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Authors: Cuccodoro, Giulio, and Yin, Zi-Wei

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A new species of Goniacerini from Cameroon (Coleoptera: Staphylinidae: Pselaphinae)

Giulio Cuccodoro[1] & Zi-Wei Yin[2]

[1] *Muséum d'histoire naturelle, Case postale 6434 CH-1211 Genève 6, Switzerland.*
E-mail: giulio.cuccodoro@ville-ge.ch
[2] *Department of Biology, Shanghai Normal University, 100 Guilin Road, Shanghai, 200234, P. R. China.*
E-mail: yin_ziwei@yahoo.com

Abstract: *Ogmocerodes navigator* sp. n. is described from Cameroon. The habitus and other morphological characters relevant to taxonomy are illustrated with colour photographs. The entire foveal pattern is also shown for the first time in an African Goniacerini.

Keywords: Goniaceritae - taxonomy - *Ogmocerodes* - new species - Afrotropics.

INTRODUCTION

Goniacerini are rather compact Pselaphinae with conspicuous, geniculate antennae. They occur in the Neotropics and in Africa south of the Sahara, and are usually collected from lowland forest leaf litter, close to or directly from decomposing wood, and several African species in association with ants or termites (Jeannel, 1959; Leleup, 1978). The most notable members of the tribe include the South African termitophile *Kistneriella termitobia* Leleup, holding the largest individual of the subfamily with a body size of 7.5 mm (Leleup, 1971, 1978), and the Neotropical genus *Heptameron* Comellini, which is one of the rare pselaphine genera in which the elytra cover the entire abdomen (Comellini, 1979).

The tribe shows an evolutionary trend towards reduction of the number of antenomeres, from eleven to five (*Paragoniastes* Comellini) in the Neotropics, and from eleven to six (*Parasimus* Jeannel) in Africa. In both regions the generic concepts of Goniacerini are largely based on this feature, often in combination with the sexually dimorphic antennae, legs, as well as other male features (Comellini, 1979; Jeannel, 1949a, b, 1959; Leleup, 1978, 1982; Raffray, 1882; Schaufuss, 1872), which in our opinion should not be used to define a taxon above the specific level. In fact, the number of antennal segments in Pselaphinae sometimes vary within a genus, as evidenced notably in Goniaceritae within *Plagiophorus* Motschuslky (Burckhardt & Löbl, 2002), or in other distantly-related groups such as the clavigerine genus *Colilodion* Besuchet (Löbl, 1998). Taking these facts into consideration, the current generic classification of Goniaerini in the Neo- and Afrotropical regions is believed largely artificial and should be thoroughly revised in the future.

Some hundred individuals of African Goniacerini are represented in scientific collections, placed in fourty-five species spanning sixteen genera, with eleven of them monotypic (Newton & Chandler, 1989). More than half of the known species are placed in the genera *Ogmocerodes* Jeannel (14 spp.) and *Ogmocerus* Raffray (12 spp.) – two of the fourteen genera that have eleven-segmented antennae. Separation of these two genera from each other is however based on the presence/absence of the pronotal antebasal suclus, which shows variations in depth and length when present (i.e. in *Ogmocerodes*), and on the location/presence/absence of the modifications on male legs and antennae.

In this paper we describe a new species of *Ogmocerodes* from Cameroon, taking the rare opportunity to have eight conspecific individuals at hand to illustrate for the first time the entire foveal pattern of the tribe.

MATERIAL AND METHODS

Morphological terminology follows Chandler (2001), except our use of 'ventrite' instead of 'sternite' when describing meso- and metathoracic structures.

The following abbreviations are applied: AL–length of the abdomen along the midline; AW–maximum width of the abdomen; EL–length of the elytra along the sutural line; EW–maximum width of the elytra; HL–length of the head from the anterior clypeal margin to

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the occipital constriction; HW–width of the head across eyes; PL–length of the pronotum along the midline; PW–maximum width of the pronotum. Length of the body is a combination of HL + PL + EL + AL.

The material studied was collected under the Research Permit nº 0000076/MINRESI/B00/C00/C10/nye of the Ministry of Scientific Research and Innovation of the Republic of Cameroon. It is deposited in the Muséum d'histoire naturelle de la Ville de Genève (MHNG).

TAXONOMY

Ogmocerodes navigator Cuccodoro & Zi-Wei Yin, sp. n.

