

Genus	Vol. 21(2): 175-190	Wrocław, 30 VII 2010
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Afrotropical Cephenniini: Redescriptions of *Cephennodes* described
by SCHAUFUSS and CAUCHOIS and three new species from Ghana,
Nigeria and Uganda
(Coleoptera: Staphylinidae: Scydmaeninae)

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ABSTRACT. Current knowledge of the Afrotropical species of *Cephennodes* REITTER is summarized, and the subgeneric status of *C. zanzibaricus* (SCHAUFUSS) from Tanzania is clarified. The latter species is redescribed and placed in *Cephennodes* s. str., based on examination of a syntype, designated here as the lectotype. *Cephennium ruandae* CAUCHOIS is transferred to *Cephennodes*, but its subgeneric placement was not possible to determine. Three new species are described: *C.* (s. str.) *nsukkaensis* n. sp. from Nigeria, *C.* (s. str.) *atewaensis* n. sp. from Ghana, and *C.* (s. str.) *bundibugyoensis* n. sp. from Uganda. *Cephennodes nsukkaensis* and *C. atewaensis* are the first Cephenniini recorded from the western part of the Afrotropical region.

Key words: entomology, taxonomy, new species, Staphylinidae, Scydmaeninae, Cephenniini, *Cephennodes*, Afrotropical, Nigeria, Uganda, Ghana, Tanzania, Rwanda.

INTRODUCTION

The majority of known Cephenniini has been described from the Oriental Region, and a significant number of species occur also in the Palearctis, but the tribe is cosmopolitan and its members can be found in all zoogeographical regions, except for the subpolar and polar zones. Afrotropical Cephenniini is a particularly poorly studied group and only three genera (*Cephennium* MÜLLER & KUNZE, *Cephennodes* REITTER and *Cephennomicrus* REITTER) with merely seven species have been reported to occur in such a large and species-rich area. The first Afrotropical *Cephennodes* was described by Ludwig Wilhelm SCHAUFUSS, as *Cephennium zanzibaricum* SCHAUFUSS, 1889, from the island of Zanzibar, currently a part of Tanzania. In 1955 CAUCHOIS described

Cephennium ruandae from Rwanda, and this species has never been revised. In 1962 Claude BESUCHET placed *Cephennium zanzibaricum* in *Cephennodes* and described *C. basilewskyi*, *C. leleupi*, *C. indifferens* and *C. marginatus* from Tanganyika; all localities given in that paper belong now in Tanzania. BESUCHET placed all these species in *Cephennodes* (s. str.), but at that time no subgenera were known within this genus, and none was proposed until nearly half a century later (JAŁOSZYŃSKI 2007). However, incidentally, BESUCHET's species indeed belong to the nominotypical subgenus, as defined currently by structures of the aedeagus. These four species were described in detail and their aedeagi adequately illustrated, so redescriptions are unnecessary. The illustration of *Cephennium ruandae* CAUCHOIS (from Rwanda) given in the original paper clearly suggested that this species had been misplaced, and its true generic status remained to be determined. The subgeneric placement of *Cephennodes zanzibaricus* needed clarification, and since it is not possible to identify this species on the basis of the original paper, it also required a detailed redescription. These two problems are clarified in the present paper, the lectotype for *Cephennium zanzibaricum* is designated, and three new species of *Cephennodes* (s. str.) are described from Uganda, Ghana and Nigeria. The latter two localities represent the first record of *Cephennodes* (and Cephenniini) from the western part of the Afrotropical Region, which suggests a wide distribution of cephenniines over the entire tropical Africa.

The measurements follow standard convention used for the Cephenniini (e.g., JAŁOSZYŃSKI 2009). Depositories of the studied specimens are as follows:

DEI – Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany;
 MHNG – Muséum d'Histoire Naturelle, Geneva, Switzerland;
 RMCA – Musée Royal de l'Afrique Centrale, Tervuren, Belgium;
 SMNS – Staatliches Museum für Naturkunde, Stuttgart, Germany.

TAXONOMY

Cephennodes (Cephennodes) zanzibaricus (SCHAUFUSS)

(Figs. 1, 2, 8, 12, 13)

Cephennodes (s. str.) *zanzibaricus* (SCHAUFUSS); BESUCHET 1962.

Cephennium zanzibaricum SCHAUFUSS, 1889: 28.

DIAGNOSIS

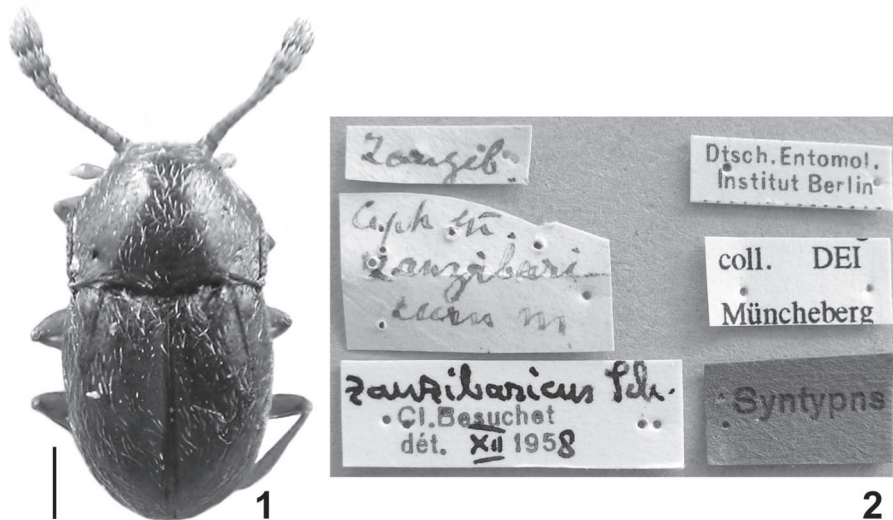
Males of this species differ from all congeners in having very small and indistinct transverse median tubercle on vertex located slightly behind hypothetical line joining posterior margins of eyes. Females and their diagnostic characters remain unknown.

