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## Katydids of the genus *Ewanella* and of the subgenus *Megalotheca* (Orthoptera: Tettigoniidae)

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### ABSTRACT

Katydids of the genus *Ewanella* Naskrecki (Mecopodinae) and stick-like katydids of the genus *Conocephalus* Thunberg (Conocephalinae) are reviewed. The latter representatives are included in the subgenus *Megalotheca* Karny, stat. n., which was formerly considered a separate genus but is here reduced to a subgenus of *Conocephalus*. Three new species from South Africa are described: *E. breviscula* sp. n., *C. (M.) namibius* sp. n., and *C. (M.) zlobini* sp. n. Identification keys to all species of *Ewanella* and *Megalotheca* are given.

**KEY WORDS:** Orthoptera, Tettigoniidae, Mecopodinae, Conocephalinae, *Ewanella*, *Conocephalus* (*Megalotheca*), new species, Africa, Madagascar, identification keys.

### INTRODUCTION

The status of both the superspecies taxa of katydids considered herein has been unclear until now. The genus *Ewanella* Naskrecki, 1994 (Mecopodinae: Aprosphylini) was described for a single species which resembles a small specialized species of the genus *Aprosphyllus* Pictet, 1888. Following the author of *Ewanella* (Naskrecki 1994: 283), the differences between these genera are in size, coloration, and pronotal length only. The discovery of a second species of *Ewanella* provides support for Naskrecki's idea of the separation of *Ewanella* from *Aprosphyllus*.

The former genus *Megalotheca* Karny, 1907 was considered to be closely related to the genus *Conocephalus* Thunberg, 1815 (Conocephalinae: Conocephalini) by Uvarov (1928). Gorochov and Llorente (2004) concluded that some species included by previous authors in *Megalotheca* are specialized stick-like representatives of *Conocephalus*. The latter authors considered that the position of the *Megalotheca* type species and some species related to it is unclear as their male cerci are very different from those of *Conocephalus*, and their male genitalia are unknown. The discovery of a new species with an intermediate structure of the male cerci and with *Conocephalus*-like male genitalia forces us to include all these specialized stick-like species in *Megalotheca* and to consider this a subgenus of *Conocephalus*.

Study material is housed in the following collections: Natal Museum, Pietermaritzburg (NMSA); Zoological Institute, Russian Academy of Sciences, St Petersburg (ZIAS).

### TAXONOMY

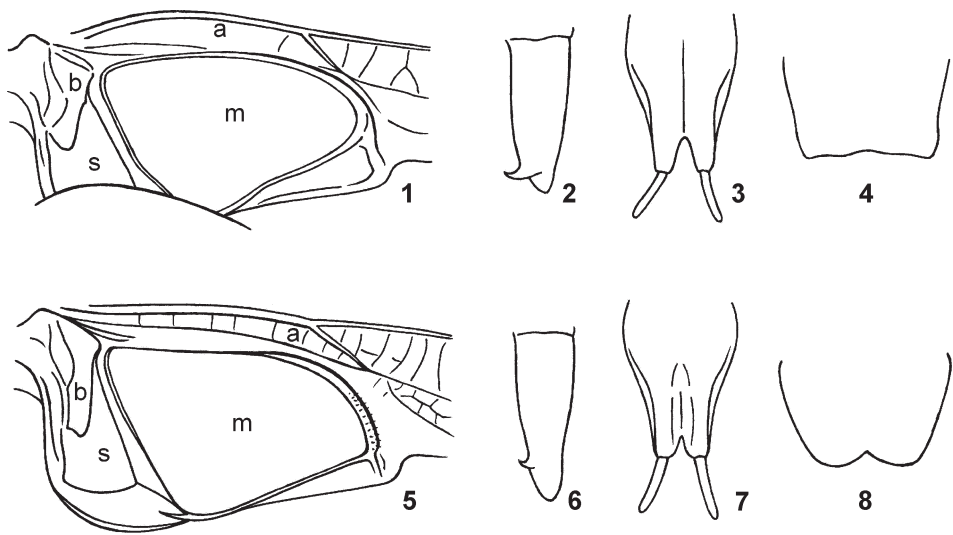
Subfamily Mecopodinae Brunner-Wattenwyl, 1878

Tribe Aprosphylini Naskrecki, 1994

Genus *Ewanella* Naskrecki, 1994

Type species: *E. longipes* Naskrecki, 1994 (South Africa: Richtersveld).