Figs 1-4

Holotype: Cameroon; ♂, labeled 'Cameroon, Centre Region, 100 m SW of Ebogo Tourist Center <3°24'00.0"N ; 11°28'00.0"E> 04.IX.2014, alt. 650 m, leg. G. Cuccodoro, #8 sifting leaf litter in wooden canoe abandoned in flood forest on the left shore of Nyong River' (in MHNG; accession number MHNG ENTO 00008839).

Paratypes: 5 ♂♂, 2 ♀♀, same label data as the holotype (in MHNG; accession numbers MHNG ENTO 00008840–00008846).

Differential diagnosis: *Ogmocerodes navigator* sp. n. shares markedly punctate pronotal disc with *O. raffrayi* Brauns, 1915, but the latter species lacks femoral spines in the male. The only other congener to possess metafemoral spines in the male is *O. hustaerti* Jeannel, 1949b, but it has no mesofemoral spines. The conformation of the antennal modification, and the shape of the aedeagus are also diagnostic.

Description: Male (Fig. 1). Length 4.41-4.79 mm. Head longer than wide, HL 1.00-1.09 mm, HW 0.80-0.83 mm, regularly punctate and setose on dorsal surface, with low, short frontal rostrum. Antennal tubercles slightly prominent and close, divided by a short, deep frontal sulcus; lacking frontal fovea, with deep, setose vertexal foveae (Fig. 2A); lacking postantennal notches at lateral margins; small areas just posterior to antennal tubercles glabrous, lacking setae and punctation; antennae (Fig. 4B) with eleven antennomeres, clubs formed by enlarged antennomeres VII-XI; scapes about as long as antennomeres II-VIII combined, distinctly sinuate near base, antennomeres II-VI each transverse, successively larger, antennomeres VII and VIII (Fig. 4C) strongly modified, each greatly enlarged and strongly concave at anteromedial margin of VII and posteromedial margin of VIII, antennomeres IX and X each transverse, narrowed at apex, XI as long as IX and X combined, with truncate base and round apex; reniform eyes each composed of about

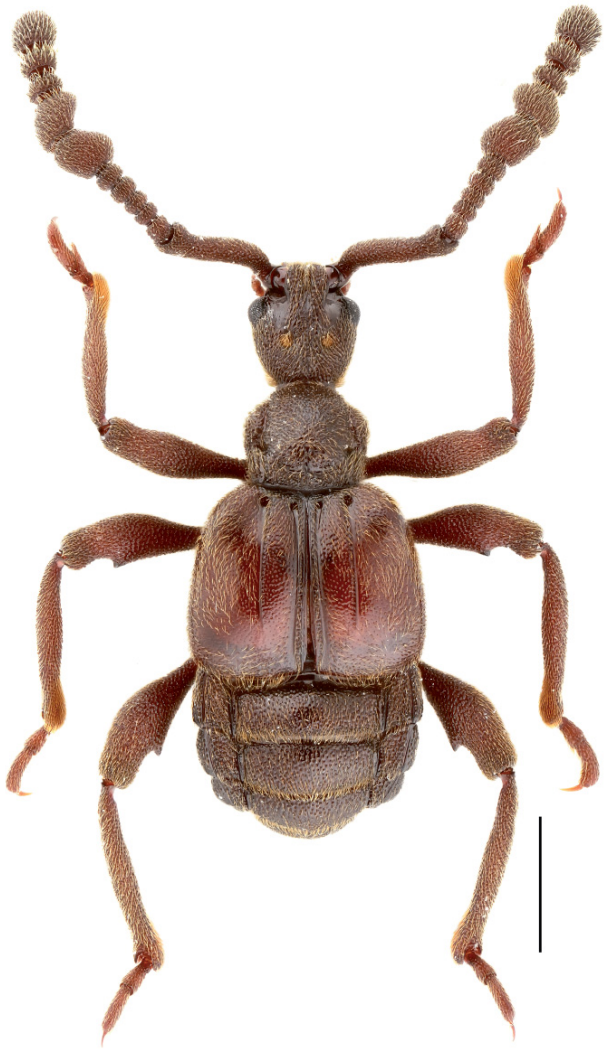

Fig. 1. Dorsal habitus of *Ogmocerodes navigator* sp. n., holotype male. Scale: 1.0 mm.

