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New species and records of Afrotropical Campopleginae (Hymenoptera: Ichneumonidae)

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Abstract – Two new Afrotropical ichneumon wasp species are described: *Casinaria latericia* Vas, sp. n. from Uganda, and *Venturia mortifera* Vas, sp. n. from Burundi. First records of *Charops ater* Szépligeti, 1908 from Burundi, *Charops electrinus* Vas, 2020 from Central African Republic, and *Charops juliannae* Vas, 2020 from Uganda are reported. With 2 figures.

Key words – *Casinaria*, *Charops*, *Venturia*, species description

INTRODUCTION

Following some recent results on the taxonomy and faunistics of Afrotropical species of *Casinaria* Holmgren, 1859, *Charops* Holmgren, 1859 and *Venturia* Schrottky, 1902 (Ichneumonidae: Campopleginae) (Vas 2020*a*, *b*, *c*), the second author provided further Afrotropical material of the above mentioned genera for examination. In the material two new species and new faunistical records were found. In this paper *Casinaria latericia* Vas, sp. n. from Uganda and *Venturia mortifera* Vas, sp. n. from Burundi are described, and first records of *Charops ater* Szépligeti, 1908 from Burundi, *Charops electrinus* Vas, 2020 from Central African Republic, and *Charops juliannae* Vas, 2020 from Uganda are reported.

Ichneumonidae taxonomy and nomenclature follow Yu & Horstmann (1997) and Yu *et al*. (2012). Morphological terminology follows Gauld (1991) and Gauld *et al*. (1997); however, in the cases of wing veins the corresponding terminology of Townes (1969) is also indicated. The material is deposited partly in the Hungarian Natural History Museum (HNHM, Budapest), partly in Università degli Studi di Roma "La Sapienza", Museo di Zoologia (MZUR, Rome), and partly in the second author's private collection (coll. FDG, Foggia). Identifications were based on Magretti (1884), Cameron (1905, 1906),

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Szépligeti (1908), Roman (1910), Cameron (1912), Enderlein (1914), Morley (1926), Seyrig (1935), Polaszek *et al.* (1994), Zwart (1998), van Noort (2019), Vas (2019*a*, *b*), Vas (2020*a*, *b*, *c*), and on checking the necessary type materials. The specimens were identified by the first author using a Nikon SMZ645 stereoscopic microscope. Taxa are listed alphabetically. Photos were taken with a 14 MP MicroQ-U3L digital camera. Post-image work was done with ToupTek ToupView v4.7 and Photoshop CS3.

RESULTS

Casinaria latericia Vas, sp. n.
(Fig. 1)

Type material – Holotype: female, Uganda, Kibale N. P., Kanyawara Bio. Station, 00°33'54.4"N, 30°21'29.8"E, 1509 m, 21–28.III.2010, leg. S. Katusabe et al., Malaise trap, specimen pinned, Id. No. HNHM-HYM 155043. – Paratypes: one female and one male, same locality and collectors, 00°33'54.1"N, 30°21'28.1"E, 1504 m, 22–29.VIII.2010 (female), 18–24.VII.2010 (male), specimens pinned, Id. No. HNHM-HYM 155044–155045, respectively. – The holotype and the paratypes are deposited in HNHM.

Diagnosis – The new species can be readily distinguished from all Afrotropical species of *Casinaria* Holmgren, 1859 by the following character states in combination: scapus and pedicellus blackish; tegula black; metasoma from third tergite orange-brown with narrow brown dorsal patches; middle leg predominantly blackish, hind leg almost entirely black; propodeum medially narrowly, strongly impressed, propodeal carinae indistinct; 2*m-cu* little proximal to middle of areolet; nervellus not intercepted.

Description – Female (Fig. 1). Body length ca 12–13 mm, fore wing length ca 9 mm.

Head: Antenna with 48–50 flagellomeres; first flagellomere long, ca 3.2–3.5× as long as its apical width; preapical flagellomeres little longer than wide to subquadrate. Head lenticular, transverse, matt, with moderately long whitish hairs. Ocular-ocellar distance about as long as ocellus diameter, posterior ocellar distance 1.5× as long as ocellus diameter. Inner eye orbits strongly indented, almost parallel. Gena granulate with indistinct punctures, very short and rather strongly narrowed behind eye. Occipital carina complete, distinctly bent out ventrally, reaching hypostomal carina at base of mandible; hypostomal carina not elevated. Frons impressed, granulate, with a rather weak, indistinct median longitudinal carina. Face and clypeus almost flat in profile, coarsely rugose, minimal width of face ca 0.7× as long as eye length; clypeus very weakly separated from face, small, its apical margin weakly convex, sharp. Malar space 0.5–0.6× as long as basal width of mandible. Mandible short, wide, lower margin with rather wide flange

from base toward teeth, flange abruptly narrowed at teeth, mandibular teeth of about equal length.