Remarks: This genus differs from the most similar genus *Aprosphyllus* Pictet, 1888 in the characters previously indicated by Naskrecki (smaller size, less spotted coloration of wings, shorter pronotum), but mainly in: the almost complete absence of a hind lobe



Figs 1–8. Species of *Ewanella*: (1–4) *E. longipes* [after Naskrecki (1994) and Eades & Otte (2009)], stridulatory apparatus of male right tegmen (1), male cercus ventrally (2), male genital plate ventrally (3), female genital plate ventrally (4); (5–8) *E. breviscula* sp. n., stridulatory apparatus of male right tegmen (5), male cercus ventrally (6), male genital plate ventrally (7), female genital plate ventrally (8). Abbreviations: (a) area between M and CuA, (b) area between place of basal articulation and sclerite 's', (m) mirror, (s) thick sclerite of basal part.

of the pronotum (which covers small basal areas of the tegmina in *Aprosphyllus*); characteristic tegmina distinctly narrowing in the distal half (in *Aprosphyllus*, tegmina with the distal half and proximal half of almost equal width, except for a widened region of the male stridulatory apparatus); a distinctly inflated proximal half of the middle tibiae; the presence of 2 pairs of small spines at the apex of the hind femora (in *Aprosphyllus*, these femora have only a ventral pair of apical spines); and a more or less truncate or notched hind part of the female genital plate (in *Aprosphyllus*, this plate is triangular).

Species included: Type species and *E. breviscula* sp. n.

Key to species of *Ewanella*

- 1 Male tegmina longer (ratio tegmen/hind femur about 0.95); mirror in stridulatory apparatus of lower (right) tegmen of male with convex lateral edge and narrower distal part (Fig. 1: m); stridulatory vein of upper (left) tegmen of male with about 46 stridulatory teeth; male cerci with longer hook situated near cercal apex (Fig. 2); male genital plate with deep apical notch (Fig. 3). Female genital plate with almost truncate hind part (Fig. 4) ..... ***E. longipes*** Naskrecki, 1994
- Male tegmina shorter (ratio tegmen/hind femur 0.75–0.8); mirror in stridulatory apparatus of lower (right) tegmen of male with straight lateral edge and wider distal part (Fig. 5: m); stridulatory vein of upper (left) tegmen of male with 37–41 stridulatory teeth; male cerci with shorter hook situated somewhat farther from cercal apex (Fig. 6); male genital plate with less deep apical notch (Fig. 7). Female genital plate distally rounded and with distinct apical notch (Fig. 8) ..... ***E. breviscula*** sp. n.

***Ewanella breviscula* sp. n.**

Figs 5–9

Etymology: From Latin *breviusculus* (slightly shortened).

Description:

*Male.*

Coloration distinctly spotted (almost as in Fig. 9), yellowish with following marks: head with a pair of small light brown spots under antennal cavities, a pair of similar spots on upper part of clypeus, 2 or 3 pairs of similar spots on genae, a pair of brownish grey stripes along dorsal edge of antennal cavities, a small brown spot on dorsal part of rostral base, brown or light brown marks of different shape and size on hind part of vertex, brownish apical ring on each scape, brownish on majority of segments of antennal flagellum (these segments with yellowish basal ring); pronotum with mostly brown or dark brown pronotal edges, a pair of small to rather large brownish spots on anterior part of disc, a few brown or dark brown vertical lines on lateral lobes, and a rather large light brown spot or a few such spots on each of lateral lobes behind these lines; legs with 3 brown bands on fore and middle femora, an additional dark brown spot at base of each middle femur, brown reticular ornament on outer surface of proximal half of hind femora, several large brownish spots on dorsal part of these femora, 2 brown bands on fore tibiae and 3 on middle tibiae, light brown area on distal part of hind tibiae, dark brown 3<sup>rd</sup> and sometimes 2<sup>nd</sup> segments of fore and middle tarsi, brown or brownish on most of hind tarsal venter, and dark brown base of 3<sup>rd</sup> segment of hind tarsi and apex of its pulvilli; tegmina with 4 or 5 large brown or brownish spots in costal area (spots crossed by light crossveins), 3 or 4 such spots at interradiar area, 4 or 5 similar spots at medial area, 2 at radial area (at its distal part), light brown membranes between crossveins of proximal and middle parts of this area, brown on majority of membranes between M and CuA (before MP+CuA1 anastomosis) and along anal edge of tegmina, transparent stridulatory areas of lower tegmen, and brownish thick sclerite at basal part of this tegmen; hind wings with transparent membranes, dark brown longitudinal veins, and almost whitish crossveins; abdomen with weakly distinct brownish spots on tergites.

