

The *E. cervus*-group of *Edessa* Fabricius, 1803 (Heteroptera: Pentatomidae: Edessinae)

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The *E. cervus*-group of *Edessa* Fabricius, 1803 (Heteroptera: Pentatomidae: Edessinae) from South and Central America, is proposed to include the *Edessa* species with the apices of the long cylindrical humeral angles bifurcated. Three new and three described species are included: *Edessa cervus* (Fabricius, 1787), *Edessa cerastes* Breddin, 1905, *Edessa elaphus* Breddin, 1905, *Edessa burmeisteri* spec. nov., *Edessa peruviana* spec. nov., *Edessa rondoniensis* spec. nov.; their external genital characters and the metasternum of *E. burmeisteri* are illustrated and their distribution is given. The males of *Edessa cerastes* Breddin, 1905, and *Edessa elaphus* Breddin, 1905, which were unknown until now, are described.

Introduction

Fabricius (1787) described *Cimex cervus* (as *cervus*) from Cayenne (fig. 1 A-D). Donovan (1800) based his *Cimex viridis* on a specimen incorrectly considered to be from Ceylon (a misreading for Cayenne?). In 1803 Fabricius transferred *C. cervus* to the proposed *Edessa* Fabricius, 1803. Amyot & Serville (1843) considered *C. viridis* Donovan a junior synonym of *E. cervus*. Chenu (1859) designated *E. cervus* as type-species of *Edessa* Fabricius, 1803, and Stål (1872) made a short redescription of the species. Many other authors listed *E. cervus* in their works, most of them listing only the places where specimens were collected. Burmeister (1835) mentioned *E. cervus* from Para and Bahia (Brazil), Herrich-Schäffer (1837) from Brazil, Blanchard (1840) also from Brazil, Dallas (1851) from Colombia and Brazil, Walker (1868) from Cayenne, Amazon region, Constancia, Rio de Janeiro and Petropolis, Stål (1872) from Rio de Janeiro and Bogota. According to the data of our material *E. cervus* is restrict to the Guyanas (Guyana, Suriname and French Guyana); so specimens mentioned from outside this region in all probability does not belong to *E. cervus* (Fabricius). These misidentifications, still very common in *Edessa*, contribute towards the presentday taxonomical “state of chaos”.

Illustrations.— The drawings are by the first author, the photographs are made by the second author. Measurements are given in millimeters.

Descriptions

The *Edessa cervus*-group

Large species (around 20 mm long), humeral lateral angles developed into long

cylindrical dark lateral projections like horns, slightly dorsally directed, apices tumescent, truncate and bifurcated (fig. 1C). Pronotum, scutellum and connexivum green, hemelytrae smooth, dull, uniformly dark-castaneous with a narrow yellow band along costal margin. Dorsal surface densely punctuate, punctures shallow, concolorous to dark. Antennae and legs castaneous, without punctures or dark dots. Dorsum of abdomen dark castaneous, venter greenish-yellow with transverse green stripes.

Head.— Head transverse with some shallow furrows and without punctures. Jugae slightly curved ventrally, tips rounded, surpassing tylus. Antennae with fourth and fifth segments lighter than preceding three segments, second and third slightly flattened, first segment shortest, second slightly longer than third, fourth subequal to fifth. Bucculae slightly divergent in anterior view, ventral margins straight and evanescent posteriorly, anterior margins truncate. Rostrum short, reaching middle of mesosternum; first segment surpassing bucculae, second subequal to third and fourth together.

Thorax.— Pronotum strongly declivent. Anterior corners each with a more or less perceptible small tooth. Antero-lateral margin wavy due to some short transverse furrows. Humeral angles long, not punctate, dorsally dark castaneous to black, ventrally usually green. Apex split in two parts: dorsally tumid slightly posteriorly projected, ventrally in a subconical protuberance somewhat laterally directed. Scars not punctate, sometimes surrounded by a border. Mesosternum with a small tumescence on anterior margin ending between procoxae. Metasternal shield (metasternum) (figs 13-14) tall, surface flat, smooth without punctures and sparsely set with long, fine setae; apex anteriorly produced and deeply bifid receiving the fourth and part of the third rostral segment, lobes truncate and resting on posterior third of mesosternum. Evaporative area dull with some shallow furrows; ostiolar peritreme narrow and extended on 4/5 of the metapleural width. Apex of scutellum acute. Corium densely punctate, except sparsely punctate yellow costal margin; membrane hyaline, castaneous.

Abdomen.— Connexivum well exposed, each segment at both sides with an anterior and posterior sparsely punctate slightly concave area. Postero-lateral angles of segments II-VI slightly posteriorly produced and spined, of segment VII strongly developed and posteriorly directed. Ventral surface smooth with a green band along each lateral margin, in which the spiracles are situated. Scars laterally on sternites in shallow grooves. Spiracles elliptic. Mesial trichobothria in line with spiracles, the others laterad of them.

Male (figs 2, 2a).— Pygophore subrectangular in dorsal view. Genital chamber open dorso-posteriorly. Dorsal rim with a pair of dark areas covered by bristles just above each superior process. Postero-lateral angles rounded and slightly developed. Ventral rim with a pair of submesial swellings separated by a deep concavity. Diaphragma at both sides with black drop-like superior process (sp) near dorsal rim. Parameres (pa), consisting of a stem and a posteriorly directed digitiform lobe, both flat. Proctiger (p) subcylindrical, strongly declivent, constricted near apex, postero-lateral margins setose.

Female (fig. 4).— Gonocoxites 8 (gc8) convex, distal part of mesial borders forming a concavity of different sizes and shapes. Laterotergites 8 (la8) with small spiracles (s) and longitudinally convex, posterior margin triangularly projected, slightly surpassing apex of postero-lateral angle of segment VII. Gonocoxite 9 (gc9) trape-

zoidal. Laterotergites 9 (la9) elongate, sloping laterally with a deep concavity on basal third and surpassing band linking laterotergites 8 dorsally.

