger and more convex eyes. The general pilosity is slightly longer in *E. remus*, but the reliable character for single specimens are the different male genitalia. From *E. berlandi* it differs in lacking the well-developed sexual dimorphism with the males being brightly coloured. The head and pronotum in *E. berlandi* are completely microsculptured, not showing any smooth areas as in *E. remus*. The parameres of the male genitalia are laterally broadly enlarged in *E. berlandi*, whereas the parameres in *E. remus* show slender lobes.

**Additional specimens examined:**

*E. berlandi* (OBENBERGER, 1932): holotype, NMPC.

*E. laenis* (GORY, 1841): holotype, MNHN and specimens from various localities in south east Brazil (Minas Gerais, Sao Paulo), ZMHB, MHCB.

***Euhylaeogena romulus* sp. nov.**

(Figs. 54, 55, 56, 67)

**Holotype:** ♂ (MIZA): Venezuela, Amazonas/ Yutaje, 200 m/ 2. III. 1995 | J. L. Garcia/ Exp. Terramar/ (Barrido) [p].

Paratypes: 1 ♀ (MIZA): same data like Holotype. 1 ♀ (MIZA): Venezuela/ Bolivar/ Hato Muños/ 23. -V.-75 [h] | B. BECHYNE/ leg. [p]. 1 ♀ (MIZA): Montalban/ Hac. Montero [h]/ Venezuela- Cara-/ bobo [p] 1300 [h] m [p]/ 18-IX- [h] 19 [p] 68 [h] | J. & B. BECHYNE/ leg. [p].

**General diagnosis:**

Small species, less than 3 mm. Viewed from above, ovoid, dorsal surface shining, dark aeneous, partially light pilose.

**Description of holotype.**

Measurements: total length: 2.85 mm; width: 2.00 mm.

Head viewed from above black with yellow-green lustre, frons in frontal view golden; surface smooth and shiny with sparse punctation; white pilosity irregular; longitudinal medial furrow very weak; eyes convex.

Antennae 11-jointed; first and second antennomere clearly enlarged; broadened from seventh antennomere.

Pronotum black, laterally yellow-greenish; finely microsculptured laterally, nearly smooth on disc; lateral margins regularly arcuate, converging towards head; anterior margin almost rounded, feebly bisinuate; 3.6 times as broad as long along body axis; pilosity white, sparse on disc, laterally more dense; disc with single red hairs.

Scutellum black-aeuous; surface shining, microsculpture very weak; 1.8 times as broad as long along body axis, glabrous.

Elytra black with yellow lustre on disc; yellow shine only visible from side; surface shining with hardly noticeable longitudinal puncture rows; microsculptured only around prehumeral depression; elytra broadest in anterior third, converging regularly curved towards apices; elytra with three transversal irregularly shaped fasciae of white hairs; first fascia at base and scanty pilose, second posterior to middle, and third covering apices; punctation between fasciae with single short, red hairs.

Ventral side black-aeuous; uniformly microsculptured, partially bigger shallow pores and white pilosity; last ventrite rounded, apically slightly truncate (Fig. 67); legs black with strongly flattened tibiae, microsculptured as ventral side.

Male genitalia somewhat claviform; parameres without enlarged lobes, lateral apically setose; penis tip rounded, shortly incised (Fig. 56).

**Etymology.** The species is named after one of the twins from the Roman mythology because of the occurrence on the same collecting area with another species, morphologically hardly distinguishable from each other.

**Distribution.** Venezuela, Amazonas province.

**Differential diagnosis.** *Euhylaeogena romulus* **sp. nov.** also belongs morphologically to the group of *E. laenis* (GORY) (Figs. 28, 29, 30, 36) and *E. berlandi* (OBENBERGER) (Figs. 19, 20, 21). From *E. laenis* it can be distinguished by the yellow reflections on the elytra, the eyes are bigger and more convex and the longitudinal medial furrow is not as pronounced as in *E. laenis*. From *E. berlandi* it differs in lacking the well developed sexual dimorphism with very bright colours at the males. The head and pronotum in *E. berlandi* are completely microsculptured, whereas it is smooth in *E. romulus*. The parameres of the male genitalia are laterally broadly enlarged in *E. berlandi* whereas the parameres in *E. romulus* are simple rounded towards the apices. *E. romulus* can be distinguished from *E. remus* by the less developed microsculpture, the irregular arrangement of the pilosity and the less developed medial furrow on the head. At first view these species are morphologically very similar to each other, but the male genitalia are completely different

**Additional specimens examined:**

*E. berlandi* (OBENBERGER, 1932): holotype, NMPC.