Rostrum very narrow and with slight dorsal notch near apex; lamellar lobes of medial edges of antennal cavities large, angular, almost reaching rostral apex; these lobes hardly wider than this apex and 5 times narrower than scape; eyes large (width of each eye almost equal to distance between them). Pronotum with hind edge oblique in profile (slightly more oblique than that of *E. longipes*; see Naskrecki 1994, fig. 17). All femora with 2 pairs of small apical spines and a few small ventral spines situated on inner keel in fore legs, outer keel in middle legs, and both keels in hind legs (spines of hind femora distinctly larger than those of other femora); fore and middle tibiae with 2 rows of small numerous ventral spines (including apical ones) and 2 rows of a few similar dorsal spines (these spines developed in proximal and distal parts of tibiae, but apical ones developed only on outer side in fore tibiae (1 spine) and on inner side in middle tibiae (1 spine); sometimes latter spine absent); hind tibiae with 2 rows of small numerous ventral spines (developed only in distal half) and 2 rows of hardly larger numerous dorsal spines situated in both halves except for small proximal and small distal parts of these tibiae (ventral apical spines of these tibiae distinctly larger than all other spines of legs, inner one almost twice as large as outer one); hind tarsi with a pair of rather

large plantulae slightly longer than half of hind basitarsus. Wings slightly shortened, distinctly not reaching hind femoral apex (ratio tegmen/hind femur 0.75–0.8); distal part of tegmen almost twice as narrow as widest part of proximal half (except in region of stridulatory apparatus); tegminal apex narrowly rounded; tegminal subcostal area almost without crossveins; tegminal R with 2 branches in distal third; area between tegminal M and CuA narrow (Fig. 5: a); area between place of basal articulation of lower tegmen and thick sclerite of its basal part (Fig. 5: b) rather wide (distinctly wider than in *E. longipes*; Fig. 1: b); this sclerite characteristic in shape (for comparison see Figs 1 and 5: s); mirror of lower tegmen (Fig. 5: m) with thin and straight lateral edge, almost angular posteromedial corner and distinctly thickened and widely rounded hind edge provided with very small setae; area between hind part of this mirror and medial (anal) edge of tegmen narrow (distinctly narrower than in *E. longipes*; see Figs 1 and 5); stridulatory vein of upper tegmen with 37–41 (37 in holotype) normal darkened teeth; length of this darkened stridulatory file 0.85–0.9 mm. Apical part of hind wings slightly or hardly exposed behind tegmina in rest position. Cerci and genital plate as in Figs 6, 7.

#### *Female.*

Coloration and structure of body similar to those of male, but pronotal disc with brownish marks on hind half, darkened tegminal spots somewhat larger and partly fused with each other, and wings slightly longer (ratio tegmen/hind femur 0.9–0.95) (Fig. 9). Genital plate with rounded posterolateral corners and distinct, almost angular apical notch (Fig. 8); ovipositor 0.6–0.7 times shorter than hind femur, hardly curved upwards, and with gradually narrowing distal part having numerous small denticles on dorsal and ventral edges, small tubercles on both lateral surfaces, and acute apex.

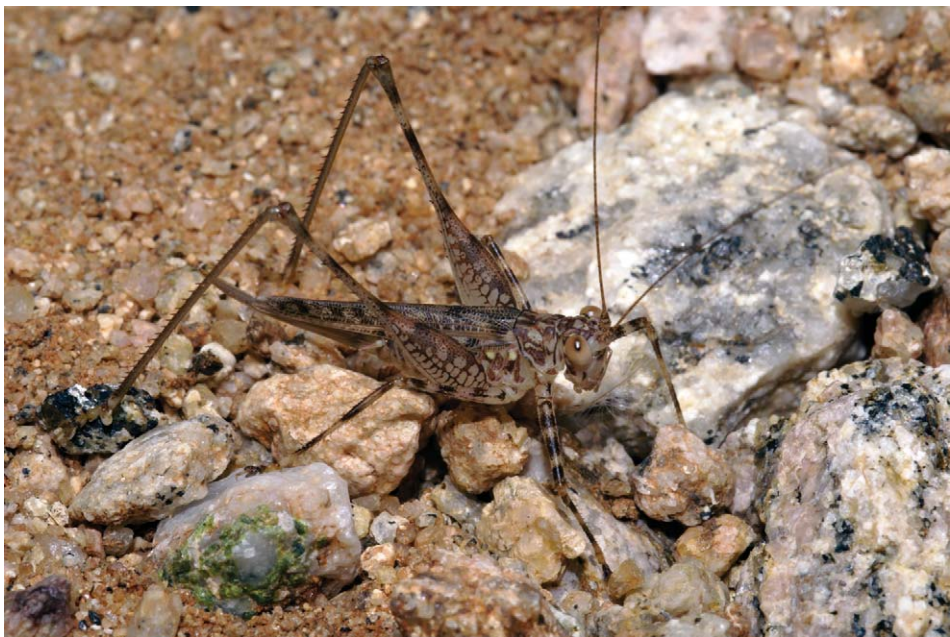


Fig. 9. Female of *Ewanella breviscula* sp. n. in living condition. (Photo courtesy A. Sochivko)