Distribution (fig. 24).— **Costa Rica; Panama; Colombia:** Putamayo; **Venezuela:** Zulia, Mérida; **Guyana:** East Berbice-Corentyne; **Suriname:** Nickerie, Paramaribo, Sipaliwini; **French Guyana:** Saint-Laurent-du-Maroni, Cayenne; **Brazil:** Amazonas, Pará, Rondônia, Bahia, Espírito Santo, Rio de Janeiro, São Paulo; **Ecuador:** Napo; **Peru:** Loreto, Lima, Madre de Dios; **Bolivia:** La Paz, Cocha Bamba.

Comments.— This group can be recognised by the long pronotal horns whose apices are truncate and bifurcate. Hemelytrae dark, dull, with costal margin yellow. Abdomen with green longitudinal bands, which include spiracles. We were not able to find reliable characters on external morphology others than those of male and female external genitalia. Therefore, we can use only these to characterise the species.

Edessa cervus (Fabricius, 1787)
(figs 1-4, 24)

Cimex cervus Fabricius, 1787: 283 40 (*cervus*); Gmelin, 1790: 2135 (*Cervus*); Fabricius, 1794: 91. Zimsen, 1964: 311.

Cimex viridis Donovan, 1800: pl. 8, fig. *.

Rhynchocoris viridis; Westwood, 1838: 26 (in Donovan & Westwood, 1838).

Edessa cervus; Fabricius, 1803: 146 (*cervus*); Westwood, 1837: 7; Herrich-Schäffer, 1837: 19, pl. 115, fig. 366; Blanchard, 1840: 143; Amyot & Serville, 1843: 159; Erichson, 1848: 610; Dallas, 1851: 320; Chenu, 1859: 217, fig. 200; Stål, 1860: 27; Walker, 1868: 423; Uhler, 1869: 323; Stål, 1872: 50; Distant, 1887: lxiii; Lethierry & Severin, 1893: 189; Kirkaldy, 1909: 155; Zimsen, 1964: 547; Froeschner, 1981: 65.

Material.— Holotype, ♂ (UZM), *Cervus* (in Fabricius' handwriting) type locality **Cayenne**, French Guyana: "Habitat Cajennae Dom. v. Rohr." (figs 1A-C); 1 ♂ (RMNH), Kourou [Cayenne, French Guyana], iv.1906, A. Bouhoure coll. 1909, / *Cimex cervus* Fabricius topotypic, P.H. van Doesburg Jr. det. 1972. / compared with the male holotype: *Cimex cervus* J.Ch. Fabricius, Cajennae Dom. v. Rohr (Kiel) in Zoological Museum, Copenhagen, 1972.

Other material. **Guyana**.— 2 ♀♀ (BMNH), Bartica; 1 ♀ (BMNH), H.E. Box, Blairmont Plantation; 1 ♀ (MNB), Schomburgk, # 244; East Berbice-Corentyne: 1 ♀ (BMNH), between King Fred. William IV falls and mouth of R. Aramatau, 1-8.xii.1935, G.A. Hudson; **Suriname**.— 2 ♀♀ (MNB), Cordua, # 244; 1 ♀, 2 ♂♂ (RMNH), Paramaribo, Cultuurtuin [= Botanical Garden], resp. 1.ix.1938, 26.ii.1940, iv.1951, D.C. Geijskes; 1 ♂ (FURG), Paramaribo, Cultuurtuin, iv.1951, D.C. Geijskes; 1 ♀ (DEI), Paramaribo, Cultuurtuin, 5.iv.1939, H.W.C. Cossee; 1 ♀ (RMNH), Paramaribo, xii.1947, L.J. v d Wal; 1 ♀ (RMNH), Paramaribo, Kwattaweg, 28.vii.1941, Geijskes; 1 ♂, 2 ♀♀ (RMNH), Kayser gebergte, 25.xi-14.xii.1960, Exped. H.A. Beatty (Chic. Nat. Hist. Mus.), Sagiman Moentari; **French Guyana**.— 1 ♀ (DEI); 1 ♂, 3 ♀♀ (MNHN), Coll. Bar, R. Oberthür, 1899; Saint-Laurent-du-Maroni: 1 ♀ (MNHN), 1 ♀ (FURG), Saint-Laurent du Maroni; Cayenne: 1 ♀ (FURG), Cayenne, *Edessa cervus* Fabr.; 3 ♀♀ (MNHN), Rouches de Kourou, Le Mout; 2 ♀♀ (MNHN), Ilet la Mère, F. Geay, 1902; 1 ♂ (DARC), Cayenne, 30.v.1986, G. Tavakilian; 1 ♂ (DARC), Cayenne, 9.vi.1986, E.G. Riley & D.A. Rider;

