

**Two new grasshoppers, *Plagiotriptus* sp. n.
and *Pseudotristria* sp. n. from sub-saharan Africa**
(*Eumastacoidea: Plagiotriptinae* and *Acridoidea: Tropidopolinae*)

by
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Abstract: Description of *Plagiotriptus peterseni* sp. n. (*Plagiotriptinae*) from Uzungwa Mts., Tanzania and *Pseudotristria isabelleae* sp. n. (*Tropidopolinae*) from Botswana with key to the species of this genus and first record of the male *Pseudotristria cylindricy* (UVAROV, 1953), also a new record from Rep. of South Africa.

Plagiotriptus peterseni sp. n. (*Plagiotriptinae*) Fig. 1.

Material: Female holotype, Tanzania S of Iringa, Uzungwa Mts., Chita Forest reserve, 750 m above sea level, 28.X.1984. Female paratype, same locality but 1500 m above sea level, 10.XI.1984. Both K. STOLTZE and G. PETERSEN leg. Both kept in Zoological Museum, Copenhagen.

Description of female holotype: Antennae 11 jointed.

Pronotum with strongly arcuate crest, above the head regularly raised (not curved forward as in *carli*).

Tegmina and wings not completely covered under pronotum, reaching past posterior edge of 2nd abdominal tergite, but far from reaching posterior part of pronotum. The wings are covered by the tegmina and nearly reaching as far as these (i.e. as in *carli*).

Hind femur with very large lamellate dorsal crest, which is provided with indentation rather than serration (as seen in *carli*). The anterior black edge of the indentations with microsculpture of longitudinal ridges (not seen in *carli*). Hind tibia with 13 outer and 14 inner spines.

Ovipositor with long and very slender valves (shorter and more robust in *carli*) with their respectively upper and lower teeth pointed and relatively long (shorter and less pointet in *carli*).

General coloration including appendages green (in dried material changing into pale brownish). Tegmen and wing bluish white of mat mildew appearance (wing red in *carli*).

Measurements: Length of body 37.1 (paratype 36.0), length of pronotum 27.0 (paratype 25.1), length of hind femur 20.0 (paratype 19.1) and length of hind tibia 18.8 (paratype 19.0).

The new species is named after Gitte PETERSEN, who has collected the material.

Male: Unknown.

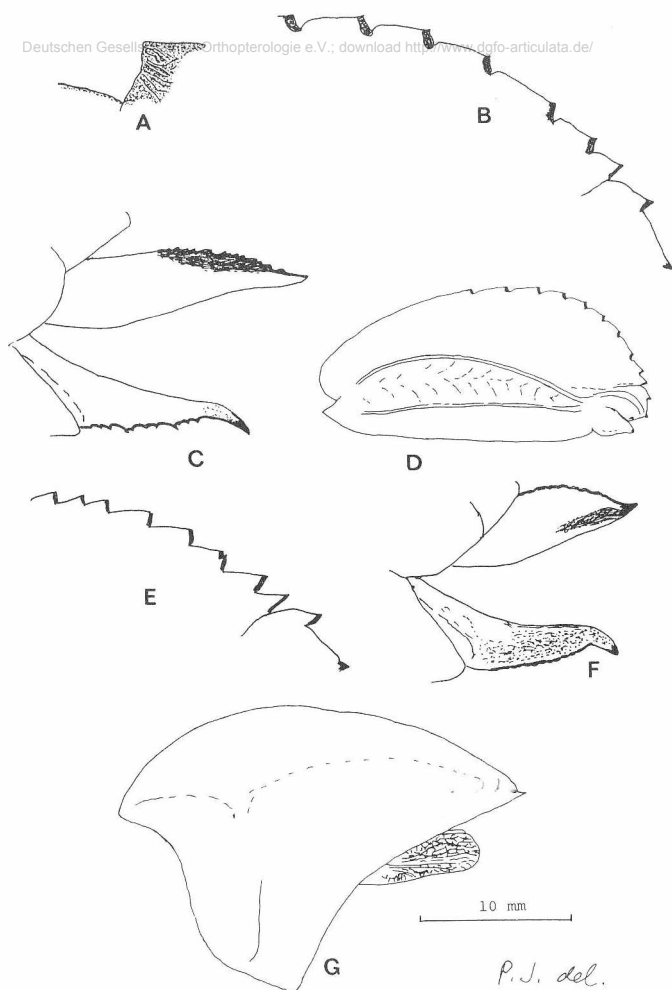


Fig. 1

Plagiotriptus peterseni sp. n. and *P. carli*, females.