Fig. 10. Type locality of *Ewanella breviscula* sp. n. (Photo courtesy A. Sochivko)

*Length* (mm): Body: ♂ 13–15, ♀ 14–17; body with wings: ♂ 18–19.5, ♀ 23–25; pronotum: ♂ 2.7–2.9, ♀ 3.2–3.5; tegmen: ♂ 13–14, ♀ 17.5–19; hind femur: ♂ 16.5–18, ♀ 19–21; ovipositor 11.5–14.

Holotype: ♂ SOUTH AFRICA: Northern Cape, about 80 km WWS of Upington [28°30'S;20°31'E], Augrabies National Park, 300–400 m, semidesert nr Orange R. (Fig. 10), on succulent bush, at night, 5–6.i.2008, A. Gorochov & A. Sotshivko (NMSA).

Paratypes: 4 ♂ 5 ♀ same data as holotype (ZIAS, NMSA), but 2 specimens collected on ground (Fig. 9).

**Comparison:** The differences between the new species and *E. longipes* are given in the key. It is necessary to add that the males of *E. breviscula* are distinctly more spotted than the holotype of *E. longipes* (only one male is known in this species), and that females of these species are distinguished from each other only by the shape of the genital plate.

Subfamily Conocephalinae Kirby et Spence, 1826

Tribe Conocephalini Kirby et Spence, 1826

Genus *Conocephalus* Thunberg, 1815

Subgenus *Megalotheca* Karny, 1907, **stat. n.**

Type species: *M. vaginalis* Karny, 1907 (South Africa: Cape of Good Hope).

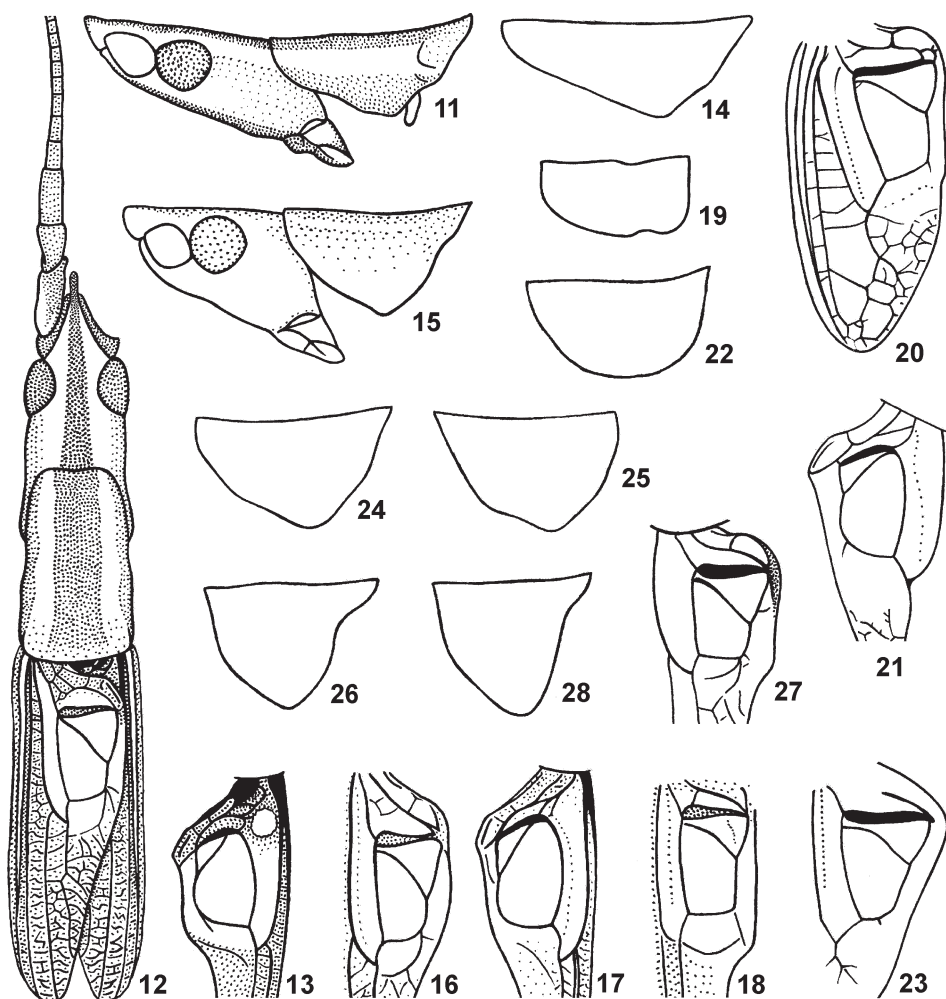
**Remarks:** This subgenus is similar to *Conocephalus* s. str. (the genus *Conocephalus* is divided into several subgenera by some previous authors, but many of them are possibly only groups of the same subgenus, as they are very similar to each other) in: the shape of the head rostrum in profile (with dorsal and ventral rostral tubercles closely contacting with each other; Figs 11, 15); the disposition of spines on the legs; and the structure of the stridulatory apparatus in the male (Figs 12, 13, 16–18, 20, 21, 23, 27) and the