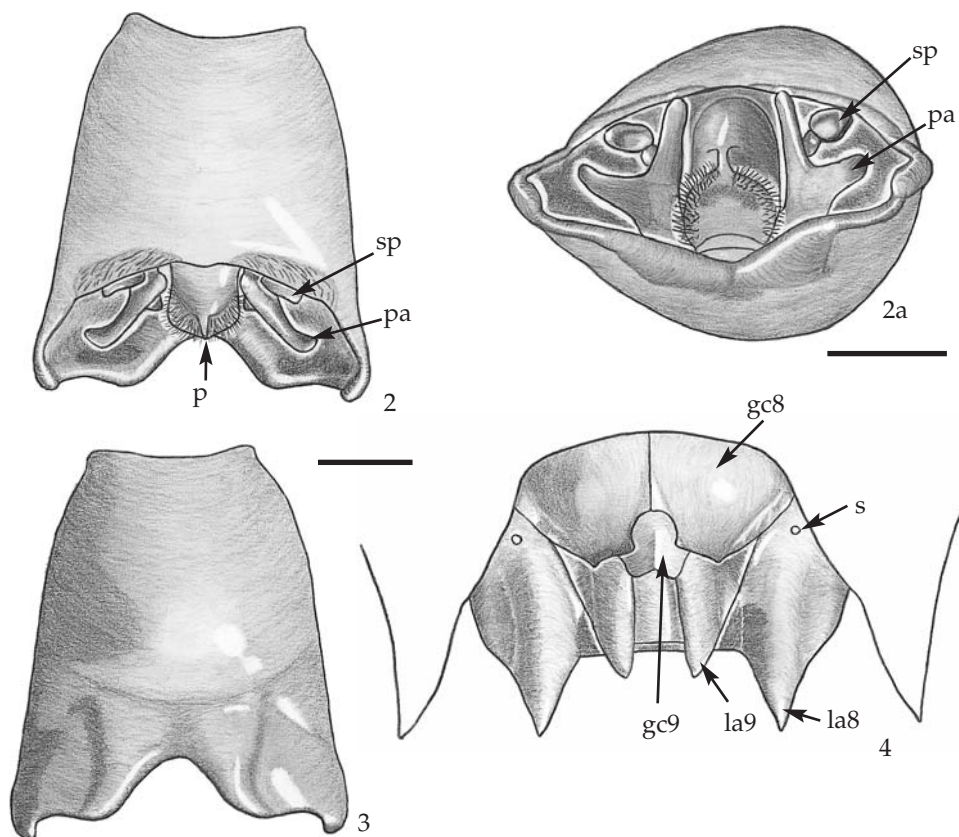
Male (figs 2-3).— Main stem of paramere long and narrow; posterior lobe almost as wide and long as the anterior part and laterally curved (figs 2-2a). Superior processes small, oblong, shallowly concave with a stubby ventral part like an independent process attached to the main one (fig. 2a). Swellings of the ventral rim rounded (fig. 3). Proctiger with posterior surface rounded; constricted part narrow (fig. 2, 2a).



Figs 1A-D, *Cimex cervus* Fabricius, ♂ holotype (UZM). A-C, habitus in dorsal, latero-ventral and frontal aspect; D, facsimile of Fabricius' original label.

Female (fig. 4).— Outline of posterior part of gonocoxites 8 bi-acuminate with a small mesial U-shaped concavity. Gonocoxite 9 strongly declivent on each side of median longitudinal line.

Measurements. Length of body 18-24; width of pronotum 16-21; width of



Figs 2-4, *Edessa cervus* (Fabricius), 2-3, ♂, pygophore; 2, dorsal view; 2a, posterior view; 3, ventral view; 4, ♀, genital plates, ventral view. gc8- gonocoxite 8; gc9- gonocoxite 9; la8- laterotergite 8; la9- laterotergite 9; p- proctiger; pa- paramere; s- spiracle; sp- superior process. Bars represent 1 mm.

abdomen 9-12; length of head 2.2-5; width of head 3.2-3.6.

Distribution (fig. 24).— **Guyanas:** **Guyana:** East Berbice-Corentyne; **Suriname:** Paramaribo, Kayser Mts.; **French Guyana:** Cayenne.

Comments.— The abovementioned topotypic specimen were compared with the holotype in Copenhagen, in combination with its photographs, was used in this study as a representative of the holotype. Among the three species that possess a stubby part on their superior processes – *E. cervus*, *E. cerastes* and *E. peruviana* – only *E. cervus* has the main stem of the parameres narrow. The female can be recognised by the small mesial concavity of the gonocoxite 8. The distribution of the true *E. cervus* is apparently limited to the Guyana's. As it was not or hardly possible to pinpoint the species without studying the external genitalia, in the past the name *cervus* probably was used by many authors for the group rather than specifically (see introduction). Donovan (1800) figured and described in its caption *Cimex viridis* "from Ceylon" which could clearly be recognized as *Edessa cervus*. It is likely that Ceylon was a misreading for Cayenne.

Edessa cerastes Breddin, 1905
(figs 5-8, 24)

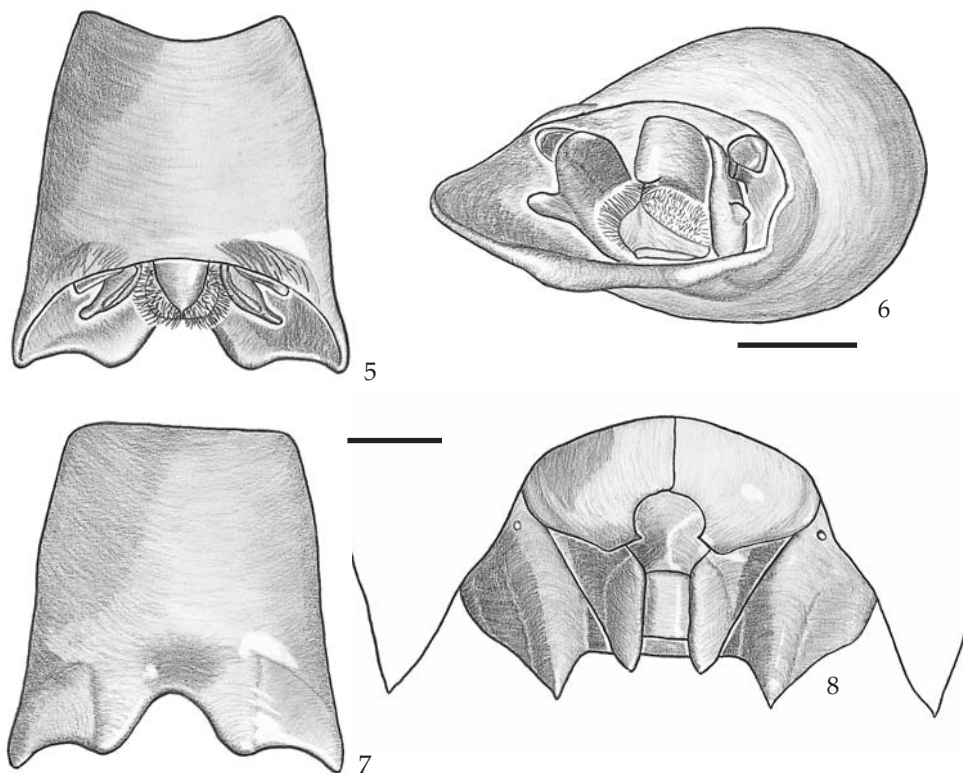
Edessa cerastes Breddin, 1905: 26; Bergroth, 1908: 178; Kirkaldy, 1909: 155; Gaedike, 1971: 82.