*E. laenis* (GORY, 1841): holotype, MNHN and specimens from various localities in south east Brazil (Minas Gerais, Sao Paulo), ZMHB, MHCB.

***Hedwigiella hyacinthina* sp. nov.**

(Figs. 60, 61, 62)

**Holotype:** ♀ (UNMSM): Peru, Dept. Huanuco/ Panguana Malaise-Trap/ Rio Yuyapichis, 260 m/ 9° 37' S, 74° 56' W/ leg. E. DILLER, 20. 9.-15. 10. 2011 [p]. Paratypes: 1 ♀ (ZSMC): same data like holotype. 1 ♀ (MIZA): Venezuela, Carabobo/ /Canoabo-Palmichal, 950 m [p]/ IV.2005 [h].

**General diagnosis:**

Small species, less than 3 mm. Viewed from above, oval with conspicuous concave frons, dorsal surface shining, violet-blue, partially light pilose.

**Description of holotype.**

Measurements: total length: 2.75 mm; width: 1.85 mm.

Head dark blue; surface smooth and shining; loose white irregular pilosity; longitudinal middle furrow expanded, strongly concave; eyes convex.

Antennae 11-jointed; first and second antennomere clearly enlarged; third and fourth smaller and of equal size, broadened from the fifth antennomere.

Pronotum dark blue; finely microsculptured laterally, smooth and shining on disc; single pores with white pilosity, sparse on disc, more dense laterally; lateral margins parallel in basal half, then converging shallowly

curved towards head; anterior margin feebly bisinuate; posterior angles with weak keel; 3.8 times as broad as long along body axis.

Scutellum black-blue; surface smooth and shining; 1.7 times as broad as long along body axis, glabrous.

Elytra blue-violet; surface shiny with hardly noticeable longitudinal puncture rows; elytra broadest shortly before middle, converging shallowly curved towards apices; humeri very distinct; elytra with two apparent transversal fasciae of white hair; first fascia at middle and second before apices; punctuation between fasciae with single short, dark hairs.

Ventral side black-aeoneous; uniformly microsculptured, partially bigger shallow pores and white pilosity; last ventrite apically truncate with a linear ridge of 12-13 teeth pointing downwards (Fig. 62); legs black with strongly flattened tibiae, microsculptured as ventral side.

**Etymology.** The species is named in reference to its intense blue-violet colouring.

**Distribution.** Peru, ACP Panguana; Venezuela, Estado Carabobo. Despite the great distance between the places of origin of the examined specimens there is no doubt about their conspecificity. A trans-Andean distribution is also known from other species native in South America [For instance COBOS (1972:37) recorded his *Agrilaxia acuminata* as the first transandine species he knows and *Amorphosternus cucullatus bruchi* (KERREMANS, 1903), originally described from Argentina, was recently recorded from the Falcon state in northern Venezuela (HORNBERG & GOTTFELD, 2012)].

**Differential diagnosis.** *Hedwigiella hyacinthina* **sp. nov.** has its morphologically closest relation to *H. jureceki* OBENBERGER (Figs. 57, 58, 59). It can be distinguished from *H. jureceki* by the less developed pilosity and the colour. The anal ventrite in females of *H. jureceki* and *H. hyacinthina* is very similar and not useful for differentiation.

**Remarks:**

Despite intensive and selective collecting in the ACP (Área de Conservación Privada) Panguana/Peru no other specimen of *H. hyacinthina* **sp. nov.** could be found. Even the single type specimen of *H. jureceki* OBENBERGER in NMPC is female. An additional number of *H. jureceki* specimens for further anatomical studies was sent from the project against the invasive Bignoniaceae *Macfadyena unguis-cati* in East Australia with assistance of Kunjithapatham Dhileepan (DAFF).