200 small facets; ocular-mandibular carinae (Fig. 2B) present; maxillary palpi with palpomere I short, II elongate, narrowed at base and widest at truncate apex, III transversely triangular, IV largest, ovoidal, with small palpal cone at apex; gula (Fig. 2C) considerably depressed posteromedially, indistinct gular sulcus present, each gular fovea has two openings, posterior pair of openings larger than anterior pair.

Pronotum (Fig. 2D) about as long as wide, PL 0.85-0.91 mm, PW 0.85-0.90 mm, with slightly constricted base, regularly round margins at middle, apex constricted to form apical collar; deep antebasal sulcus connecting lateral antebasal foveae, sulcus interrupted by short longitudinal basomedian carina, with short, shallow sulcus anterior to carina; punctation and setation of pronotal disc similar to that of head. Prosternite (Fig. 2E) with two pairs of lateral procoxal foveae; lacking paranotal sulci or carinae.

Elytra (Fig. 2F) wider than long, EL 1.15-1.29 mm, EW 1.56-1.70 mm, disc more sparsely and finely punctate

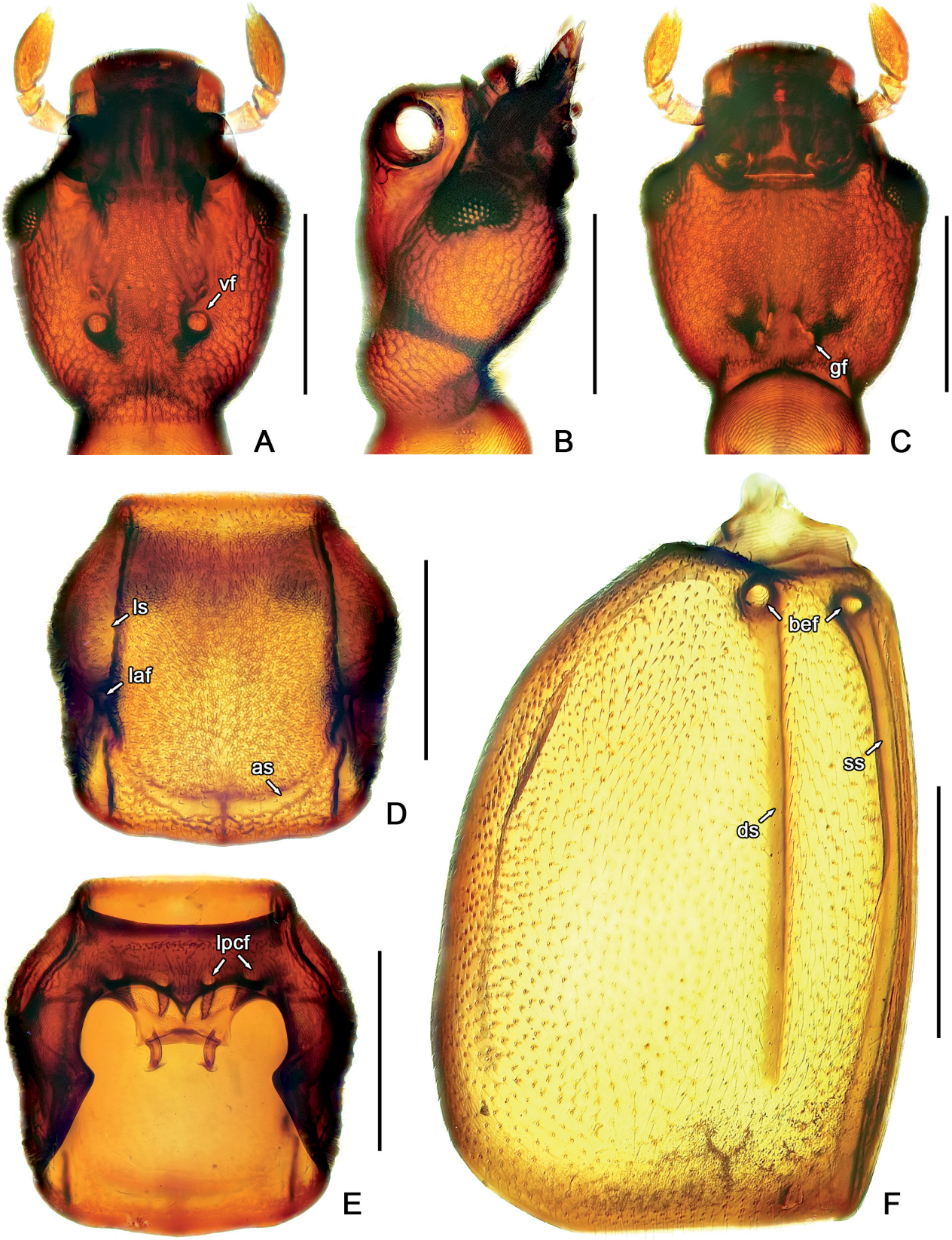

Fig. 2. Diagnostic characters of *Ogmocerodes navigator* sp. n. (A) Head, in dorsal view. (B) Same, in lateral view. (C) Same, in ventral view. (D) Pronotum. (E) Prosternite. (F) Left elytron. Scales: 0.5 mm. Abbreviations: as – antebasal sulcus, bef – basal elytral fovea, ds – discal stria, gf – gular fovea, laf – lateral antebasal fovea, lpcf – lateral procoxal fovea, ls – lateral sulcus, ss – sutural stria, vf – vertexal fovea.