abdominal apex in both sexes (including the same type of male genital sclerites; Figs 32, 35, 37, 42, 55). But its representatives differ from the majority of species of *Conocephalus* s. str. in the characters connected with their specialized stick-like appearance (strong adaptation to life on thin stems and very narrow leaves of grasses): body thin; head very long and with very narrow rostrum; proximal antennal segments thickened (Fig. 12), pronotum low and without distinct humeral notches (in typical species of *Conocephalus*, it is high and with distinct humeral notches; for comparison see Figs 11, 14, 15, 19, 22 and 26, 28); fore and middle legs short; hind femora thin. In some species of *Megalotheca* the male cerci are very different in shape to those of *Conocephalus* s. str. (for comparison see Figs 43, 46, 50 and 53, 54, 56). However, in the other species of this subgenus the male cerci are similar to those of *Conocephalus* s. str. (Figs 30, 33, 36, 38) or are intermediate (Fig. 39). Also, some species of *Conocephalus* have the head similar to that of *Conocephalus* s. str. (their head is shorter and with wider rostrum than in *Megalotheca*) and the structure of some other body parts more or less similar to that of *Megalotheca* (their subgeneric position is unclear; Figs 24, 25).

Species included (names in original binomen): Type species [= *Xiphidion restiorum* Peringuey, 1916, synonymized by Uvarov (1928)]; *M. xiphidioides* Karny, 1907; *X. parvulum* Peringuey, 1916; *X. longiceps* Peringuey, 1916; *M. montana* Uvarov, 1928; *C. phasma* Gorochov & Llorente, 2004; *C. marcelloi* Gorochov & Llorente, 2004; *C. (M.) namibius* sp. n.; *C. (M.) zlobini* sp. n. Eades and Otte (2009) continue to include *M. nigrifrons* Chopard, 1952 in the genus *Megalotheca*, but Gorochov and Llorente (2004) have shown that this species probably belongs to another tribe of the Conocephalinae.

#### Key to species of *Megalotheca*, based on males

- 1 Hind edge of pronotal lateral lobe distinctly oblique (Figs 11, 14, 15). Cercus distinctly elongate, not widened, and with almost acute apex (Figs 30, 33, 36, 38) ..... 2
- Hind edge of pronotal lateral lobe more or less vertical (Figs 19, 22). Cercus weakly elongate or short, distinctly widened in distal, middle, or proximal parts, and with diverse apex (Figs 40, 44, 45, 47, 48, 51) ..... 6
- 2 Both pairs of wings shortened, distinctly not reaching abdominal apex. Cercus with large denticle behind middle part [Madagascar] ..... **C. (M.) xiphidioides** (Karny)
- Wings diverse. Cercus with large denticle at proximal or middle parts (Figs 30, 33, 36, 38) ..... 3
- 3 Both pairs of wings shortened, distinctly not reaching abdominal apex. Cercus with very long distal part behind large denticle (this part distinctly longer than rest of cercus; Figs 30, 38) ..... 4
- Both pairs of wings long, extending behind abdominal apex. Cercus with not very long distal part behind large denticle (this part almost equal to rest of cercus in length or slightly shorter; Figs 33, 36); hind part of genital plate as in Fig. 34 ... 5
- 4 Pronotum shorter (ratio hind femur/pronotum about 3.5; Fig. 11). Cercus with large denticle rather thick and not S-shaped; cercal medial edge between this denticle



