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Two new species of *Macropsis* Lewis, 1836 (Homoptera: Auchenorrhyncha: Cicadellidae: Eurymelinae: Macropsini) of the *M. simplex* Jacobi, 1910 species group from Uganda

Два новых вида *Macropsis* Lewis, 1836 (Homoptera: Auchenorrhyncha: Cicadellidae: Eurymelinae: Macropsini) группы *M. simplex* Jacobi, 1910 из Уганды

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KEY WORDS: Homoptera, Auchenorrhyncha, Cicadellidae, Macropsini, *Macropsis*, new species, Uganda, Africa.

КЛЮЧЕВЫЕ СЛОВА: Homoptera, Auchenorrhyncha, Cicadellidae, Macropsini, *Macropsis*, новые виды, Уганда, Африка.

ABSTRACT. *Macropsis semuliki* Tishechkin, **sp.n.** and *M. ugandica* Tishechkin, **sp.n.** from Uganda are described and illustrated. Both species belong to the *M. simplex* Jacobi, 1910 species group.

РЕЗЮМЕ. Приведены иллюстрированные описания *Macropsis semuliki* Tishechkin, **sp.n.** и *M. ugandica* Tishechkin, **sp.n.** из Уганды. Оба вида относятся к группе *M. simplex* Jacobi, 1910.

Introduction

Most data on Macropsini (Homoptera: Auchenorrhyncha: Cicadellidae: Eurymelinae) from tropical Africa (Ethiopian Region) were summarized in the revision of Linnavuori [1978]. He listed from this region 29 species of *Macropsis*, one species of *Tsavopsis* Linnavuori, 1978, two species of *Ruandopsis* Linnavuori, 1978, four species of *Kiamoncopsis* Linnavuori, 1978, and one species of *Asmaropsis* Linnavuori, 1978.

Hamilton [1980] synonymized the genus *Tsavopsis* with *Macropsis* and *Asmaropsis* with *Hephathus* Ribaut, 1952; also, he lowered the rank of *Kiamoncopsis* to the subgenus of *Pediopsoides* Matsumura, 1912. Later we excluded all extra-Palearctic species from *Hephathus* and thus restored *Asmaropsis* from synonymy [Tishechkin, 2015]. As a result, Macropsini of tropical Africa currently include four genera, *Macropsis, Asmaropsis, Pediopsoides* (*Kiamoncopsis*), and *Ruandopsis*.

Linnavuori [1978] classified the African species of *Macropsis* into seven groups. The *M. nigraflavida* Evans, 1955 group is monotypic; the *M. chlorotica* Linnavuori, 1978 group, the *M. myrmecophila* Linnavuori, 1978 group, the *M. aristogeiton* Linnavuori, 1978 group, and the *M. turneri* China, 1925 group include two species each. The remaining two groups, the *M. simplex* Jacobi, 1910 group and the *M. minuscula* Linnavuori, 1978 group, are the largest and include seven and 12 species, respectively. The position of one species is uncertain.

Later, the number of species in some groups changed. Theron [1980] established a synonymy *M. pondoensis* China, 1925 = *M. octopunctata* China, 1925 in the *M. minuscula* group. Recently we included *M. tuberculata* (Linnavuori, 1978) originally described in the genus *Tsavopsis* into the *M. turneri* group and described two species from the *M. minuscula* group, one species from the *M. simplex* group, and one species from the *M. chlorotica* group from the vicinity of Ambo, Ethiopia [Tishechkin, 2019]. Thus, the number of known African species is currently 33.

We hypothesized that the most part of African *Macropsis* species represent a separate lineage that shifted to Fabaceae of the subfamily Mimosoideae (*Acacia* Mill., 1754, *Albizia* Durazz., 1772) and demonstrated explosive radiation on *Acacia* in tropical Africa; at present, members of this lineage are also known from India and the Arabian Peninsula [Dlabola, 1979; Tishechkin, 2017, 2019; Viraktamath, Yeshwanth, 2021]. Ac-

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cording to Ross [1981], in Africa, the genus *Acacia* includes 115 species from two subgenera and reaches its maximum diversity in the eastern part of this continent. For this reason, descriptions of new species of *Macropsis* from tropical Africa are highly probable.

Due to the courtesy of Dr. V.M. Gnezdilov (Zoological Institute of Russian Academy of Sciences, St. Petersburg, Russia), we were able to study material on two new *Macropsis* species of the *M. simplex* group from Uganda. Descriptions of these species are given below.