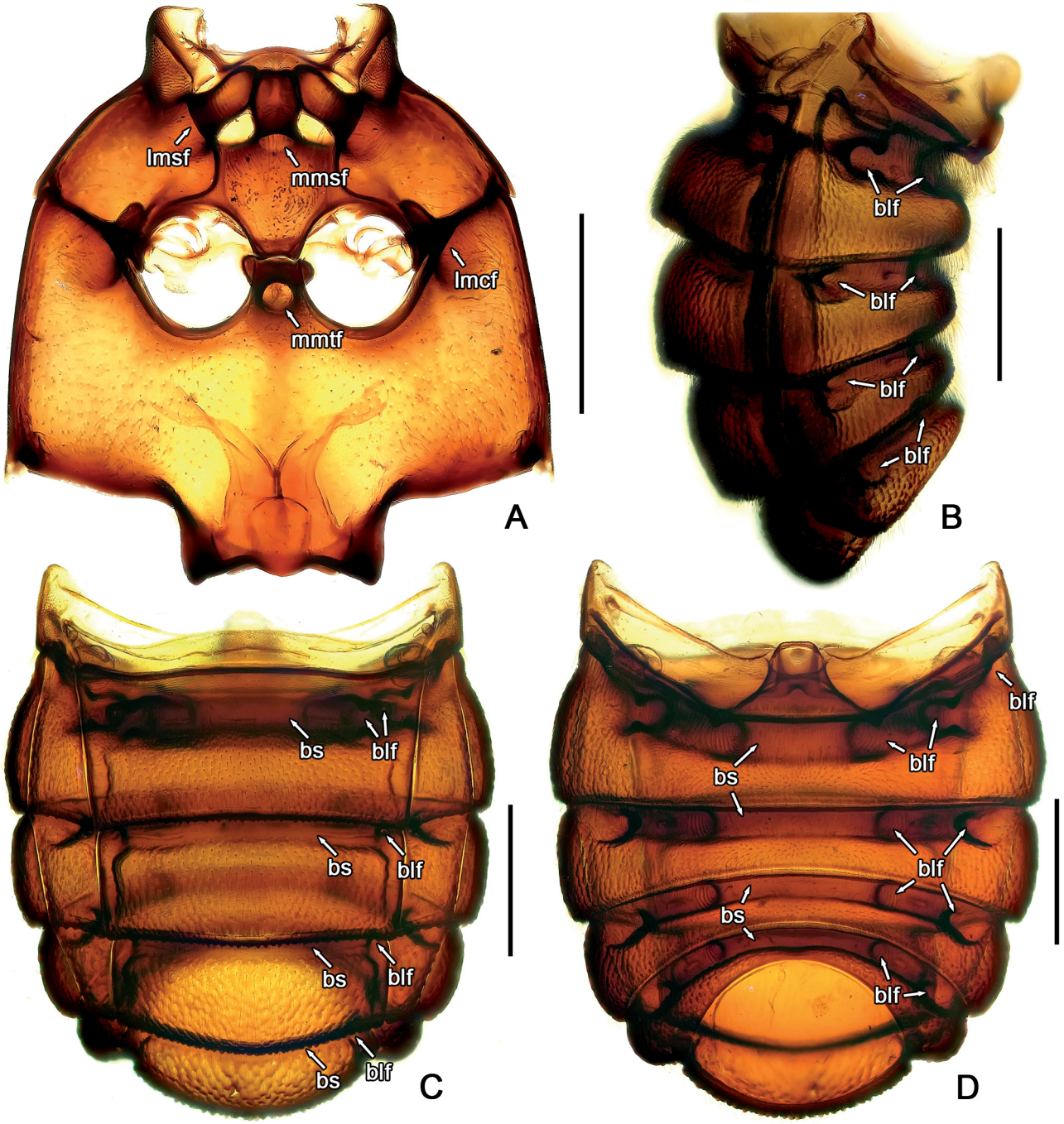

Fig. 3. Diagnostic characters of *Ogmocerodes navigator* sp. n. (A) Meso- and metaventrite. (B) Abdomen, in lateral view. (C) Same, in dorsal view. (D) Same, in ventral view. Scales: 0.5 mm. Abbreviations: blf – basolateral foveae, bs – basal sulcus, lmcf – lateral mesocoxal foveae, lmsf – lateral mesoventral foveae, mmsf – median mesoventral foveae, mmtf – median metaventral fovea.