Mesosoma: Mesosoma with dense, relatively short, whitish hairs. Dorsal half of pronotum granulate-punctate, ventral half smooth to very finely granulate with strong transverse wrinkles; epomia strong. Mesoscutum coarsely rugose-punctate, convex in profile, slightly longer than wide, notaulus not developed. Scuto-scutellar groove deep and moderately wide. Scutellum coarsely rugose, wide, weakly convex in profile, medially not impressed, lateral carina basally distinct. Mesopleuron rugose-punctate with strong transverse wrinkles anterior to speculum and along dorsal half of anterior margin; speculum smooth to very finely granulate; mesopleural suture impressed with short transverse costae. Epicnemial carina complete, strong, pleural part bent to anterior margin of mesopleuron reaching it at about its middle height, transversal part (i.e. part at level of sternaulus running through epicnemium to ventral edge of pronotum) not developed, ventral part (behind fore coxae) complete, little elevated. Sternaulus indistinct. Posterior transverse carina of mesosternum complete, little elevated, medially slightly excised. Metanotum rugose-punctate, ca 0.4× as long as scutellum. Metapleuron rugose to rugose-punctate; juxtacoxal carina indistinct; submetapleural carina complete, strong. Pleural carina of propodeum strong; propodeal spiracle elongate oval, separated from pleural carina by about 0.5× its length, not connected to pleural carina by a distinct ridge. Propodeum long, its apex almost reaching middle length of hind coxa, rugose, medially narrowly, strongly impressed with transverse wrinkles; propodeal carinae indistinct. Fore wing with short-stalked, relatively large areolet, 3*rs-m* present, pigmented, second recurrent vein (2*m-cu*) little proximal to middle of areolet; distal abscissa of *Rs* straight, apical third weakly, evenly curved toward wing margin; nervulus (*cu-a*) postfurcal by ca 0.25× its length, strongly inclivous; postnervulus (abscissa of *Cu*1 between 1*m-cu* and *Cu*1a + *Cu*1b) intercepted little above its middle by *Cu*1a; lower external angle of second discal cell acute. Hind wing with nervellus (*cu-a* + abscissa of *Cu*1 between *M* and *cu-a*) about vertical, not broken, not intercepted by discoidella (distal abscissa of *Cu*1); discoidella spectral, proximally not connected to nervellus. Coxae granulate with indistinct, superficial punctures. Hind femur rather slender, ca 6.5× as long as high. Inner spur of hind tibia ca 0.7× as long as first tarsomere of hind tarsus. Tarsal claws small and short, slightly longer than arolium, basal two-third with distinct pecten.

Metasoma: Metasoma strongly compressed, finely granulate to shagreened with short, greyish to brownish hairs. First tergite long and slender, ca 6× as long as width of its apical margin, 1.2–1.3× as long as second tergite, 0.9× as long as hind femur, without glymma; dorsomedian carina of first tergite missing; postpetiolus weakly bulging. Suture separating first tergite from first sternite situated distinctly above mid-height at basal third of first metasomal segment. Second tergite long and slender, ca 3× as long as its apical width; thyridium large, deep, pear-shaped, its distance from basal margin of tergite ca 1.5× as long as its

length, connected to basal margin of tergite by weak, superficial groove. Posterior margins of third and following tergites medially slightly and widely concave. Ovipositor sheath shorter than apical depth of metasoma; ovipositor strong, straight, compressed, dorsal preapical notch distinct, lower valve narrowed before apex.

Colour: Antenna brown, scapus and pedicellus blackish. Head, including mandible, black, except palpi brownish yellow and mandibular teeth dark reddish brown. Mesosoma, including tegula, black. Metasoma: petiolus black, ventrally brownish, postpetiolus apically brownish; second tergite blackish, subapically reddish brown; following tergites orange-brown with narrow brown dorsal patches; ovipositor sheath blackish. Wings moderately infuscate, wing veins and pterostigma brown. Fore leg: coxa black, sometimes apically yellowish; trochanter and trochantellus brown, apically more or less yellowish; femur orange, ventrally dark brown; tibia dorsally pale yellowish, ventrally orange to brownish; tarsus brownish yellow, apical tarsomere brown. Middle leg: coxa black; trochanter and trochantellus black, extreme apices very narrowly brownish; femur blackish to dark brown, base and apex narrowly yellowish brown; tibia dark brown with small, indistinct basal yellowish brown spot; tarsus dark brownish. Hind leg: coxa black; trochanter and trochantellus black, extreme apices at most very narrowly brownish; femur black, base narrowly brownish; tibia blackish to dark brown, basal yellowish brown spot small, narrow, indistinct; tarsus blackish to dark brown.