**Additional specimens examined:**

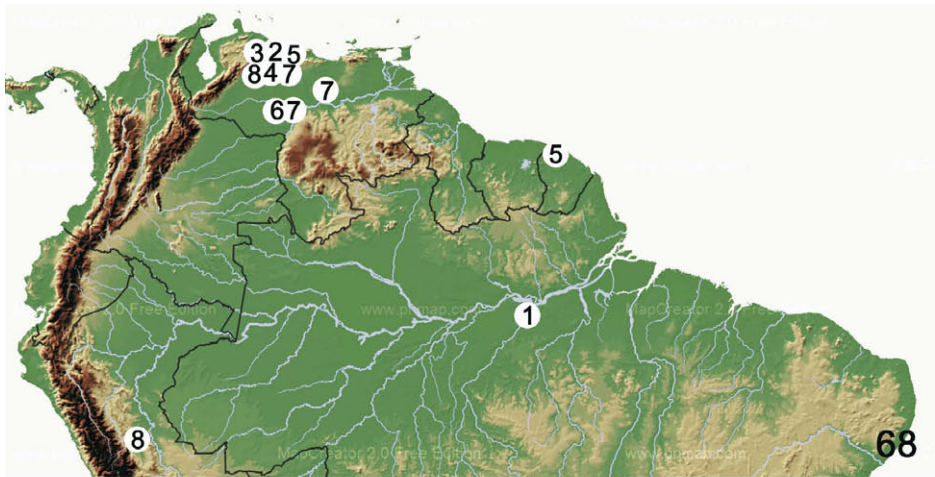
*H. jureceki* OBENBERGER, 1941: holotype, NMPC and specimens from DAFF.

## Discussion

The current listing is to be understood more as a catalogue and reflects the current state of knowledge. There is very little to report about the distribution and species affiliations of several species and only assumptions can be given at the moment. The number of reliable data is pretty low. The majority of the described species are trapped or random catches, collected over a long period. Personal experience shows that with intensive search specimens can be caught in higher quantity, also to ascertain evidence regarding variability and habitat preferences. At the research station ACP Panguana in Peru, it was observed that the beetles are all active during the day and leave the plants after sunset, when everything will be overtaken by ants. While collecting with the net, the plant arrangement is often disturbed extensively; the beetles drop quickly and fly away. Only with some patience and an aspirator, almost 50 specimens of *Euhylaeogena alia* (BELLAMY) were captured from a single plant of *Xylophragma pratense* (BUREAU & K. SCHUM.) Sprague (Bignoniaceae) (Fig. 69, 70) within a short time [new country and hostplant record].

Generally it can be recognised that, even after the generic changes of HESPENHEIDE (2014), the genus *Euhylaeogena* remains morphologically diverse and several species groups can be distinguished. The study shows, that most of the species are easily distinguishable by means of the male genitalia, whereas the determination of females in some cases is very difficult, especially in the morphological group of *E. laenis* and *E. festiva*, although the female anal ventrite shows species-specific structures in the majority of the species in the subtribe of Pachyschelidina.





**Plate IX (Figs. 68 – 70)**

68: Map with type localities of the new described species (1: *E. batesi* sp. nov.; 2: *E. guttata* sp. nov.; 3: *E. hespenheidei* sp. nov.; 4: *E. lucida* sp. nov.; 5: *E. orbicularia* sp. nov.; 6: *E. remus* sp. nov.; 7: *E. romulus* sp. nov.; 8: *Hedwigiella hyacinthina* sp. nov.); 69: Habitat of *Euhylaeogena alia* (BELLAMY) in the ACP Panguana; 70: *Xylophragma pratense* (BUREAU & K. SCHUM.) Sprague (Bignoniaceae), hostplant of *E. alia*.