Material.— Holotype, ♀ (DEI), "Chiriqui" [Panama?], *Edessa cerastes* Breddin, coll. Breddin, Dtsch. Entomol. Institut Berlin, DEI Eberswalde, Holotypus".

Other material. **Panama**.— 2 ♂♂, 2 ♀♀ (DEC), 1 ♀ (RMNH), 1 ♂ (FURG), Canal Zone, Pipeline Road, 21.i.1978, A. Suslow; 1 ♂ (CAS), Chiriqui, from Rolle, E.P. Van Duzee col.

Male (figs 5-7).— Main stem of paramere long and wide, apex rounded; posterior lobe short, straight, postero-laterally directed (figs 5-6). Superior processes small and concave, dorsal margin just reaching dorsal rim of genital chamber, narrow part strongly bent ventrally and slightly separated from the main part by a shallow transverse sulcus (fig. 6). Swellings of the ventral rim rounded (fig. 7). Proctiger with posterior surface sharply arched; constricted part thin (fig. 6).

Female (fig. 8).— Mesial borders of gonocoxites 8 more or less overlapping each other. Outline of posterior part of the gonocoxites 8 slightly bi-acuminate with a mesial large, shallowly U-shaped concavity. Gonocoxite 9 somewhat declivent on



Figs 5-8, *Edessa cerastes* Breddin, 5-7, ♂, pygophore; 5, dorsal view; 6, posterior view; 7, ventral view; 8, female, genital plates, ventral view. Bars represent 1 mm.

each side of medial line.

Measurements.— Length of body 21-22; width of pronotum 18-21; width of abdomen 10-12; length of head 2.3-2.7; width of head 3.3-3.5.

Distribution (fig. 24).— **Panama**. N.B.: Breddin (1905: 26) mentioned in his description only “Costarica” but the label of the type specimen reads Chiriqui which is in Panama.

Comments.— Differences in colour among antennal segments are less conspicuous in *E. cerastes* than in the other species.

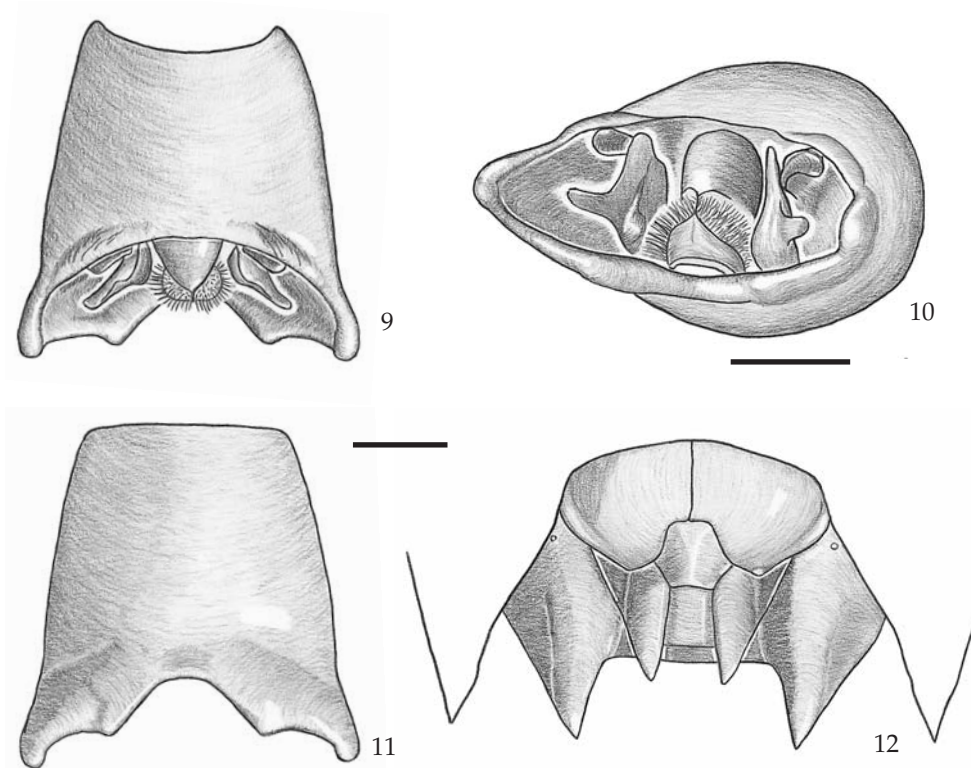
Edessa elaphus Breddin, 1905
(figs 9-12, 24-25)

Edessa elaphus Breddin, 1905: 26; Bergroth, 1908: 178; Kirkaldy 1909: 157; Gaedike, 1971: 85.

Edessa cervus; Burmeister, 1835: 354 (misidentification).