Material and methods

The abdomens of specimens examined were macerated in 10% KOH. Digital images of the male abdominal apodemes and genitalia and of ovipositors were obtained with a Micromed 3 LED M microscope equipped with a MIchrome 5 Pro camera (Tucsen).

The type specimens of species described below are deposited in the collection of the Zoological Institute of Russian Academy of Sciences, St. Petersburg, Russia (ZIN).

Results

The *M. simplex* group includes species with numerous dark speckles on head, pro- and mesonotum, and on the forewings. In this respect, members of this group are similar to oak-dwelling species of *Macropsis* from southeastern Palearctic, but differ from them in the absence of tufts of setae in lateral corners of the male 8th sternite and in the simple spine-like pygofer processes (usually expanded, dentified, or modified in some other way in oak-dwelling species) [Li et al., 2014].

Macropsis semuliki Tishechkin, **sp.n.**
Figs 1–5, 8–11, 13–17, 20–22, 24.

MATERIAL. Holotype, ♂: Uganda, western part, Bundibugyo Distr., 500 m, environs of Semuliki N.P. forest, 12–14.III.2020, A.V. Gorochov & G. Irisov; paratypes: 2 ♂♂, 2 ♀♀, same locality, date, and collectors, one male lacks head and pronotum (ZIN). 2 ♂♂ and 1 ♀ dissected.

DESCRIPTION. Greenish yellow with rather sparse brown speckles (Figs 1–4). Face usually unmarked or with single brown speckles (Fig. 5), only in one male with numerous speckles. Mesonotum with dark triangles in lateral angles. Proepimeron unmarked. Forewings semi-transparent, with brown speckles concentrated mainly on clavus, along costal margins, around proximal parts of subapical cells, and in apical part. Some transverse veins brown.

Apex of crown and anterior margin of pronotum sharply angular; crown in dorsal view in middle somewhat shorter than next to eyes. Face sometimes with weakly developed longitudinal median keel in apical half, pronotum always with distinct median keel, keel on mesonotum usually indistinct. In one male, pronotum more convex than in all other specimens, but in other traits it does not differ from them (Fig. 1).

Male abdominal apodemes of 2nd tergite short, with very broad triangular lobes separated by wide v-shaped notch (Figs 8–9). Sternal apodemes triangular with narrow tips and, sometimes, with small projections at base on inner margins, slightly converging, separated by wide more or less rounded notch (Figs 10–11). Penis in lateral view rather wide, evenly tapering apically, with small lobes on each side of apex (Figs 13–15). Styles with strongly expanded clavate rounded tips (Figs 16–17). Similarly to some other African species (e. g., *M. hippodameia* Linnavuori, 1978, *M. nikippa* Tishechkin, 2019, *M. antibia* Tishechkin, 2019), pygofer lobes with strongly sclerotized ribs along back margins (Figs 20–22). Pygofer appendages rather wide, somewhat expanded in basal parts and diverging in distal halves in back view (Fig. 20); spine-like, straight in distal two-thirds in lateral view (Figs 21–22).

Similarly to most other members of the *M. simplex* species group, 2nd valvulae of ovipositor fused, with four preapical teeth visible; proximal tooth largest and separated from others by wide notch (Fig. 24).

Body length (including forewings): ♂, 4.2–4.4 mm; ♀, 4.8 mm.

COMPARISON WITH RELATED SPECIES. The *M. simplex* group includes eight species.

M. semuliki **sp.n.** is much smaller than *M. gigas* Linnavuori, 1978*, M. lamellaris* Linnavuori, 1978, and *M. bakeri* Linnavuori, 1978. It also differs from *M. bakeri* in the shape of the preapical teeth on the 2nd valvulae of ovipositor and in the position of the proximal denticle, which is situated apart from the others (situated close to others in *M. bakeri*).

M. chinai Metcalf, 1966 differs from *M. semuliki* **sp.n.** by wider and more convex pronotum and in bluntly angular apex of crown and of anterior margin of pronotum. In coloration, it differs from *M. semuliki* **sp.n.** by denser speckles on body and the forewings and by the presence of dark spots on the face.

M. capensis (Cogan, 1916) has bluntly angular apex of crown and anterior margin of pronotum and 7–9 closely spaced preapical denticles on the 2nd valvulae of ovipositor *vs.* 3 such denticles in *M. semuliki* **sp.n.** In addition, *M. capensis* was collected from *Myrica cordifolia* L. (Myricaceae) whose range is limited to South Africa [Theron, 1970].