## Acknowledgments

I would like to express my special thanks to S. BÍLÝ and V. KUBAN (NMPC), A. MANTILLERI (MNHN), M. BARCLAY and M. KERLEY (BMNH), M. UHLIG u. B. JAEGER (ZMHB), M. BALKE, J. u. E. DILLER (ZSMC), O. JÄGER (SMTD), M. PARÍS (MNCN), L. JOLY (MIZA) for the loan of material and for the possibility to study the respective type specimens under their care. Thanks to J. BERGSTEN and K. A. JOHANSON (NHRS) for sending type photos and considerably information to the history of the preserved specimens. Warm thanks also go to Kunjithapatham DHILEEPAN (DAFF) for sending substantial study material, to G. GERLACH (München) and L. LOHMANN (São Paulo) for plant identification and to H. HESPENHEIDE (University of California, Los Angeles) for valuable suggestions towards the improvement of the manuscript.

## Zusammenfassung

In der vorliegenden Arbeit werden sieben neue Prachtkäfer der ausschließlich in der Neotropis verbreiteten, erst kürzlich aufgestellten Gattung *Euhylaeogena* HESPENHEIDE, 2014 beschrieben. *Euhylaeogena batesi* **sp. nov.**, *E. guttata* **sp. nov.**, *E. hespenheidei* **sp. nov.**, *E. lucida* **sp. nov.**, *E. orbicularia* **sp. nov.**, *E. remus* **sp. nov.**, *E. romulus* **sp. nov.**, dazu eine Art der Gattung *Hedwigiella* OBENBERGER 1941, *Hedwigiella hyacinthina* **sp. nov.** Die Arten werden mit morphologisch nahe verwandten Arten verglichen.

Lectotypen und Paralectotypen von *Euhylaeogena cognata* (KIRSCH, 1873), *E. compar* (KIRSCH, 1873), *E. lata* (KIRSCH, 1873), *E. nana* (KIRSCH, 1873) und *E. planifrons* (KIRSCH, 1873) werden festgelegt. Alle neu beschriebenen Arten und Vergleichsarten werden fotografisch dargestellt und wenn möglich mit Zeichnungen der männlichen Genitalien und/oder der Analventrite ergänzt.

Im Rahmen dieser Arbeit und zusammenhängend mit den kürzlich erschienenen Änderungen auf Gattungsebene (HESPENHEIDE, 2014) werden 73 bisher in der Gattung *Hylaeogena* OBENBERGER, 1923 geführte Arten in die Gattungen *Euhylaeogena* bzw. *Hedwigiella* OBENBERGER, 1941 gestellt (siehe Abstract).

*Hedwigiella cbellamyi* HESPENHEIDE, 2014: 25 **syn. nov.** ist ein kürzlich beschriebenes Taxon und synonym zu *Hedwigiella anniae* (OBENBERGER, 1932) **comb. nov.**

## References

- APT, Ö. 1954: Neue Trachydinen aus dem ungarischen Naturwissenschaftlichen Museum (Col., Buprestidae). – *Annales Historiconaturales Musei Nationalis Hungarici (Series Nova)* **5**: 231-242.
- BELLAMY, C. L. 2008: A World Catalogue and Bibliography of the jewel beetles (Coleoptera: Buprestoidea), Volume 4: Agrilinae. Agrilina through Trachyini. – *Pensoft Series Faunistica No. 79*: 1932-2684.
- BLACKWELDER, R. E. 1944: Checklist of the coleopterous insects of Mexico, Central America, The West Indies, and South America, Part 2. – *United States National Museum, Bulletin* **185**: 189-341.
- BOHEMANN, C. H. 1858: Coleoptera, species novas descripsit. pp. 1-127. – In: *Kongliga Svenska Fregatten Eugenies Resa omkring Jorden under befäl af C. A. Virgin, Åren 1851-1853. Volume 2 (Zoologi, 1, Insecta)*, Stockholm, P. A. Norstedt & Söner, 4, 217 pp., 2 plates.
- COBOS, A. 1972: Ensayo monográfico sobre las *Anthaxia* ESCHS. (Coleoptera, Buprestidae) de América. Tercera parte: Subgénero *Agrilaxia* KERREMANS. – *Archivos de Instituto de Aclimatación* **16** (1971):5-235, 16 plates.
- COBOS, A. 1990: *Opuscula Buprestologica, III. Nuevos materiales de la fauna Neotropical (Coleoptera: Buprestidae)*. – *Elytron* **3**: 49-59.
- DHILEEPAN, K., D. B. J. TAYLOR, C. LOCKETT & M. TREVINO 2011: Application to release *Hylaeogena jureceki* OBENBERGER (Coleoptera: Buprestidae), a potential biological control agent for cat's claw creeper *Macfadyena unguis-cati* L. Gentry (Bignoniaceae). – *Queensland Department of Employment, Economic Development & Innovation*, 17 pp. + appendix.
- FISHER, W. S. 1922: The leaf and twig mining buprestid beetles of Mexico and Central America. – *Proceedings of the United States National Museum, No. 2454*, **62** (8): 1-95.