Material.— Holotype, ♀ (DEI), **Peru**, “Lima: Callanga, *Edessa elaphus* Breddin, coll. Breddin, Dtsch. Entomol. Institut, Holotypus”. **Colombia**. Putamayo: 1 ♂ (BMNH); **Venezuela**.— Zulia: 1 ♀ (UCV), Kasmera, Rio Yaea, Sierra de Perija, 250 m, 19.ix.1961, C. J. Rosales & F. Fernandez; 1 ♂ (UCV), Mérida, El Vigía, 24.ix.1951, Fenives & Salas; **Suriname**. 1 ♂ (MNB), Salingre; 1 ♀ (RMNH), Calkoen; Nickerie distr.: 1 ♀ (FURG), Curuni I., 18.ix.1969, D.C. Geijskes; 1 ♀ (RMNH), Curuni I., 28.ix.1959, D.C. Geijskes; **Brazil**.— 2 ♂♂, 1 ♀ (BMNH), probably Brazil circa 1830, B.M. 1974-88; 1 ♂, 1 ♀ (IRSN), R.I.Sc.N.B., ex coll. Schoutenden; 1 ♀ (MNHN), coll. Camille van Volxem; 1 ♂ (MNHN), coll. Guérin Méneville, 1871; Pará: 1 ♀ (MNR), Óbidos, Colônia Rio Branco, 27-31.xii.1952, P.A. Teles; Bahia: 1 ♀ (IRSN), R.I.Sc.N.B., ex coll. Schoutenden; 2 ♂♂, 2 ♀♀ (MNB), # 244, Gómez; 1 ♀ (JBC), Belmonte, Fazenda Lealdade, 12.i.1946, J. Becker; 1 ♂ (MNHN), Lacerda; Espírito Santo: 1 ♀ (JBC), Cariacica, iii.1981, A.C. Domingos; 1 ♂ (DEI), Sta Leopoldina, H. Rolle; Rio de Janeiro: 1 ♂ (FURG), Haguai, Hacuraça, 20.vii.1982, J. Becker; 1 ♀ (IRSN), Nova Friburgo, R.I.Sc.N.B., ex coll. Schoutenden; 1 ♀ (BMNH), Petropolis, ii.1857, J. Gray; 1 ♂ (BMNH), Constancia, i.1857, J. Gray; 1 ♀ (MNHN), Serra dos Órgãos, 500-900 m, 1902, E.R. Wagner; 1 ♀ (FURG), Silva Jardim, Reserva biol. Poço das Antas, 4.xi.1980, S.M. Vaz; 1 ♀ (MNR), Km 47 estrada Rio-São Paulo, iv.1949, D. Mendes; 1 ♀ (ZSM), Niterói, 25.ix.1924; 1 ♀ (MNR), Rio de Janeiro, viii.1943, Longud; 2 ♂♂ (BMNH), Rio de Janeiro, xii.1856, J. Gray; 1 ♂, 2 ♀♀ (CMNH), Rio de Janeiro, Acc. # 2966; 1 ♂ (MNHN), Rio de Janeiro, 1909, Dr. Dupuy; 1 ♂, 1 ♀ (FURG), Rio de Janeiro, ii.1935, D. Mendes; 1 ♂, 1 ♀ (MNR), Rio de Janeiro, 4.xii.1939, D. Mendes; 1 ♀ (JBC), Rio de Janeiro, Barra da Tijuca, 7.ix.1953, Becker; 1 ♀ (MNR), Rio de Janeiro, xi.1986, H.S. Lopes; 1 ♂ (MNR), Rio de Janeiro, Couanea, 9.x.1960, H. Schuher; 1 ♀ (DEI), Rio de Janeiro, 24.i.1919, Ctr.— Brasil, R. Fischer; 1 ♀ (MNHN), Rio de Janeiro, Le Moults coll.; 1 ♂ (IRSN), Rio de Janeiro, R.I.Sc.N.B., ex coll. Schoutenden; 1 ♀ (MZSP), Rio de Janeiro, 6.viii.1940, Dario Mendes; 1 ♂ (FURG), 1 ♂, 2 ♀♀ (MNR), Represa Rio Grande, xi.1976, E.S. Lima, Campos Seabra coll.; 2 ♂♂ (MNR), Represa Rio Grande, i.1977, E.S. Lima; 1 ♂ (MNR), Represa Rio Grande, i.1968, F.M. Oliveira; São Paulo: 1 ♂ (MZSP), Campinas-Goiás, xii.1935, Borgmeier & S. Lopes; **Ecuador**. Napo: 1 ♀ (BMNH), Coca, ix-x.1982, G. Onore, Tropical Rain Forest general collection, B.M. 1982-246; **Bolivia**. 1 ♂, 1 ♀ (BMNH), Steinbach, 1904-311; La Paz: 1 ♀ (IRSN), Mapiri, R.I.Sc.N.B., ex coll. Schoutenden; Cocha Bamba: 1 ♀ (MZSP), near Chaparé (400 m), 1.x.1950, Dirings; 1 ♂ (CMNH), Las Juntas, xii.1933, Steinbach.

Male (figs 9-11).— Main stem of paramere long and wide, abruptly narrowing towards apex; posterior lobe long and laterally curved (figs 9-10). Superior processes small and concave, dorsal margin just reaching dorsal rim of genital chamber; narrow part strongly bent ventrally (fig. 10). Swellings of ventral rim slightly acuminate (fig. 11). Proctiger with posterior surface sharply arched; constricted part thin (fig. 10).



Figs 9-12, *Edessa elaphus* Breddin, 9-11, ♂, pygophore; 9, dorsal view; 10, posterior view; 11, ventral view; 12, female, genital plates, ventral view. Bars represent 1 mm.

Female (fig. 12).— Mesial borders of gonocoxites 8 parallel. Outline of posterior part of gonocoxites 8 strongly bi-acuminate with a mesial large concavity. Gonocoxite 9 somewhat declivent on each side of medial line.

Measurements.— Length of body 18-23; width of pronotum 16-20; width of abdomen 9-11; length of head 2.2-2.5; width of head 3.2-3.6.