REDESCRIPTION

Male (Fig. 1). Body small, oval, moderately slender and convex, with very shallow constriction between pronotum and elytra, length 1.13 mm; pigmentation dark reddish-brown, vestiture slightly lighter than cuticle. Head (Fig. 8) moderately large,

length 0.15 mm, width 0.51 mm, broadest at large, strongly convex and coarsely faceted eyes; vertex and frontoclypeal area confluent, convex, vertex with very small, transverse and indistinctly delimited median tubercle behind hypothetical line joining posterior margins of eyes; supraantennal tubercles small but distinct; punctures very small and shallow, but recognizable under magnification 40x, separated by spaces 1.5-2x as long as puncture diameters; setae very short, sparse and nearly recumbent. Antennae relatively short, length 0.48 mm, with large 3- or 4-segmented club (it is unclear whether only slightly enlarged antennomere VIII should be included in club or not) and slender, compact proximal part; antennomere I about twice as long as broad; II slightly narrower and shorter than I, 1.8x as long as broad; III-VI subequal in length and width, each slightly narrower than II and distinctly transverse; VII as broad as VI but slightly longer, subquadrate; VIII distinctly broader than VII but comparable in length; IX much broader than VIII, transverse; X much broader than IX and slightly longer, transverse; XI about as long as IX-X together, distinctly broader than X.

Pronotum nearly semicircular in dorsal view, broadest just anterior to middle but only slightly narrowing posteriorly, length 0.35 mm, width 0.51 mm; anterior margin weakly convex; lateral margins strongly rounded in anterior half, then nearly straight to right hind angles; posterior margin deeply biemarginate; lateral carinae strongly thickened and relatively broad, but not separated from lateral margins; lateral ante-basal foveae small and shallow, each located closer to posterior than lateral margin of pronotum. Punctures on median part of disc very small and shallow but very dense, separated by spaces shorter than puncture diameters, punctures near each front angle of pronotum are much more distinct and coarse; setae short, moderately dense, only slightly suberect.



1-2. *Cephennodes zanzibaricus* (SCHAUFFUSS); 1 – lectotype male; 2 – original labels of the lectotype (scale bar: 0.2 mm)

Elytra oval, broadest between middle and anterior third, strongly narrowing from broadest place to apices, length 0.63 mm, width 0.53 mm, elytral index 1.19. Subhumeral lines very narrow but distinct, as long as 0.44x length of elytra, developed as sharp border between more convex humeral region and less convex adsutural area; humeral denticles small but distinct; basal fovea on each elytron large and located closer to scutellum than to humerus; apices of elytra separately rounded. Punctures more distinct than those in median part of pronotum but still very fine; setae similar to those on pronotum. Hind wings well developed.

Legs moderately slender and long, without peculiar characters.

Metaventrete convex in middle, with shallow and indistinctly delimited postmesocoxal impressions, finely and sparsely but distinctly punctate.

Aedeagus (Figs. 12, 13) 0.15 mm in length, typical *simonis*-type; median lobe strongly asymmetrical with long, protruding, narrow and subtriangular apical part; apical group of projections long, in ventral view subtriangular, with apex directed towards apex of median lobe, in lateral view apical hook curved dorsally at slightly obtuse angle; parameres short, with three and two setae visible.

Female. Unknown.

TYPE MATERIAL

Lectotype (designated herein, see Remarks) (male): nine labels: "Zanzib." [white, handwritten in black]; "Cephennium \ zanzibari- \ cum m" [white, handwritten in black]; "Syntypns (sic!)" [red, typed in black]; "C.Schaufuss 1930" [white, printed in black]; "Dtsch.Entomol. \ Institut Berlin" [white, printed in black]; "zanzibarius Sch. [handwritten in black] \ CI Besuchet [printed in black] \ det. [printed in black] XII [handwritten in black] 195 [printed in black] 8 [handwritten in black]" [white]; "coll. DEI \ Müncheberg" [white, printed in black]; "Cephennodes \ zanzibaricum \ Schauf." [white, handwritten in black]. During the present study another white printed label was added: "CEPHENNODES (s. str.) \ zanzibarius \ (Schaufuss, 1889) \ LECTOTYPUS \ P. JAŁOSZYŃSKI, '09" (DEI).

DISTRIBUTION

Tanzania: Zanzibar Island.

REMARKS

Three type specimens of *Cephennium zanzibaricum* are preserved in two museums: the male redescribed in the present paper and deposited at DEI, and two males at The Natural History Museum, London, UK (R. BOOTH, personal comm.). The number of type specimens was not specified in the original description and no data that can be used to identify a possible holotype seem to exist. Therefore, these three specimens must be treated as syntypes. In accordance with the ICZN Article 74.1, the specimen used in the present study and preserved at DEI is herein designated as a lectotype, in order to preserve stability of nomenclature.