M. semuliki **sp.n.** differs from *M. kanongensis* Evans, 1955 in rounded style tips (acute in *M. kanongensis*, Fig. 18) and straight pygofer appendage in lateral view (bent backwards in apical half in *M. kanongensis*, Fig. 23).

Differs from *M. tincta* Tishechkin, 2019 in sharply angular apex of crown and of anterior margin of pronotum (more rounded in *M. tincta*, Fig. 29), short and wide triangular 2nd tergal apodemes (rather long, more or less rectangular, separated by narrow round notch in *M. tincta*, Fig. 12), and coloration.

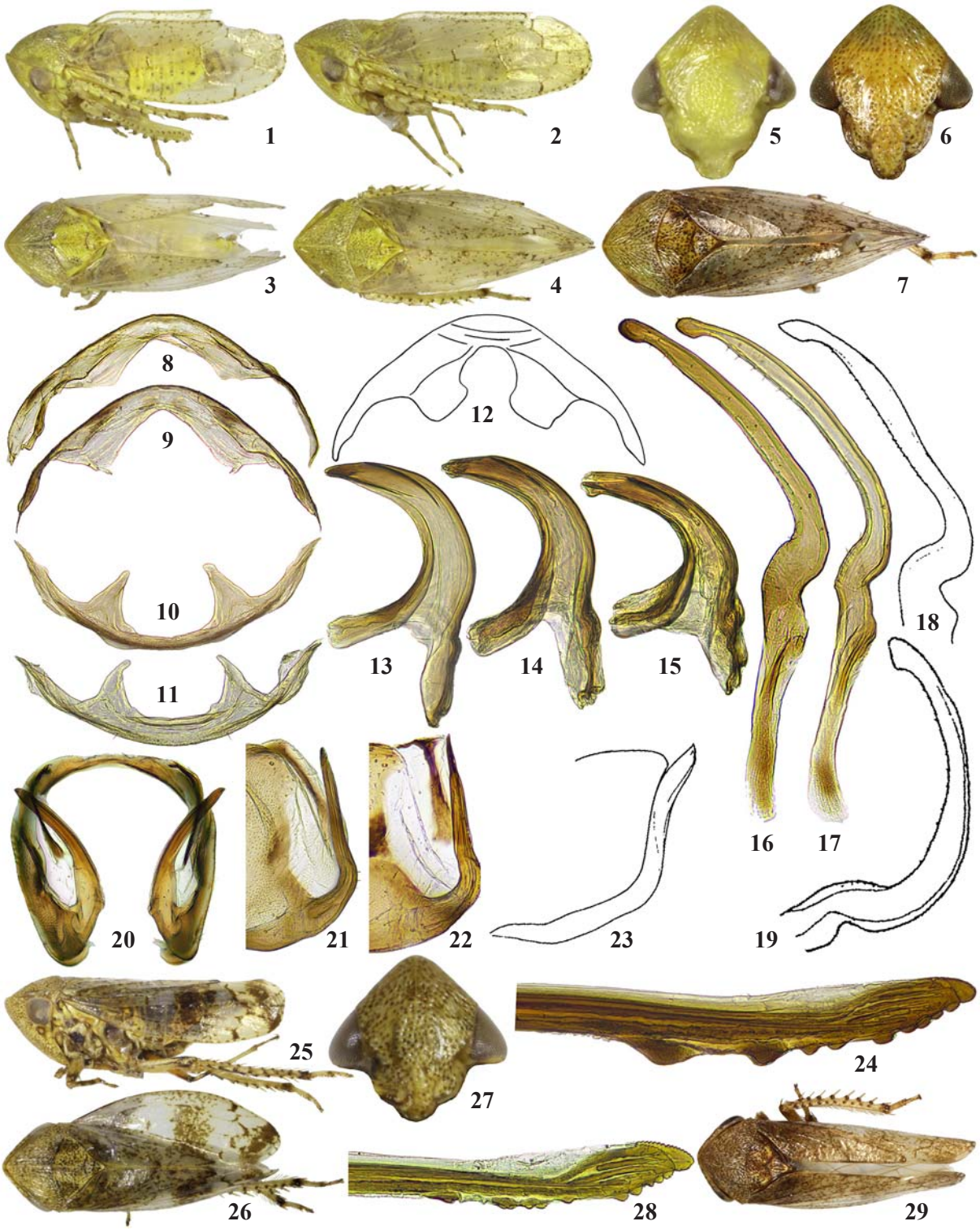
Differs from *M. simplex* in lighter coloration with distinct greenish tinge and sparse brown speckles (with dense speckles and only rarely with slight greenish tinge in *M. simplex*, Figs 6–7) and in rounded style tips (more acute with straight inner margins of tips in *M. simplex*, Fig. 19).