Male: Similar to female in all character states described above, except: posterior margins of apical tergites straight; clasper narrow, elongate rod-like, apically slightly widened and rounded; dorsal brown patches of tergites 7–8 more extended laterally than in female; fore trochanter and trochantellus dorsally more extensively yellowish than in female.

Distribution – Uganda.

Etymology – The specific epithet *latericia* is the feminine form of the Latin adjective *latericius, -a, -um* meaning made of bricks; it refers to the brick-like orange brown colouration of the metasoma of the new species.

Remarks on identification – By using the identification key in Vas (2020*b*), the new species would run to couplet 2, but without complete match to the character states given in any half of the couplet; the new species can be easily distinguished from both species keyed out at couplet 2, namely *Casinaria crassiventris* (Cameron, 1906) and *Casinaria kittenbergeri* Vas, 2020, by the colouration of middle and hind legs and by its not intercepted, unbroken nervellus.

Fig. 1. *Casinaria latericia* Vas, sp. n., holotype. Scale bar = 1 mm (photo by Zoltán Vas)

Charops ater Szépligeti, 1908

Material – **Burundi**: Rwegura, Kibira Nat. Park, 2°53'25.9"S, 29°27'25.4"E, 2226 m, 28–30.I.2011, leg. M. Mei, P. Cerretti & D. Withmore, 1♀, deposited in MZUR.

Remarks – First record for Burundi. This species was known from Tanzania and Kenya (Szépligeti 1908, Seyrig 1935, Vas 2020*a*).

Charops electrinus Vas, 2020

Material – **Central African Republic**: Bamingui-Bangoran Pr., 75 km SSW Ndele, 450 m, 8–12.VII.2011, leg. A. Kudrna Jr., 1♀, deposited in HNHM.

Remarks – First record for Central African Republic. This species was recently described from Uganda (Vas 2020*a*). As compared to the holotype of the species, this specimen has slightly darker, brownish yellow tegula (tegula of the holotype is pale yellow).

Charops juliannae Vas, 2020

Material – **Uganda**: Kibale N. P., Kanyawara Bio. Station, 00°33'54.4"N, 30°21'29.8"E, 1509 m, 7.III.–18.VII.2010, leg. S. Katusabe et al., Malaise trap, 11♀, of which 8♀ are deposited in HNHM and 3♀ in coll. FDG; same locality and collectors, 00°33'54.1"N, 30°21'28.1"E, 1504 m, 18–24.VII.2010, 1♀, deposited in HNHM.

Remarks – First records for Uganda. This species was recently described from Tanzania (Vas 2020*a*).

Venturia mortifera Vas, sp. n.
(Fig. 2)

Type material – Holotype: female, Burundi, Rwegura, Kibira Nat. Park, 2°53'25.9"S, 29°27'25.4"E, 2226 m, 28–30.I.2011, leg. M. Mei, P. Cerretti & D. Whitmore, specimen pinned, tips of both antennae missing. – The holotype is deposited in MZUR.

Diagnosis – The new species can be readily distinguished from all known *Venturia* species by its unique habitus, showing the character combination of entirely black colouration, strongly infuscate, brownish wings, weak to obsolescent propodeal carination, long ovipositor sheath (ca 2.4× as long as hind tibia), and large size (body length ca 14 mm).

Description – Female (Fig. 2). Body length ca 14 mm, fore wing length ca 9 mm.

Head: First flagellomere long, ca 3.7× as long as its apical width; preapical flagellomeres slightly longer than wide to quadrate. Head transverse, matt, with dense, short, whitish hairs. Ocular-ocellar distance 1.3–1.4× as long as ocellus diameter, posterior ocellar distance 1.4× as long as ocellus diameter. Inner eye orbits weakly indented, about parallel. Gena granulate to weakly rugose with distinct, dense punctures, moderately short, in dorsal view 0.5× as long as eye width, distinctly narrowed behind eye. Occipital carina complete, medially evenly arched, reaching hypostomal carina little before base of mandible; hypostomal carina not elevated. Frons flat, rugose-punctate, without median longitudinal

carina. Face and clypeus almost flat in profile, rugose-punctate with strong punctures; clypeus relatively wide, its apical margin weakly convex, sharp. Malar space 0.5× as long as basal width of mandible. Mandible relatively long, lower margin with a relatively narrow carina from base toward teeth, carina gradually narrowed toward teeth, mandibular teeth of about equal length.