Figs 11–28. *Conocephalus*, male (after Karny (1907), Uvarov (1928), Gorochov & Llorente (2004), Eades & Otte (2009), and orig.): (11–13) *C. phasma*, head and pronotum laterally (11), head with base of left antenna, pronotum, and tegmina dorsally (12), stridulatory apparatus of right tegmen (13); (14) *C. longiceps*, pronotum laterally; (15) *C. namibius* sp. n., head and pronotum laterally; (16, 17) *C. marcelloi*, stridulatory apparatus of left (16) and right (17) tegmina; (18) *C. xiphidioides*, stridulatory apparatus of left tegmen; (19–21) *C. zlobini* sp. n., pronotum laterally (19), left tegmen (20), stridulatory apparatus of right tegmen (21); (22) *C. montana*, pronotum laterally; (23) *C. parvula*, stridulatory apparatus of left tegmen; (24) *C. rhodesianus*, pronotum laterally; (25) *C. bechuanensis*, pronotum laterally; (26, 27) *C. discolor*, pronotum laterally (26), stridulatory apparatus of left tegmen (27); (28) *C. inaequalis*, pronotum laterally.

- and cercal apex with concave middle part (Fig. 30); hind part of genital plate as in Fig. 31 [Tanzania] ..... ***C. (M.) phasma*** Gor. et Llor.
- Pronotum longer (ratio hind femur/pronotum about 3; Fig. 14). Cercus with large denticle rather thin and slightly S-shaped; cercal medial edge between this denticle and cercal apex with convex middle part (Fig. 38) [Zimbabwe] ..... ***C. (M.) longiceps*** (Pering.)



- 5 Head distinctly longer (similar to that from Fig. 11) – interspace between eye and posteroventral corner of epicranium slightly longer than fore femur. Cercus with large denticle less curved and with distal part behind it slightly longer (Fig. 33) [Madagascar] ..... **C. (M.) marcelloi** Gor. et Llor.
- Head distinctly shorter (Fig. 15) – interspace between eye and posteroventral corner of epicranium distinctly shorter than fore femur. Cercus with large denticle more curved and with distal part behind it slightly shorter (Fig. 36) [Namibia] ..... **C. (M.) namibius** sp. n.
- 6 Ventral edge of pronotal lateral lobe with shallow (but distinct) notch in hind half (Fig. 19). Cercus weakly elongate, distinctly widened in proximal part, and with almost acute apex (Figs 39, 40); genital plate with slightly widened apex and long styles (Fig. 41) [South Africa: KwaZulu-Natal] ..... **C. (M.) zlobini** sp. n.
- Ventral edge of pronotal lateral lobe without distinct notch (Fig. 22). Cercus short, distinctly widened in distal or middle parts, and with diverse apex (Figs 43–48, 50, 51); genital plate with somewhat narrower apex and reduced styles (Figs 49, 52) ... 7
- 7 Cercus with almost acute apex and large denticle almost angularly curved at base (Figs 43–45) [South Africa: Western Cape] ..... **C. (M.) montana** (Uv.), comb. n.
- Cercus with widely rounded apex and large denticle curved more or less roundly (Figs 46–48, 50, 51) ..... 8
- 8 Cercus shorter and with large denticle shorter and less arched (Figs 50, 51); genital plate with shallow apical notch (Fig. 52) [South Africa: Western Cape] ..... **C. (M.) vaginalis** (Karny), comb. n.
- Cercus longer and with large denticle longer and more arched (Figs 46–48); genital plate with rather deep apical notch (Fig. 49) [South Africa: Western Cape] ..... **C. (M.) parvula** (Pering.), comb. n.

**Conocephalus (Megalotheca) namibius** sp. n.

Figs 15, 36, 37

Etymology: From Namibia.

Description:

*Male.*

Coloration greenish yellow with a pair of hardly lighter (yellowish) stripes along lateral edges of disc, light brown area between them, yellowish proximal half of tegminal Sc, brownish both its distal half and stridulatory vein of upper tegmen, brown both plectrum of lower tegmen and majority of longitudinal veins in hind wings, semitransparent rest of wing venation, and transparent membranes of all wings (hind legs missing). Shape of head in profile as in Fig. 15; shape of both anterior part of head (from above) and proximal part of antennae similar to that shown in Fig. 12, but rostrum hardly shorter; interspace between eye and posteroventral corner of epicranium (situated behind hind part of subgena) distinctly shorter than fore femur (ratio 1.2). Pronotum also similar to that of *C. phasma* (from above; Fig. 12), but slightly shorter and with lateral lobes higher and somewhat different in shape (Fig. 15). Both pairs of wings long, extending much behind abdominal apex; tegmina narrow, and 4 mm not reaching apex of hind