Apart from the slightly modified head, morphology of this species is unremarkable and represents a typical, generalized form common within *Cephennodes*. The aedeagus

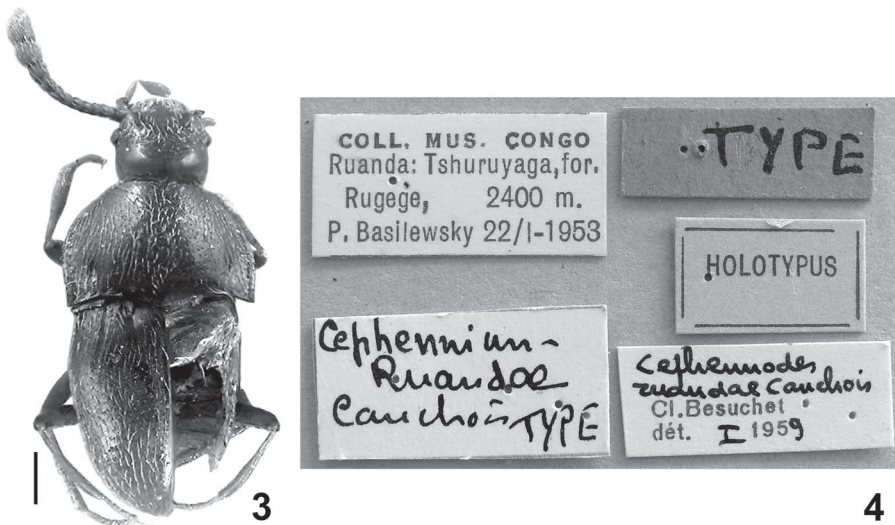
of *C. zanzibaricus* is most similar to that found in *C. atewaensis* from Ghana described below, *C. basilewskyi* from continental Tanzania, and slightly similar (due to projected, triangular apex of the median lobe) to *C. hongkongensis* JALOSZYŃSKI, 2008a from Hong Kong and *C. papuanus* JALOSZYŃSKI, 2008b from Papua New Guinea. However, distinct differences can be seen in details of the aedeagi, body size and shape, and proportions of body parts. *Cephennodes zanzibaricus* is much smaller than *C. hongkongensis* and *C. papuanus* (1.13 mm vs. 1.42-1.44 mm and 1.52 mm, respectively); the two latter species have also different modifications of the head, consisting of transverse impressions or grooves. The aedeagus of *C. basilewskyi*, figured in the original paper (BESUCHET 1962), is much larger than that in *C. zanzibaricus* (0.26-0.27 mm vs. 0.15 mm), and differs clearly in shorter apical part of the median lobe. *Cephennodes atewaensis* differs from *C. zanzibaricus* in the strongly modified frons.

“Zanzibar” given by SCHAUFUSS as the type locality is somewhat unclear. This geographical name refers to a semi-autonomous part of Tanzania, comprising two large and a number of small islands known as the Zanzibar Archipelago, and a part of the continental coast, in the past partly controlled by the sultan of Zanzibar. However, the main island, Unguja, is usually referred to as Zanzibar, and it seems the most probable place where the studied material comes from.

***Cephennodes (incertae sedis) ruandae* (CAUCHOIS) n. comb.**

(Figs. 3, 4)

Cephennum ruandae CAUCHOIS, 1955: 94, fig. 10.



3-4. *Cephennodes ruandae* (CAUCHOIS); 3 – holotype; 2 – original labels of the holotype (scale bar: 0.2 mm)

DIAGNOSIS

This species differs from other Afrotropical congeners in having very small eyes composed of 7-8 ommatidia, large body (nearly 1.5 mm), very finely punctate dorsum, much more distinctly and densely punctate metaventricle, and subhumeral elytral lines very fine and as short as only 0.22x length of elytra. Since the aedeagus is unknown, the diagnosis may not be entirely reliable (see Remarks).

REDESCRIPTION

Holotype, sex unknown (Fig. 3). Body moderately small, oval, moderately slender and convex, with shallow but distinct constriction between pronotum and elytra, length 1.48 mm; pigmentation dark reddish-brown, vestiture slightly lighter than cuticle. Head large, length 0.20 mm, width 0.35 mm, broadest at small but strongly convex eyes composed of 7 or 8 ommatidia; vertex and frontoclypeal area non-modified, confluent and convex, clypeus deflexed; supraantennal tubercles small but distinct; punctures very small and shallow, but sharply marked and well visible under magnification 40x, separated by spaces 1.5-2x as long as puncture diameters; setae very short, sparse and nearly recumbent. Antennae relatively short, length 0.65 mm, with large 3- or 5-segmented club (antennomeres VII and VIII are only slightly enlarged and transition between proximal part of flagellum and club is gradual) and slender, compact proximal part; antennomere I about 1.7x as long as broad; II slightly narrower and shorter than I, 1.3x as long as broad; III-VI subequal in length and width, each slightly narrower than II and subquadrate; VII slightly longer and broader than VI, about as long as broad; VIII slightly larger than VII, about as long as broad; IX distinctly broader than VIII, transverse; X much broader and slightly longer than IX, transverse; XI about as long as IX-X together, slightly broader than X.