Distribution (fig. 24).— **Colombia**: Putamayo; **Venezuela**: Zulia, Mérida; **Suriname**: Nickerie; **Brazil**: Pará, Bahia, Espírito Santo, Rio de Janeiro, São Paulo; **Ecuador**: Napo; **Peru**: Lima; **Bolivia**: La Paz, Cocha Bamba.

Comments.— We had the opportunity to examine Burmeister's material; he seems to be the first author to misidentify this species as *E. cervus*. We also examined material misidentified by Stål, Dallas and Walker as *E. cervus*. Other taxonomists made the same mistake due to the high similarity between the species. The male of *E. elaphus*, however, could be identified by the form of the parameres which is wide with a narrow tip, and by the superior processes, lacking a stubby part; in the female by the gonocoxites 8, showing the mesial concavity wider than in *E. cervus*.

Edessa burmeisteri spec. nov.
(figs 13-18, 24)

Material examined.— Holotype, ♂ (MNR), “**Brazil**, Amazonas: Benjamin Constant, viii.1979, A.C. Domingos”.

Paratypes (2 ♂♂, 2 ♀♀). **Brazil**.— Amazonas: 1 ♂ (FURG), same data as holotype; **Peru**.— Madre de Dios: 1 ♂ (CAS), Tingo Maria, Monson Valley, 10.xi.1954, E.I. Schlinger & E.S. Ross; 1 ♀ (CAS), same data, 11.xii.1954; 1 ♀ (RMNH), same data, 2.xi.1954, ‘*Edessa cervus* (Fabr.)’ det. J. C. Lutz; **Ecuador**.— 1 ♀ (NRS), Ecuador Or., Zarayaku, ‘*Edessa (Edessa) cervus* (Fabr.)’ Det. J.C.Lutz.

Male (figs 15-17).— Main stem of paramere large, high and wide, apex obtuse; posterior lobe short, straight, dorso-posteriorly directed (figs 15-16). Superior processes large, shallowly concave, dorsal margin slightly surpassing dorsal rim of genital chamber, narrow part strongly bent ventrally (fig. 16). Swellings of ventral rim obtuse (fig. 17). Proctiger with posterior surface rounded; constricted part thin (fig. 16).

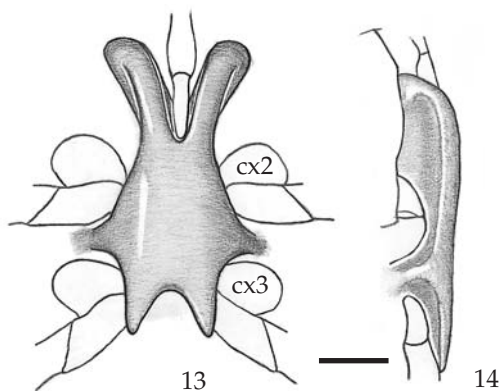
Female (fig. 18). Mesial borders of gonocoxites 8 overlapping each other and slightly projected into the mesial concavity. Outline of posterior part of the gonocoxites 8 bi-acuminate with a mesial large shallow concavity. Gonocoxite 9 somewhat declivent on each side of medial line.

Measurements.— Length of body 21-24; width of pronotum 16-19; width of abdomen 10-12; length of head 2.4-2.8; width of head 3.3-3.6.

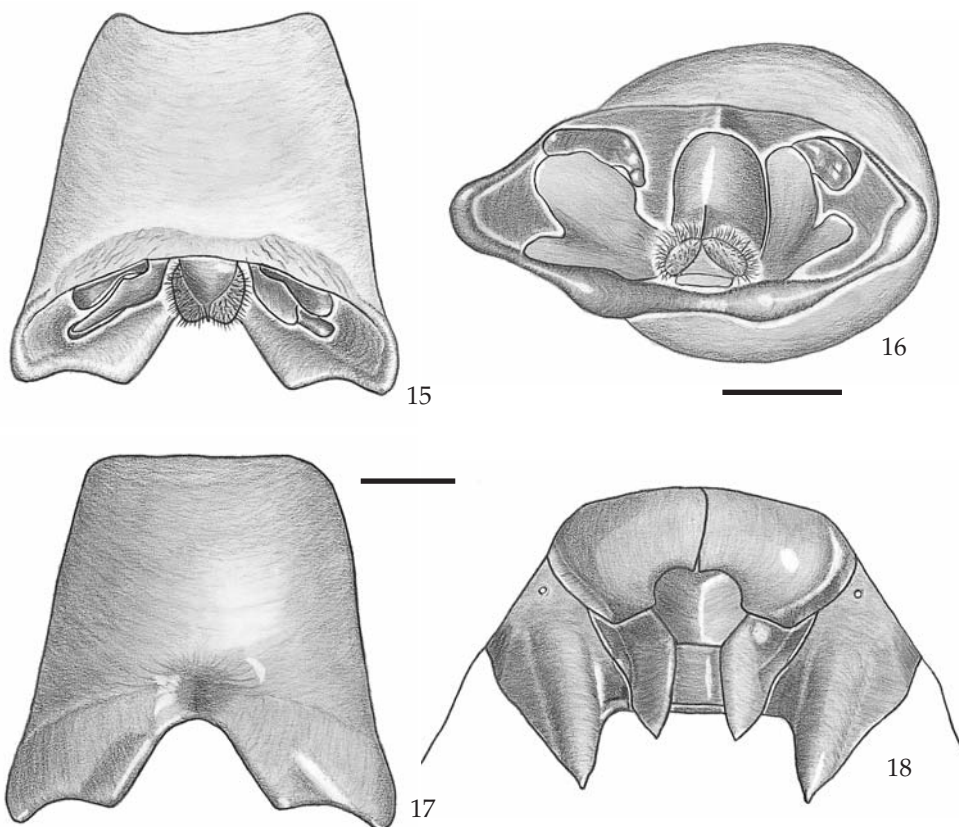
Distribution (fig. 24).— **Brazil**: Amazonas; **Peru**: Huánuco.