wings; stridulatory apparatus in lower (right) tegmen very similar to that of *C. marcelloi* (Fig. 17); this apparatus in upper (left) tegmen very similar to that of *C. phasma* (Fig. 12); costal area in proximal half of tegmina normally developed (but not wide); in distal half of tegmina, this area strongly reduced; tegminal RS and MA forming a single longitudinal vein with 6 or 7 short distal branches (base of RS almost indistinct, similar to crossvein; R appears like a vein lacking branches, as its base has distinct connection with only RA). Abdomen rather long, with 10<sup>th</sup> tergite as in Fig. 36; cerci elongate (but less elongate than in *C. phasma*, *C. longiceps*, and *C. marcelloi*), with almost acute apex and distinctly curved large denticle situated at middle of cercus; medial edge of cercus between its apex and this denticle convex at middle (Fig. 36); genital plate with hind part almost identical to that of *C. marcelloi* (Fig. 34); genital sclerites as in Fig. 37.

*Female* unknown.

*Length* (mm): Body 18, body with wings 29, pronotum 3.7, fore femur 2.4, tegmen 18.5.

Holotype: ♂ NAMIBIA: "Waterberg Nat. Park, Entrance, Road 2512, 20°32'S:17°20'E, Stuckenberg & Londt, *Acacia thornveld*", 20.iii.1984 (NMSA).

*Comparison*: Differences between the new species and the most similar species (*C. marcelloi*, *C. phasma*, *C. longiceps*, and possibly *C. xiphidioides*) are described in the key.

### ***Conocephalus* (*Megalotheca*) *zlobini* sp. n.**

Figs 19–21, 39–42

*Etymology*: In memory of the Russian entomologist Vladimir Zlobin.

*Description*:

*Male*.

Coloration yellowish grey with the following marks: head with a pair of lighter (yellowish) longitudinal stripes running from lateral sides of rostral base and along dorsal edges of eyes to hind part of vertex, more or less brownish antennae or only several proximal segments of antennal flagellum, and sometimes light brown area between above-mentioned stripes; pronotum with 2 pairs of light yellowish stripes (not reaching hind edge) along lateral edges of disc and ventral edges of lateral lobes; sometimes pronotum with light brown areas between these stripes; tegmina more or less transparent with yellowish thick vein along costal edge, brownish or greyish venation of stridulatory apparatus, and light greyish or whitish venation in rest of tegmina; tergites of pterothorax and abdominal base with a pair of yellowish longitudinal stripes and brown area between them; rest of abdomen with less distinct stripes and sometimes light brown area between them. Shape of head similar to that shown in Figs 11, 12. Pronotal disc almost as in Fig. 12, but hind part not curved upwards; pronotal lobes with almost vertical anterior and hind edges (first edge shorter than second one), round anterolateral and posterolateral corners, slightly oblique anterior half of ventral edge, and shallow (but distinct) notch at its hind half (Fig. 19). Tegmina distinctly shortened, reaching hind half of 5<sup>th</sup> abdominal tergite, with very narrow (especially at middle) costal area, thick proximal and middle parts of Sc, and venation of dorsal part as in Figs 20, 21; hind wings strongly shortened, reaching anterior half of 1<sup>st</sup> abdominal tergite. Abdomen rather long, with 10<sup>th</sup> tergite as



Fig. 29. Type locality of *Conocephalus zlobini* sp. n.

in Fig. 39; cerci weakly elongate, almost conical, and with almost acute apex, narrow and slightly arched large denticle in middle part, small (but very distinct) proximal denticle, and small medial lamellar lobe between these denticles (this lobe with narrower distal part situated above large denticle; Figs 39, 40); genital plate with slightly widened hind part (having wide and moderately deep angular notch at apex) and long thin styles (Fig. 41); genital sclerites as in Fig. 42.