ETYMOLOGY. The name of the new species is the name of the national park near which it was collected.

Macropsis ugandica Tishechkin, **sp.n.**
Figs 25–28.

MATERIAL. Holotype, ♀: Uganda, western part, Bundibugyo Distr., 500 m, environs of Semuliki N.P. forest, 12–14.III.2020, A.V. Gorochov & G. Irisov; paratype, 1 ♀, same locality, date, and collectors (ZIN). 1 ♀ dissected.

DESCRIPTION. Light yellowish brown with dense dark speckles on face, pro-, and mesonotum (Figs 25–27). Mesonotum with dark triangles in lateral angles. Proepimeron



Figs 1–29. *Macropsis* spp.: 1–5, 8–11, 13–17, 20–22, 24 — *M. semuliki* **sp.n.**; 6–7, 19 — *M. simplex*; 12, 29 — *M. tincta*; 18, 23 — *M. kanongensis*; 25–28 — *M. ugandica* **sp.n.** 1 — male, lateral habitus; 2, 25 — same, female; 3, 29 — male, dorsal habitus; 4, 7, 26 — same, female; 5–6, 27 — face; 8–9, 12 — male abdominal apodemes of the 2nd tergite; 10–11 — the 2nd sternite; 13–14 — penis, lateral view; 15 — same, lateral and dorsal view; 16–19 — style; 20 — pygofer, caudal view; 21–23 — pygofer lobe and process, lateral view; 24, 28 — fused 2nd valvulae of ovipositor; 6–7, 12, 29 — after Tishechkin [2019]; 18–19, 23 — after Linnavuori [1978].

Рис. 1–29. *Macropsis* spp.: 1–5, 8–11, 13–17, 20–22, 24 — *M. semuliki* **sp.n.**; 6–7, 19 — *M. simplex*; 12, 29 — *M. tincta*; 18, 23 — *M. kanongensis*; 25–28 — *M. ugandica* **sp.n.** 1 — самец, внешний вид сбоку; 2, 25 — то же, самка; 3, 29 — самец, внешний вид сверху; 4, 7, 26 — то же, самка; 5–6, 27 — лицо; 8–9, 12 — аподемы второго брюшного тергита самца; 10–11 — аподемы второго стернита; 13–14 — пенис, сбоку; 15 — то же, сбоку и сверху; 16–19 — стилус; 20 — пигофор, сзади; 21–23 — доля пигофора и отросток, сбоку; 24, 28 — сросшиеся вторые створки яйцеклада; 6–7, 12, 29 — по Tishechkin [2019]; 18–19, 23 — по Linnavuori [1978].

with small black spot. Forewings fairly shiny, transparent, with dense brown speckles partially merged with each other around proximal parts of subapical cells and in apical part. Areas at the level of middle of forewing and before apex almost entirely unspotted and form two more or less distinct transparent transverse stripes.

Apex of crown and anterior margin of pronotum sharply angular; crown in dorsal view in middle of same length or somewhat shorter than next to eyes. Face with weakly developed longitudinal median keel in apical half, pronotum always with distinct median keel, keel on mesonotum absent.

2nd valvulae of ovipositor fused, each with 3–4 preapical teeth situated close to each other and with one proximal tooth separated from others by wide notch (Fig. 28).

Body length (including forewings): ♀, 4.0–4.1 mm.

COMPARISON WITH RELATED SPECIES. Very small species. Differs from all seven species from the *M. simplex* group listed in Linnavuori [1978] by smaller size. Differs from *M. tincta*, which is similar in size, in more sharply angular apex of crown and anterior margin of pronotum, shiny forewings, and dark pattern (Figs 25–26 and 29). Differs from *M. semuliki* **sp.n.** in coloration and somewhat smaller size.

ETYMOLOGY. Species name derives from the name of the country, Uganda, where it was collected.

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