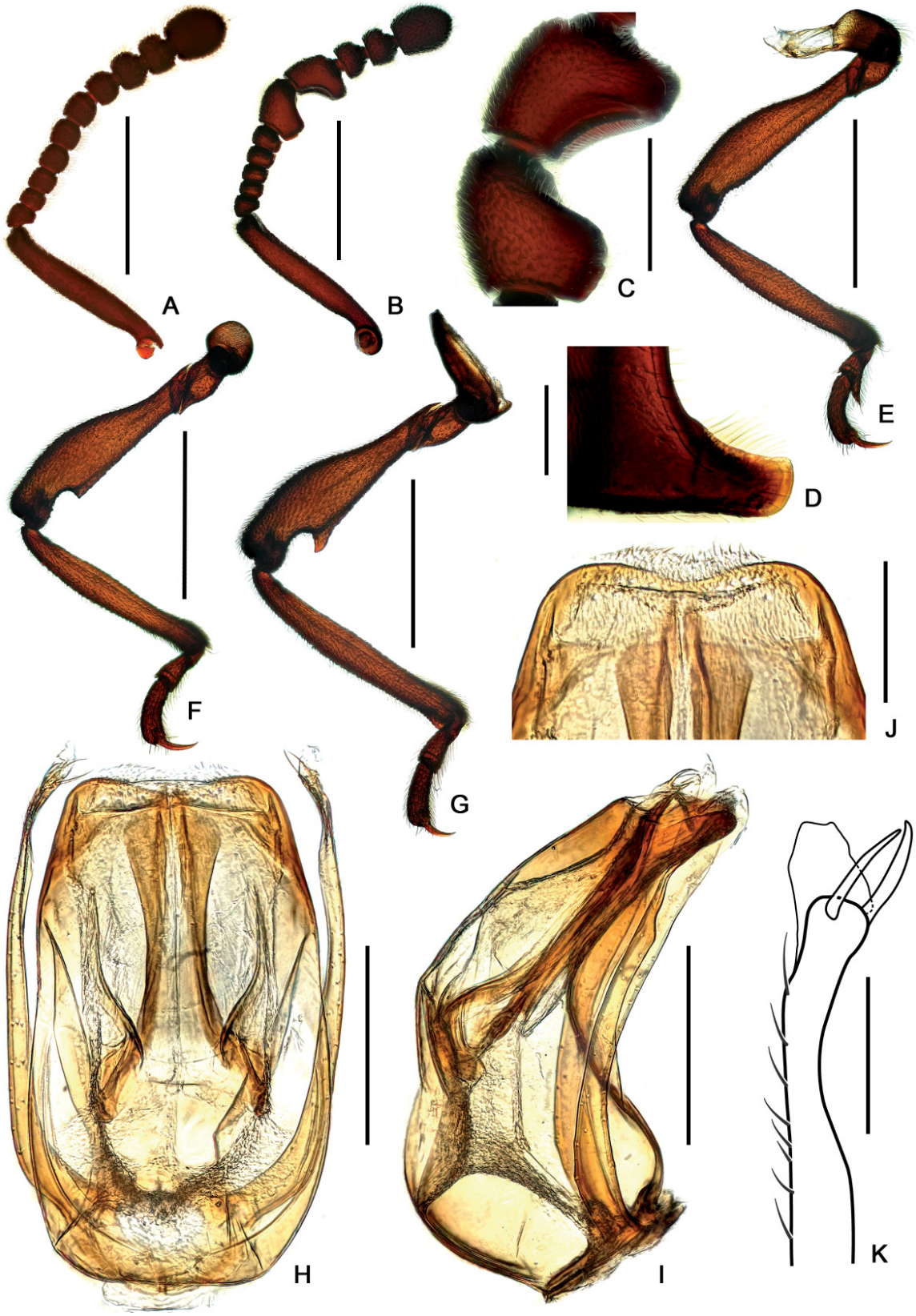

Fig. 4. Diagnostic characters of *Ogmocerodes navigator* sp. n. (A. Female. B–K. Male). (A, B) Left antenna. (C) Antennomeres VII-VIII. (D) Metaventral projection. (E) Fore leg. (F) Middle leg. (G) Hind leg. (H) Aedeagus, in dorsal view. (I) Same, in lateral view. (J) Apical portion of aedeagal median lobe, in dorsal view. (K) Apical portion of aedeagal right paramere, in dorsal view. Scales: A-C, E-G = 1.0 mm; D, H, I = 0.2 mm; J = 0.1 mm. K = 0.05 mm.

Fig. 5. Collecting site (A) and habitat (B) of the type series.

than pronotum, covered with recumbent setae; each elytron with two large, nude basal foveae; lacking subbasal fovea; sutural stria entire; discal stria extending to apical 4/5 of elytral length; lacking subhumeral foveae and marginal sulci. Mesoventrite (Fig. 3A) with single, large median mesoventral fovea, large lateral mesoventral foveae not forked; lateral mesocoxal foveae deep. Metaventrite (Fig. 3A) with large median fovea slightly forked inwards; with distinct projections (Fig. 4D); posterior margin convex medially.

Legs roughly punctate, densely setose; meso- (Fig. 4F) and metafemora (Fig. 4G) each spinose at their ventral margin near apex; third tarsomeres longer than second tarsomeres, protarsomeres II (Fig. 4E) acutely lobed, extending beneath III; with single tarsal claws, and one transparent bristle-like seta.

Abdomen (Fig. 3B-D) stout, AL 1.41-1.50 mm, AW 1.57-1.66 mm, coarsely punctate, regularly setose; tergite IV (first visible tergite, Fig. 3C) slightly longer than V, lateral margins sulcate, with broad basal impression, lacking mediobasal foveae, with one large and one tiny pair of basolateral foveae in large sockets at lateral margins of impression, lacking discal carinae; tergite V as long as VI, VII much shorter than previous tergite, tergites V-VII each with basal sulcus and one