Comments.— This species can easily be recognised in the male by the huge main stem of the parameres and the form of the superior processes, in the female by the inner margins of the gonocoxites 8 which is somewhat projected in the mesial concavity.

Etymology.— The species is named after Hermann Carl Conrad Burmeister (1807-1892) who collected in Brazil (1850-1852) and in Argentina (1856-1860) and who published many important contributions to entomology among which his “Handbuch der Entomologie”, 5 vols, 1832-1855 and “Genera quaedam Insectorum iconibus illustravit et descripsit H. Burmeister” (1838-1846) (W. Horn & S. Schenkling, 1928: 157-160).



Figs 13-14, *Edessa burmeisteri* spec. nov., metasternal shield, ventral and lateral view, respectively. Bar represents 1 mm.



Figs 15-18, *Edessa burmeisteri* spec. nov.; 15-17, ♂, pygophore; 15, dorsal view; 16, posterior view; 17, ventral view; 18, female, genital plates, ventral view. Bars represent 1 mm.

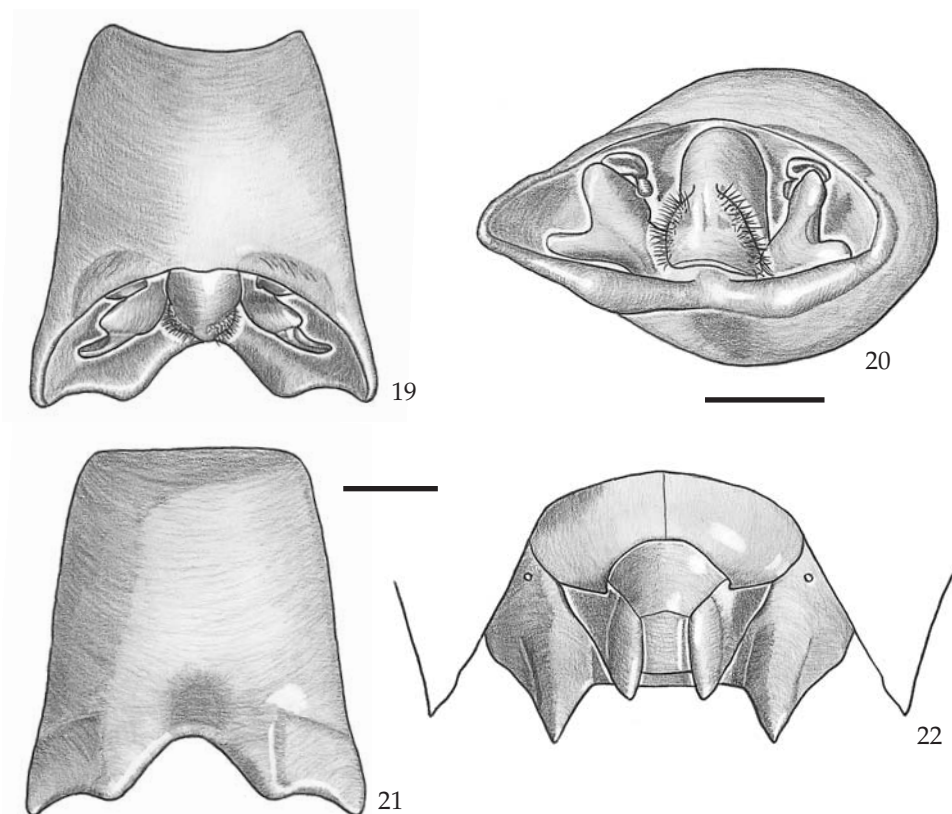
Edessa peruviana spec. nov.
(Figs 19-22, 24)

Material.— Holotype, ♂ (MNR), **Peru**, Loreto: confl. rios Zumun e Yanuasyacu, ii.1980, J. Becker. Paratypes (1 ♂, 1 ♀). **Peru**.— Loreto: 1 ♀ (MNR), same data as holotype; 1 ♂ (DEI), Jumbatis a. Hualanga, N. Peru, 350 m, 1932, leg. G. Klug, ded. Nagel, 1933.

Male (figs 19-21).— Main stem of paramere short and wide, narrowing towards apex; posterior lobe long, postero-laterally curved (figs 19-20). Superior processes very small, oblong and shallowly concave, narrow part strongly bent ventrally, stubby and separated from the main part by a deep, transverse sulcus (fig. 20). Swellings of the ventral rim rounded (fig. 21). Proctiger with posterior surface sharply arched; constricted part slightly narrow (fig. 20).

Female (fig. 22).— Mesial borders of gonocoxites 8 parallel; outline of posterior part slightly curved, with a mesial large and wide concavity. Gonocoxite 9 convex.

Measurements. Length of body 20-21; width of pronotum 16-17; width of abdomen 10-11; length of head 2.2-2.4; width of head 3.2-3.3.



Figs 19-22, *Edessa peruviana* spec. nov.; 19-21, ♂, pygophore; 19, dorsal view; 20, posterior view; 21, ventral view; 22, female, genital plates, ventral view. Bars represent 1 mm.

Distribution (fig. 24).— **Peru**: Loreto.

Comments.— Among the species, *E. peruviana* has the widest concavity in the mesial borders of the gonocoxites 8. Other remarkable characteristic: the stubby part of the superior processes is almost totally separated from the main part.

Etymology.— The name is derived from the country of origin.

Edessa rondoniensis spec. nov.
(figs 23-24)

Material.— Holotype, ♀ (MNR), **Brazil**, Rondônia: Ouro Preto d'Oeste, viii.1980, A. Domingos; Paratype, 1 ♀ (FURG), same data as holotype, vii.1986, O. Roppa.

Female (fig. 23).— Mesial borders of gonocoxites 8 parallel; outline of posterior part of gonocoxites 8 convex with a mesial tiny U-shaped concavity. Gonocoxite 9 strongly declivent on each side of medial line. Male unknown.