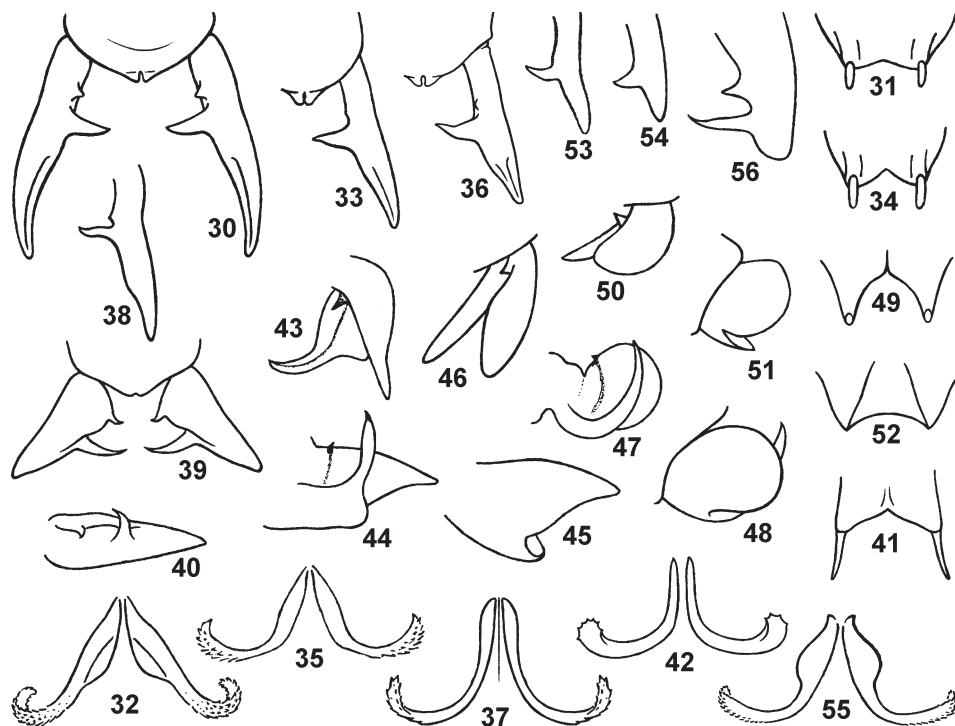
#### *Female.*

Coloration and structure of body similar to those of male, but median area of pterothoracic and basal abdominal tergites lighter (yellowish or brownish), lateral parts of basal and middle abdominal tergites sometimes brownish, both pairs of wings very small (covering only small anterior parts of meso- and metanotum respectively) and in nymphal position. Genital plate rather small, with rounded hind half; ovipositor long (ratio ovipositor/hind femur 1.6–1.7), straight, slightly widened in profile, very narrow from above, with distal part almost gradually narrowing to acute apex, brown dorsal and clearly lighter ventral valvae, and without distinct traces of imaginal slip sutures between valves.

*Length* (mm): Body: ♂ 16–19, ♀ 12–16; pronotum: ♂ 2.9–3.2, ♀ 2.6–2.9; fore femur: ♂ 2–2.2, ♀ 1.8–2; tegmen, ♂ 4.5–4.9; hind femur: ♂ 7.5–8.2, ♀ 7.2–8; ovipositor 12.8–13.2.

*Holotype*: ♂ SOUTH AFRICA: KwaZulu-Natal: northern Drakensberg, Cathedral Peak [28°57'S:29°14'E], 1400–1800 m, mountain grassland (Fig. 29), on grass, at night, 26–28.i.2008, A. Gorochov (NMSA).

*Paratypes*: 2♂ 4♀ same data as holotype (ZIAS, NMSA).



Figs 30–56. *Conocephalus*, male (after Peringuey (1916), Uvarov (1928), Gorochov & Llorente (2004), Eades & Otte (2009), and orig.): (30–32) *C. phasma*, abdominal apex dorsally (30), hind part of genital plate ventrally (31), genital sclerites (32); (33–35) *C. marcelloi*, abdominal apex without left part dorsally (33), hind part of genital plate ventrally (34), genital sclerites (35); (36, 37) *C. namibius* sp. n., abdominal apex without left part dorsally (36), genital sclerites (37); (38) *C. longiceps*, cercus dorsally; (39–42) *C. zlobini* sp. n., abdominal apex dorsally (39), inner side of cercus (40), hind part of genital plate ventrally (41), genital sclerites (42); (43–45) *C. montana*, cercus dorsally (43) and laterally (45), its inner side (44); (46–49) *C. parvula*, cercus dorsally (46) and laterally (48), its inner side (47), hind part of genital plate ventrally (49); (50–52) *C. vaginalis*, cercus dorsally (50) and laterally (51), hind part of genital plate ventrally (52); (53) *C. rhodesianus*, cercus dorsally; (54, 55) *C. discolor*, cercus dorsally (54), genital sclerites (55); (56) *C. inaequalis*, cercus dorsally.

Comparison: The new species is intermediate between a group including a few species with rather simple (primitive?) male cerci (*C. marcelloi*, *C. phasma*, *C. longiceps*, and possibly *C. xiphidioides*) and all the other species of *Megalotheca* having distinctly modified ones. The main differences of the new species from all representatives of this subgenus are given in the key.

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