Pronotum nearly semicircular in dorsal view, broadest slightly posterior to middle, length 0.48 mm, width 0.68 mm; anterior margin very broad and weakly convex; lateral margins strongly rounded in anterior half and weakly rounded in posterior half, slightly narrowing toward sharp and acute hind angles; posterior margin deeply biemarginate; lateral carinae narrow but distinctly thickened, not separated from lateral margins; lateral ante-basal foveae small but sharply marked, each located much closer to posterior than lateral margin of pronotum. Punctures on median part of disc very small but relatively sharply marked, recognizable under magnification 40x, separated by spaces 1-1.5x as long as puncture diameters, punctures near each front angle of pronotum not differing markedly from those in middle; setae short, moderately dense, nearly recumbent.

Elytra oval, broadest near anterior third, moderately strongly narrowing from broadest place to apices, length 0.80 mm, width 0.70 mm, elytral index 1.14. Subhumeral lines very narrow and fine, as short as only 0.22x length of elytra, developed as sharp border between more convex humeral region and only minimally less convex adsutural area; humeral denticles small but distinct; basal fovea on each elytron large and located much closer to scutellum than to humerus. Punctures shallower and sparser than those in median part of pronotum but comparable in diameters; setae similar to those on pronotum. Hind wings not studied.

Legs moderately slender and long, without peculiar characters.

Metaventrite without postmesocoxal impressions, covered with relatively large and sharply marked punctures separated by spaces similar to puncture diameters.

Aedeagus unknown (see Remarks).

TYPE MATERIAL

Holotype (sex unknown): six labels: "COLL. MUS. CONGO \ RUANDA: Tshuryyaga, for. \ Rugege, 2400 m. \ P. Basilewsky 22/I-1953" [white, printed]; "Cephen-nium - \ Ruandae \ Cauchois TYPE" [white, handwritten in black]; "TYPE" [red, handwritten in black]; "HOLOTYPUS" [pink, printed in black]; "Cephenodes \ ruandae Cauchois [handwritten in black] \ CI Besuchet [printed in black] \ det. [printed in black] I [handwritten in black] 195 [printed in black] 9 [handwritten in black]" [white] (RMCA).

DISTRIBUTION

Western Rwanda.

REMARKS

Cephenodes ruandae is known from the holotype only. Unfortunately, the sex of this specimen is not possible to identify for two reasons. The holotype is partly damaged, and its right antenna, right elytron and, more importantly, abdomen are missing. CAUCHOIS (1955) gave ambiguous data concerning the sex - the first line of his description reads "Type: un ♂, Tshuryyaga (Mus. Congo)", while the last line reads "Ruanda: Tshuryyaga, forêt du Rugege, 2400 m., une seule ♀". The lack of description and illustration of the aedeagus, which are given for other species described in the same paper, may suggest that the holotype is a female. The current subgeneric system of *Cephenodes* is based on male and female copulatory organs, and therefore the placement of *C. ruandae* must remain *incertae sedis* within the genus. Moreover, characters associated with the aedeagus are primary diagnostic features to identify species of *Cephenodes*, and females of some unremarkable species with generalized morphology, without any peculiar characters, can be identified only by direct comparison with males, and usually only when collected together with males. Among the known species of Afrotropical *Cephenodes*, *C. ruandae* can be identified on the basis of the small eyes and proportions of body parts. However, existence of morphologically identical or nearly identical pairs of species is not uncommon in Cephenniini, and certain identification of *C. ruandae* in newly found materials may be problematic.

Cephenodes (Cephenodes) nsukkaensis n. sp.

(Figs. 5, 9, 14, 15)

NAME DERIVATION

Locotypical, after the town Nsukka in Nigeria, the terra typica of this species.

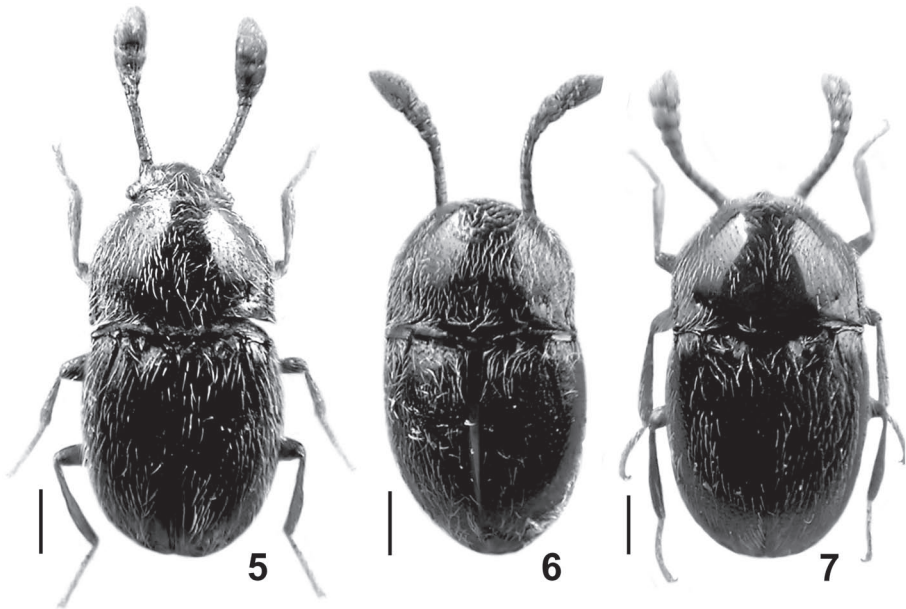
DIAGNOSIS

Males of this species differ from all congeners in having uniquely modified head: anterior part of frons distinctly impressed, with postero-median pair of very small,

partly fused together tubercles and small and diffused antero-median tubercle. Females and their diagnostic characters remain unknown.