Measurements.— Length of body 21; width of pronotum 17; width of abdomen 11; length of head 2.4; width of head 3.3.

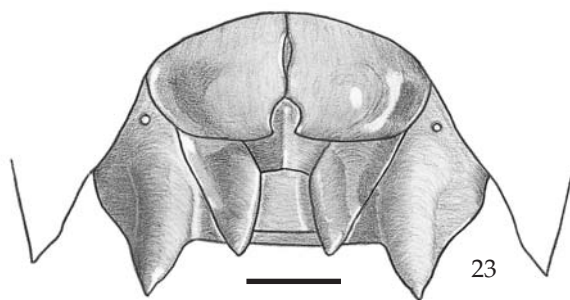


Fig. 23, *Edessa rondoniensis* spec. nov.; ♀, genital plates, ventral view. Bar represents 1 mm.

Distribution (fig. 24).— **Brazil**: Rondônia.

Comments.— Known only from two female specimens. The convex outline of gonocoxites 8 and the tiny mesial concavity could identify this species. The small crack seen between gonocoxites 8 seems to be a common deformity, which was also observed in other species.

Etymology.— From Rondônia, the province in which the specimens were collected.

Acknowledgements and abbreviations of depositories

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List of institutions

(BMNH) =	Natural History Museum, London, U.K.
(CAS) =	California Academy of Sciences, San Francisco, U.S.A.
(CMNH) =	Carnegie Museum of Natural History, Pittsburg, U.S.A.
(DARC) =	D.A. Rider collection, North Dakota State University, Fargo, U.S.A.
(DEC) =	Dodge Engleman collection, Miami, U.S.A.
(DEI) =	Deutsches Entomologisches Institut, Eberswalde, Germany.
(FURG) =	Department of Zoology, Federal University of Rio Grande do Sul, Porto Alegre, Brazil.
(IRSN) =	Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium.

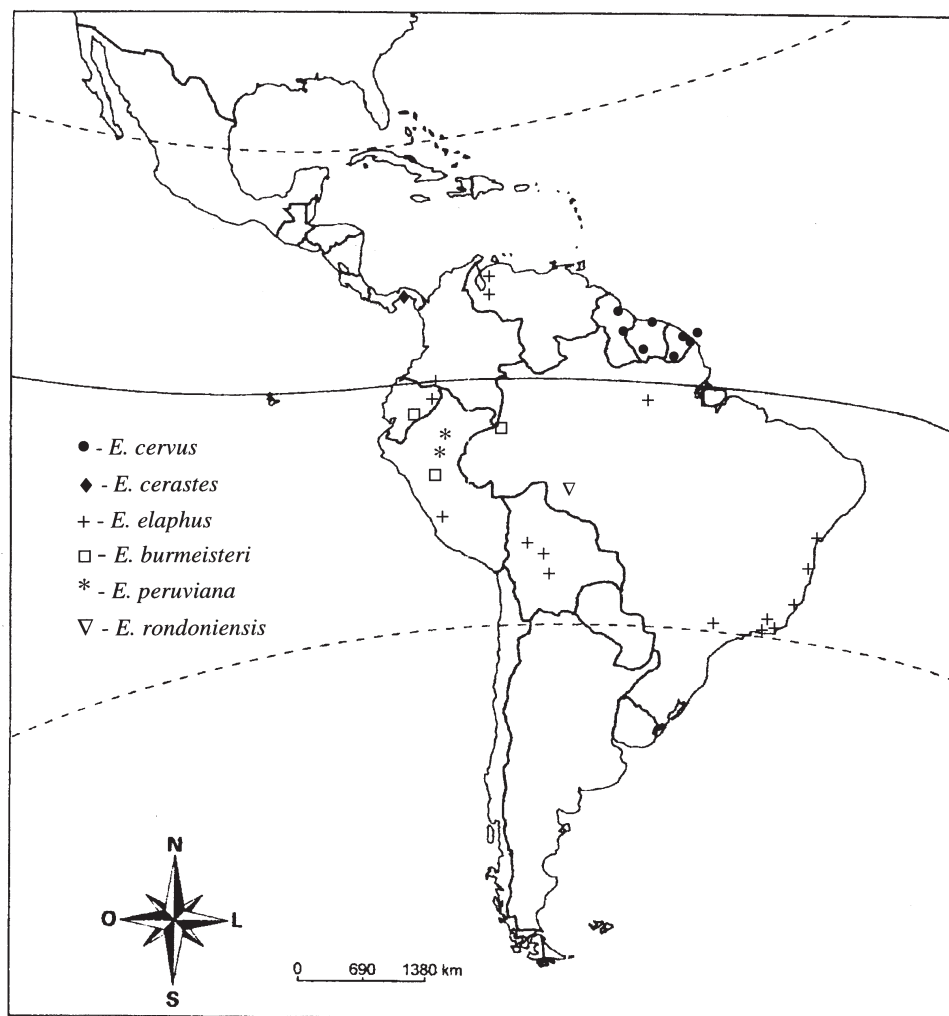


Fig. 24, Distribution map of the species belonging to the *E. cervus*-group.

- (JBC) = J. Becker collection, Rio de Janeiro, Brazil.
 (MNB) = Museum für Naturkunde, Berlin, Germany.
 (MNHN) = Muséum National d' Histoire Naturelle, Paris, France.
 (MNR) = National Museum, Rio de Janeiro, Brazil.
 (MZSP) = Zoological Museum, University of São Paulo, São Paulo, Brazil.
 (NRS) = Naturhistoriska Riksmuseet, Stockholm, Sweden.
 (RMNH) = National Museum of Natural History, Leiden, The Netherlands.
 (UCV) = Universidad Central de Venezuela, Maracay, Venezuela.
 (UZM) = Universitetets Zoologiske Museet, København, Denmark.
 (ZSM) = Zoologisches Staatssammlung München, Germany.

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