Mesosoma: Mesosoma with dense, short, whitish hairs, matt, rugose-punctate with dense and distinct to strong punctures, propodeum more strongly rugose and less distinctly punctate than other parts of mesosoma. Pronotum without distinct transverse wrinkles; epomia rather weak. Mesoscutum convex in profile, little longer than wide, notaulus not developed. Scuto-scutellar groove wide, deep. Scutellum convex, lateral carina indistinct. Speculum matt, granulate; mesopleural suture impressed with short, relatively weak transverse costae. Epicnemial carina complete, strong, pleural part bent to anterior margin of mesopleuron reaching it below its middle height, transversal part (i.e. part at level of sternaulus running through epicnemium to ventral edge of pronotum) not developed, ventral part (behind fore coxae) complete, not elevated. Sternaulus indistinct. Posterior transverse carina of mesosternum complete, slightly elevated, medially not excised. Metanotum ca 0.5× as long as scutellum. Metapleuron with juxtacoxal carina indistinct, submetapleural carina complete, strong. Pleural carina of propodeum strong; propodeal spiracle elongate oval, separated from pleural carina by ca 0.7× its length, not connected to pleural carina by a distinct ridge. Propodeum rather long, its apex reaching little beyond middle length of hind coxa, medially flattened, very slightly impressed, area superomedia and area petiolaris with distinct transverse wrinkles and rugosity. Area basalis short trapezoidal, ca 0.6× as long as its basal width; area superomedia hexagonal, long and narrow, ca 3× as long as wide, reaching up to about basal 0.6× length of propodeum, apically opened, confluent with area petiolaris; area petiolaris narrow. Propodeal carinae weak on basal half of propodeum, faint to obsolescent on apical half. Fore wing with relatively large, subsessile areolet, 3*rs-m* present, pigmented, second recurrent vein (2*m-cu*) distal to middle of areolet, little closer to middle of areolet than to its distal apex; distal abscissa of *Rs* straight, its extreme distal part slightly bent toward wing margin; nervulus (*cu-a*) postfurcal, weakly inclivous; postnervulus (abscissa of *Cu*1 between 1*m-cu* and *Cu*1a + *Cu*1b) intercepted little above its middle by *Cu*1a; lower external angle of second discal cell acute. Hind wing with nervellus (*cu-a* + abscissa of *Cu*1 between *M* and *cu-a*) broken, intercepted by discoidella (distal abscissa of *Cu*1) at about posterior third of its length, inclivous above discoidella, reclivous below discoidella; discoidella spectral, proximally connected to nervellus. Coxae granulate with dense punctures. Hind femur long and slender, ca 6× as long as high. Inner spur of hind tibia ca 0.45× as long as first tarsomere of hind tarsus. Tarsal claws slightly longer than arolium, basal half with strong pecten.

Metasoma: Metasoma with short, whitish and greyish hairs, compressed, petiolus smooth, metasoma from postpetiolus granulate to shagreened. First

tergite ca 6× as long as width of its apical margin, ca 1.1× as long as second tergite, ca 0.9× as long as hind femur; dorsomedian carina of first tergite missing; glymma not developed; postpetiolus moderately bulging. Suture separating first tergite from first sternite situated at about mid-height at basal third of first metasomal segment. Second tergite long and slender, ca 2.4× as long as its apical width; thyridium small, oval, its distance from basal margin of tergite ca 4× as long as its length, connected to basal margin of tergite by a weak, rather shallow groove. Posterior margins of apical tergites medially distinctly excised. Ovipositor sheath long, 2.4× as long as hind tibia; ovipositor compressed, shaft slightly, tip rather strongly upcurved, dorsal preapical notch weak.

Colour: Black. Wings strongly infuscate, brownish, wing veins and pterostigma blackish.

Male: Unknown.

Distribution – Burundi.

Etymology – The specific epithet *mortifera* is the feminine form of the Latin adjective *mortifer, -a, -um* meaning deadly, death-bringing; it refers to formidable, dark and fierce habitus of the new species.

Fig. 2. *Venturia mortifera* Vas, sp. n., holotype. Scale bar = 1 mm (photo by Zoltán Vas)

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