DESCRIPTION

Male (Fig. 5). Body small, oval, elongate, moderately convex, with barely marked constriction between pronotum and elytra, length 1.15 mm; pigmentation moderately dark brown, vestiture much lighter than cuticle. Head (Fig. 9) moderately large, broadest at large, strongly convex and coarsely faceted eyes; length 0.15 mm, width 0.30 mm; vertex convex, confluent with posterior part of frons; anterior part of frons impressed, with postero-median pair of very small and partly fused together tubercles, and with small and diffused antero-median clypeal tubercle; supraantennal tubercles feebly marked. Punctures on vertex very fine but recognizable under magnification 40x, separated by spaces 1-2 as long as puncture diameters, frontal impression and clypeus glossy, punctures not discernible under magnification 80x; setae short and sparse, recumbent to slightly suberect. Antennae short, with slender and compact proximal parts and strongly enlarged 3 or 4 terminal antennomeres forming distinct club (width of antennomere VIII is intermediary between VII and IX and it is unclear whether it should be treated as part of club or not); length of antennae 0.48 mm; antennomere I only slightly longer than broad; II similar in length but distinctly narrower than I, 1.2x as long as broad; III-IV subequal in length and width, each slightly narrower and much shorter than II, distinctly transverse; V-VI subequal in size, each as broad as IV but slightly longer, subquadrate; VII as broad as VI but slightly longer, 1.1x as long as broad; VIII as long



5-7. Holotype males: 5 – *Cephennodes nsukkaensis* n. sp.; 6 – *Cephennodes atewaensis* n. sp.; 7 – *Cephennodes bundibugyoensis* n. sp. (scale bars: 0.2 mm)

as VII but distinctly broader, transverse; IX slightly longer and much broader than VIII, transverse; X slightly longer and much broader than IX, strongly transverse; XI as long as IX-X together, minimally broader than X.

Pronotum nearly semicircular in dorsal view, broadest at base but barely noticeably narrowing anteriorly in posterior half, length 0.35 mm, width 0.53 mm; anterior margin broadly rounded; lateral margins in anterior half strongly rounded, in posterior half nearly straight; hind angles sharp but not acute; posterior margin biemarginate; lateral carinae very narrow and not separated from lateral margins; lateral ante-basal foveae small, each located closer to posterior than to lateral margin of pronotum. Punctures on median part of disc very fine, shallow, unevenly distributed, separated by spaces 1-2x as long as puncture diameters, area near each front angle covered with more distinct and denser, but not coarse punctures; setae short, moderately dense, suberect.

Elytra oval, elongate, broadest between middle and anterior third, moderately narrowing toward apices, length 0.65 mm, width 0.55 mm, elytral index 1.18. Subhumeral lines narrow but distinct, each as long as 0.38x length of elytra, developed as moderately sharp border between more convex humeral area and less convex adsutural region; humeral denticles small but distinct; basal fovea on each elytron large and located closer to scutellum than to humerus; elytra separately rounded. Punctures more distinct than those on median part of pronotum but still fine; setae similar to those on pronotum but slightly longer. Hind wings long, functional.

Legs moderately slender and long, without peculiar characters.

Metaventricle with short, shallow and difused postmesocoxal impressions, very finely punctate.

Aedeagus (Figs. 14, 15) 0.18 mm in length, typical *simonis*-type; median lobe moderately asymmetrical with broadly rounded apical part; apical group of projections long, in ventral view subtriangular, with apex directed towards apex of median lobe, in lateral view apical hook curved dorsally at nearly right angle; parameres long, each with three setae

Female. Unknown.

TYPE MATERIAL

Holotype (male): "NIGERIA:Nsukka \ 19.VII.1988 \ leg.F.-I.KRELL" [blue, printed]; "*CEPHENNODES* (s. str.) *nsukkaensis* m., det. P. JAŁOSZYŃSKI, 2009, HOLOTYPUS" [red, printed] (SMNS).

DISTRIBUTION

Southern Nigeria, Enugu State.

REMARKS

The aedeagus of *C. nsukkaensis* with its broadly rounded apex of the oval median lobe is most similar to that known in two Asian species: *C. sichuanus* JAŁOSZYŃSKI, 2007b from China, and *C. praemorsus* JAŁOSZYŃSKI et NOMURA, 2008 from Thailand. *Cephennodes sichuanus* is distinctly different in having the frons with an indistinct

median tubercle, without impression; and *C. praemorsus* has the apex of the median lobe rather truncate than rounded, and clearly different shape of apical projections.

***Cephennodes (Cephennodes) atewaensis* n. sp.**

(Figs. 6, 10, 16, 17)

NAME DERIVATION

Locotypical, after Mt. Atewa in Ghana, the terra typica of this species.

DIAGNOSIS

Males of this species can be distinguished from all other members of *Cephennodes* by unique modifications of head: frons with large transverse impression deep on sides and shallow in middle, bordered posteriorly by small median tubercle and anteriorly by rounded transverse carina with two shallow lateral notches delimiting convex median part; also combination of very dark brown, nearly black pigmentation, very small basal elytral foveae and lateral carinae on pronotum narrowly separated from lateral margins is unique. Females and female diagnostic characters remain unknown.