pair of basolateral foveae, and with sulcate lateral margins, tergite VIII roundly triangular, lacking fovea; paratergites accompanying tergites IV-VII (Fig. 3C). Sternite IV (second visible sternite, Fig. 3D) longest, with wide, densely setose basal sulcus, with three pairs of basolateral foveae, lateral pair smaller than mesal two pairs; sternites V-VII each with setose basal sulcus and two pairs of basolateral foveae, sternite VIII strongly transverse, lacking fovea, with broadly concaved posterior margin, sternite IX membranous, composed of lateral pair of triangular sclerites and one oval, elongate median plate.

Aedeagus (Fig. 4H, I) stout, length 0.51 mm, with symmetric median lobe and parameres, with large ovoidal dorsal diaphragm opening; anterior margin of median lobe (Fig. 4J) with membranous, finely setose fringe; parameres (Fig. 4H, I) each with rows of sparse setae from near base to apex, apex (Fig. 4K) with two large setae.

Female. Similar to male in general appearance, with simple antennomeres VII-VIII (Fig. 4A), protarsi, and meso- and metafemora, and metaventrite lacking projections; each eye with about 180 facets. Measurements: BL 4.41-4.51 mm, HL 0.96-0.99 mm, HW 0.77-0.78 mm, PL 0.84-0.87 mm, PW 0.84-0.85 mm, EL 1.18-1.23 mm, EW 1.55-1.59 mm, AL 1.40-1.45 mm, AW 1.57-1.64 mm.

Habitat: The type series was collected at an elevation of 650 m just before the main rainy season, from sifted leaf litter accumulated in an old wooden canoe abandoned in a flood forest some twenty meters from the waters of the Nyong River (Fig. 5).

Distribution: The new species is known only from the type locality in central Cameroon approximately 10 km southeast of the city of Mbalmayo.

Etymology: The epithet "*navigator*" means "sailor" in Latin, remembering that the type series was collected in a canoe.

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