- GORY, H. L. 1841: Histoire naturelle et iconographie des insectes Coléoptères. – Monographie des buprestides, Supplement. P. Duménil, Paris. Volume **4**: 127–356.
- HESPENHEIDE, H. A. 1979: Nomenclatural notes on the Agrilinae (Buprestidae). IV. – The Coleopterists Bulletin **33** (1): 105-120.
- HESPENHEIDE, H. A. 2014: A reconsideration of *Hylaeogena* OBENBERGER, 1923 (Coleoptera: Buprestidae), with description of a new genus and new species from Mexico and Central America. – Coleopterologists Bulletin **68** (1): 21-30.
- HORNBERG, M. 2012: Nomenclatural changes in Neotropical Tracheini with the description of *Hylaeogena aeneonitens* sp. nov. (Coleoptera: Buprestidae) from the Orinoco basin in Venezuela. – Zootaxa **3242**: 53-61.
- HORNBERG, M. & S. GOTTWALD 2012: *Ditriaena romeroi* sp. nov. (Coleoptera: Buprestidae), a new species from northwestern Venezuela – Zootaxa **3239**: 64-68.
- KERREMANS, C. 1903: Coleoptera Serricornia, Fam. Buprestidae. In: P. WYTSMAN (ed.). – Genera Insectorum, Fasc. **12b**; **12c**; **12d**. Verteneuil & Desmet, Bruxelles: 49-338.
- KIRSCH, T. F. W. 1873: Beiträge zur Kenntniss der Peruanischen Käferfauna auf Dr. Abendroths Sammlungen basirt. – Berliner Entomologische Zeitschrift **17**: 121-152 [Second printing, 1874/ 17: 339-418].
- KIRSCH, T. F. W. 1866: Beiträge zur Käferfauna von Bogotá. – Berliner Entomologische Zeitschrift **10**: 173-216.
- OBENBERGER, J. 1925: Revision monographique des Trachydides Pachyscheloides de l'Amerique (Coleopt., Buprest.). – Acta Entomologica Musaei Nationalis Pragae **3**: 3-149.
- OBENBERGER, J. 1932: De generis *Hylaeogena* OBENB. speciebus novis (Col. Bupr.). Nové druhy rodu *Hylaeogena* OBENB. (Col. Bupr.). – Acta Entomologica Musaei Nationalis Pragae **10**: 125-129.
- OBENBERGER, J. 1941: Nový druh a subgenus krascu z Brasílie (Col. Bupr.). De specie et subgenere novo Buprestidarum Brasílie (Col. Bupr.). – Acta Societatis Entomologicae Bohemiae **38**: 75-76.
- WATERHOUSE, C. O. 1889: Biologia Centrali-Americana, Insecta, Coleoptera, Buprestidae, Volume **3**, part 1, pp. 49-166, plates IV-VIII and Supplement: 167-193.

**Author's address:**

Michael HORNBERG  
Kavalierstraße 11  
13187 Berlin  
Germany  
mihornburg@t-online.de

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Mitteilungen der Münchner Entomologischen Gesellschaft](#)

Jahr/Year: 2014

Band/Volume: [104](#)

Autor(en)/Author(s): Hornburg Michael

Artikel/Article: [Taxonomic synopsis of the genera \*Euhylaeogena\* HESPENHEIDE, 2014 and \*Hedwigiella\* OBENBERGER, 1941 for South America with the description of eight new species. \(Coleoptera: Buprestidae\) 5-29](#)