DESCRIPTION

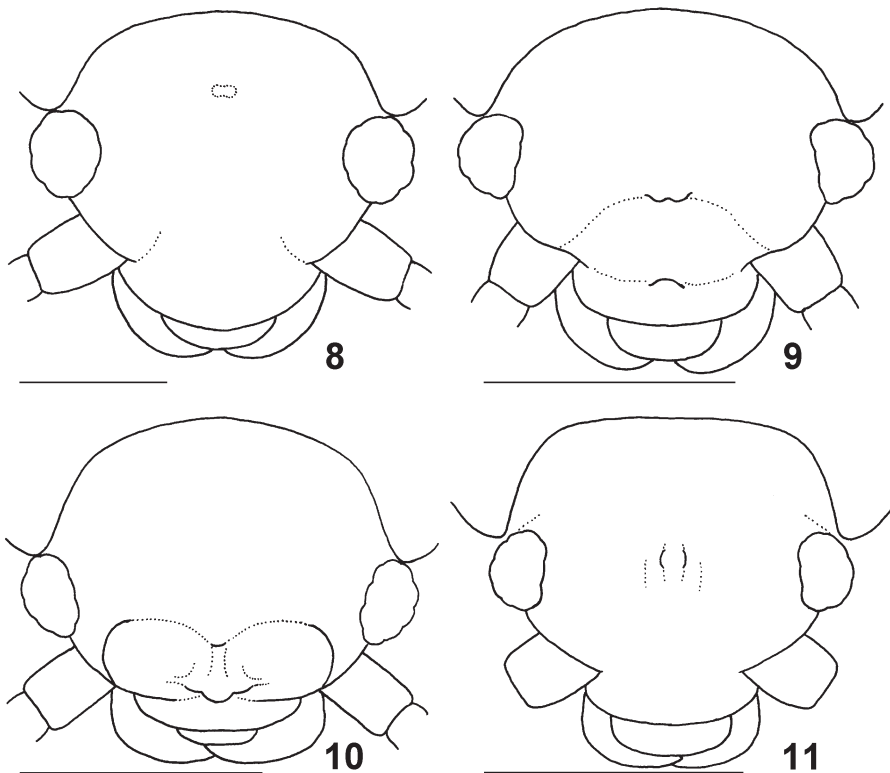
Male (Fig. 6). Body small, oval, elongate, moderately convex, with barely marked constriction between pronotum and elytra, length 1.20 mm; pigmentation dark brown, nearly black, vestiture silverish-brown. Head (Fig. 10) moderately large, broadest at large, strongly convex and coarsely faceted eyes; length 0.15 mm, width 0.33 mm; vertex and posterior part of frons convex and confluent, anterior part of frons transversely impressed, with small median tubercle on posterior margin of impression and small, rounded median carina on its anterior margin; supraantennal tubercles indistinct; punctures on anterior part of vertex and posterior part of frons very small but distinct, separated by spaces 1-1.5x as long as puncture diameters, posterior part of vertex and frontal impression nearly impunctate; setae on unmodified part of head short, dense and suberect, frontal impression asetose. Antennae short, with slender and compact proximal part and strongly enlarged club composed of three or four terminal antennomeres (whether antennomere VIII belongs to club or not may be subjective), length of antennae 0.53 mm; antennomere I 1.3x as long as broad; II minimally shorter and narrower than I, 1.3x as long as broad; III-IV subequal in length and width, each slightly narrower and much shorter than II, slightly transverse; V-VI subequal in size, each as broad as IV but slightly longer, subquadrate; VII as broad as VI but slightly longer, 1.1x as long as broad; VIII distinctly broader but not longer than VII, transverse; IX much broader and slightly longer than VIII, transverse; X much broader and longer than IX, only slightly broader than long; XI slightly longer than IX-X together, distinctly broader than X.

Pronotum nearly semicircular in dorsal view, equally broad from posterior third to base, length 0.40 mm, width 0.58 mm; anterior margin broadly rounded; lateral margins in anterior half strongly rounded, in posterior half nearly straight; hind angles right and acute; posterior margin biemarginate; lateral carinae narrow and narrowly

but distinctly separated from lateral margins, area between lateral carina and lateral margin much narrower than width of median antennomeres; lateral ante-basal foveae very small and shallow, each located much closer to posterior than to lateral margin of pronotum. Punctures on median part of disc very small and shallow but distinct, separated by spaces comparable to puncture diameters, relatively large area near each front angle covered with more distinct and denser, slightly coarse punctures; setae short, moderately dense, suberect.

Elytra oval, elongate, broadest near anterior third, moderately narrowing toward apices, length 0.65 mm, width 0.60 mm, elytral index 1.08. Subhumeral lines very narrow but distinct, as long as 0.38x length of elytra, developed as sharp border between more convex humeral area and less convex adsutural region; humeral denticles small but distinct; basal fovea on each elytron very small and located closer to scutellum than to humerus; elytra separately rounded. Punctures much more distinct than those on median part of pronotum but still small, sharply marked and slightly coarse; setae similar to those on pronotum but slightly longer. Hind wings long, functional.

Legs moderately slender and long, without peculiar characters.



8-11. Head modifications in fronto-dorsal view, simplified. 8 – *Cephennodes zanzibaricus* (SCHAUFUSS); 9 – *C. nsukkaensis* n. sp.; 10 – *C. atewaensis* n. sp.; 11 – *C. bundibugyoensis* n. sp. (scale bars: 0.2 mm)

Metaventrite with short, shallow and diffused postmesocoxal impressions, covered with fine and sparse but distinct punctures, slightly denser in middle than on sides.

Aedeagus (Figs. 16, 17) 0.18 mm in length, typical *simonis*-type; median lobe strongly asymmetrical with short, protruding, narrow and nearly rod-shaped apical part; apical group of projections long, in ventral view trapezoidal, with apex curved in opposite direction than apex of median lobe, in lateral view apical hook curved dorsally at distinctly obtuse angle; parameres long, each with three setae.

Female. Unknown.

TYPE MATERIAL

Holotype (male): "GHANA E.R. \ Mt. Atewa rainfor. \ R.W.Taylor, 17-20. \ x. 1968, barlesate" [white, printed]; "*CEPHENNODES* (s. str.) *atewaensis* m., det. P. JAŁOSZYŃSKI, 2009, HOLOTYPUS" [red, printed] (MHNG).

DISTRIBUTION

Southern Ghana, Eastern Region.

REMARKS

The aedeagus of *C. atewaensis* is most similar to that found in *C. zanzibaricus*, *C. basilewskyi*, and slightly also to *C. hongkongensis* and *C. papuanus* JAŁOSZYŃSKI. *Cephennodes atewaensis* is much smaller than *C. hongkongensis* and *C. papuanus*; the aedeagus of *C. basilewskyi* differs in broader and less distinctly separated apical part of the median lobe and the shape of apical projections. Differences between *C. atewaensis* and *C. zanzibaricus* are mentioned in remarks for the latter species.

***Cephennodes (Cephennodes) bundibugyoensis* n. sp.**

(Figs. 7, 11, 18, 19)

NAME DERIVATION

Locotypical, after the district and town Bundibugyo in Uganda.

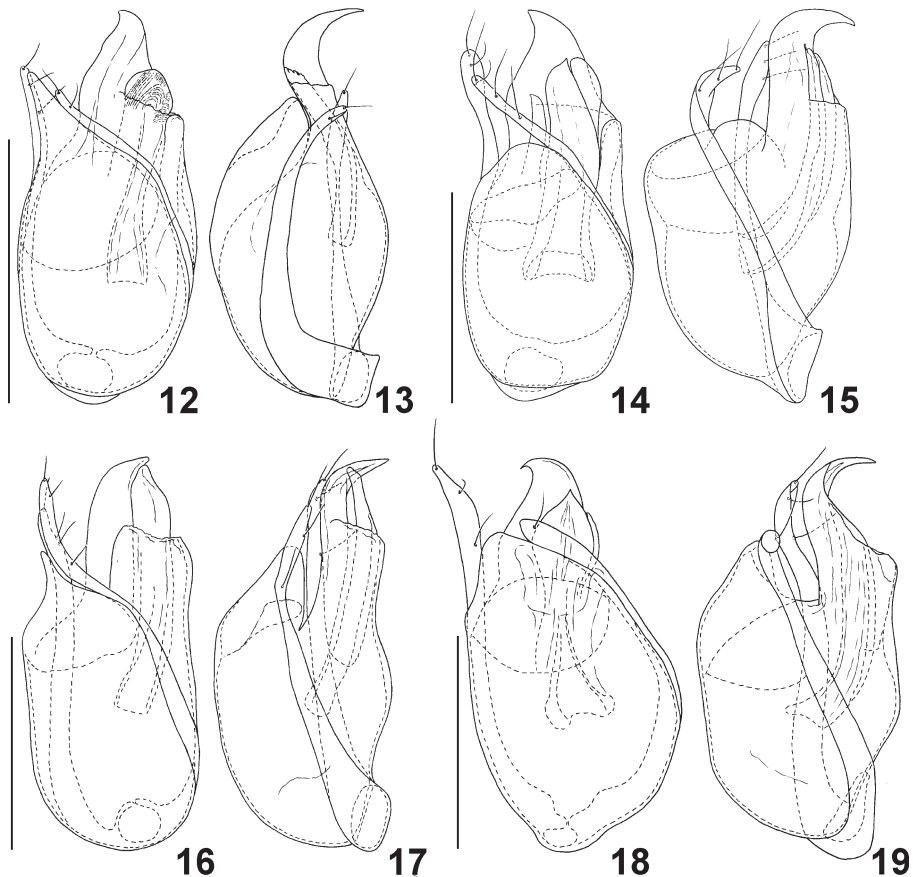
DIAGNOSIS

Males of this species differ from all congeners in having small but distinct median tubercle between frons and vertex, delimited laterally by indistinct impressions; lateral carinae of pronotum very narrowly separated from lateral margins; median lobe of aedeagus irregular in shape, with short, subtriangular and broadly rounded apex; and parameres remarkably differing in length. Females and their diagnostic characters remain unknown.

DESCRIPTION

Male (Fig. 7). Body small, oval, elongate, strongly convex, with barely marked constriction between pronotum and elytra, length 1.23 mm; pigmentation reddish-brown, vestiture lighter than cuticle. Head (Fig. 11) moderately large, broadest at large, strongly convex and coarsely faceted eyes; length 0.15 mm, width 0.28 mm; vertex

more convex in posterior part than in anterior; frons convex, with median tubercle in posterior part delimited laterally by indistinct impressions; supraantennal tubercles small, weakly raised. Punctures on vertex and frons very fine and shallow, separated by spaces about equal to puncture diameters; setae short, sparse, suberect. Antennae short, with slender proximal part of flagellum and strongly enlarged club composed of three or four terminal antennomeres (it may be subjective whether or not antennomere VIII should be included in club), length of antenna 0.43 mm; antennomere I 1.2x as long as broad; II slightly narrower than I but nearly equal in length, 1.4x as long as broad; III-IV subequal in length and width, each slightly narrower and much shorter than II, slightly broader than long; V-VI subequal in size, each as broad as IV but slightly longer, barely noticeably transverse; VII as broad as VI but slightly longer, subquadrate; VIII as long as VII but slightly broader, transverse; IX much broader and longer than VIII,



12-19. Aedeagus in ventral (12, 14, 16, 18) and lateral (13, 15, 17, 19) views. 12, 13 – *Cephennodes zanzibarius* (SCHAUFUSS); 14, 15 – *C. nsukkaensis* n. sp.; 16, 17 – *C. atewaensis* n. sp.; 18, 19 – *C. bundibugyoensis* n. sp. (scale bars: 0.1 mm)

transverse; X much broader and longer than IX, about as long as broad; XI as long as IX and X together, distinctly broader than X.

Pronotum nearly semicircular in dorsal view, broadest shortly before base, length 0.38 mm, width 0.60 mm; anterior margin broadly rounded; lateral margins in anterior half strongly rounded, in posterior half very weakly rounded, nearly straight; hind angles right and acute; posterior margin biemarginate; lateral carinae very narrowly but distinctly separated from lateral margins; lateral ante-basal foveae very small, each located slightly closer to posterior than to lateral margin of pronotum. Punctures on median part of disc very fine, shallow, unevenly distributed, separated by spaces 0.5-2x as long as puncture diameters, area near each front angle covered with more distinct and denser, but not coarse punctures; setae short, moderately dense, suberect.

Elytra oval, elongate, broadest near anterior third, moderately narrowing toward apices, length 0.70 mm, width 0.60 mm, elytral index 1.17. Subhumeral lines narrow but distinct, as long as 0.32x length of elytra, developed as sharp border between more convex humeral area and less convex adsutural region; humeral denticles small but distinct; basal fovea on each elytron moderately large and located closer to scutellum than to humerus; elytra separately rounded. Punctures more distinct than those on median part of pronotum, slightly coarse but still fine; setae similar to those on pronotum but slightly longer. Hind wings long, functional.

Legs moderately slender and long, without peculiar characters.

Metaventricle with short, shallow and diffused postmesocoxal impressions, very finely punctate, punctures on sides more distinct than in median part of ventrite.

Aedeagus (Figs. 18, 19) 0.18 mm in length, typical *simonis*-type; median lobe strongly asymmetrical with short, subtriangular and broadly rounded apical part; apical group of projections short, in ventral view subtriangular, with apex directed toward apex of median lobe, in lateral view apical hook curved dorsally at nearly right angle; parameres strongly differing in length, with three and one seta visible.

Female. Unknown.

TYPE MATERIAL

Holotype (male): "UGANDA:Ruwenzori \ above Bundibugyo \ 1300m, 21.V.1993 \ Cuccodoro&Erne # 11B" [white, printed]; "*CEPHENNODES* (s. str.) *bundibugyoensis* m., det. P. JAŁOSZYŃSKI, 2009, HOLOTYPUS" [red, printed] (MHNG).

DISTRIBUTION

Western Uganda, Rwenzori Mts. (previously spelled Ruwenzori), Bundibugyo District.

REMARKS

The slightly irregular shape of the median lobe of aedeagus, with short, subtriangular and broadly rounded apex and the parameres significantly differing in length represent a unique combination of characters and although slightly similar aedeagi are known in some Asian species, none can be confused with that of *C. bundibugyoensis*.

DISCUSSION

Previously known Afrotropical species of *Cephennodes* have been reported to occur only in the Eastafrican part of the region. Apart from *C. ruandae*, which remains problematic due to unknown aedeagus and unclear sex of the holotype, all of them shared relatively similar, simple aedeagi and non-modified heads of males (BESUCHET 1962). The species newly described in the present paper significantly broadened westwards the known range of the genus in Africa, to include the Westafrican Region, and three more countries. It is certain that *Cephennodes* inhabits the entire tropical Africa, but judging from museum collections known to the author it is much less frequent than in the Oriental Region. The currently known Afrotropical species certainly represent a very small fraction of a presumed diversity of the genus on such a vast area. However, they share the same type of the aedeagus (the *simonis*-type of JALOSZYŃSKI (2007a)) and its structures (the median lobe, apical projections and parameres) are relatively similar in all species. At the current stage of knowledge, Afrotropical *Cephennodes* must be regarded less diverse than forms known from southeastern and eastern Asia. However, several species show interesting modifications of the head, ranging from very small median tubercles on the vertex or the posterior part of the frons to large impressions occupying a major part of the frons and accompanied by tubercles and carinae. Four species with such modifications out of nine known suggest a common occurrence of such male secondary sexual structures in Afrotropical *Cephennodes*, especially when their distributions are considered. These modifications are similar to those known in some Oriental species and together with highly uniform external morphology and the aedeagi provide evidence that species inhabiting the Orientalis and Afrotropis have evolved from a common ancestor.

ACKNOWLEDGMENTS

I am greatly indebted to Dr. Lothar ZERCHE (DEI), Dr. Giulio CUCCODORO (MHNG), Dr. Wolfgang SCHAWALLER (SMNS) and Dr. Marc DE MEYER (RMCA) for issuing the loans of specimens used in this study. Dr. Roger G. BOOTH (The Natural History Museum, London, UK) provided additional information on the syntypes of *C. zanzibaricus* under his care, Dr. Sean O'KEEFE helped in finding obscure literature, and Peter HLAVÁČ kindly helped in verifying data from French texts.

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