A: *P. peterseni*, hind femoral dorsal „spine“ in large magnification; right leg, outer side. Paratype. B: *P. peterseni*, „spines“ on distal, dorsal side of left hind femur, outer side. Holotype (larger magnification than in D.) C: *P. peterseni*, ovipositor, lateral view. Holotype. D: *P. peterseni*, left entire hind femur, outer side. Holotype. E: *P. carli*, spines on distal, dorsal side of left hind femur. F: *P. carli*, ovipositor, lateral view. G: *P. peterseni*, female pronotum with tegmen (part of wing just visible above tegmen). Holotype.

Paratype: Female. The tegmina and wings of same size as in holotype but are practically completely covered by pronotal hind margin. This difference in exposure of tegmina in holo- and paratype is most likely caused by different position of pro- and pterothorax in relation to each other when the specimens were preserved.

Differential diagnosis: The new species is different from *leei* DESCAMPS 1977, *pinivorus* DESCAMPS, 1977, *alcus* (C. BOLIVAR, 1914) and *parvulus* DESCAMPS, 1977 (female unknown) in the length of tegmina surpassing apex of wings and in larger size. The new species cannot be the female of *parvulus* judging from the relative size of the sexes within this genus. The new species is different from *hippiscus* (GERSTAECKER, 1869) and *loricatus* (REHN and REHN, 1945) in the more normal shape of tegmina (not lobiform and oval as in these). The new species is very close to *carli* (C. BOLIVAR, 1914) in general morphology, size, in the relative length of tegmina and wings, in the strongly arcuate crest of pronotum and of upper margin of hind femur, but the new species is different from *carli* in the shorter tegmina and wings, in the blue colour of wings, in the indentation of hind femoral crest as well as in the more slender ovipositor valves with more pointed teeth.

Notes on *Plagiotriptus* ssp.: In the monograph on *Thericleidae* DESCAMPS 1977 the males of *alcus* and *carli* are said to be unknown; but *alcus* male was described by JOHNSEN and FORCHHAMMER 1974 and the male of *carli* has since been described by JOHNSEN 1983. In DESCAMPS key p. 68 l.c. the female of *leei* is said to be unknown, while he p. 70 mentions a female allotype in Brit. Mus. and gives its measurements. DESCAMPS (l.c.) proposes that *parvulus*, only known in the male sex, possibly might be the male of *alcus*; that this is not correct is evident from JOHNSEN and FORCHHAMMER 1974. One male *P. hippiscus* from Kenya: Machakos, Nunguni (K. RASMUSSEN leg., VII 1974) in Nat. Hist. Mus., Aarhus, Denmark, represent the westernmost record in Kenya of this species.

Pseudotristeria isabelleae sp. n. (*Tropidopolinae*)

Fig. 2

Material: Botswana, Ngamiland District. 15 km N of Kuke Quarantine Camp on Ghanzi-Maun road, 20°55'S 22°25'E, on tall grass in dense bush savanna with *Acacia fleckii*. 1000-1150 m above sea level, 20.XII.1984, P. JOHNSEN leg., 3 males (holotype and 2 paratypes) and 1 female (allotype) in Natural Hist. Mus., Aarhus, Denmark. Moremi Wildlife Reserve 11 km WNW of South Gate, 19°23'S 23°33'E, about 820 m above sea level, 18.-20.IV. 1972, 1 female, and 40 km W of Gweta, 20°17'S 24°54'E, about 912 m above sea level, 22.IV.1972, 7 males, 10 females (all paratypes) in British Museum.

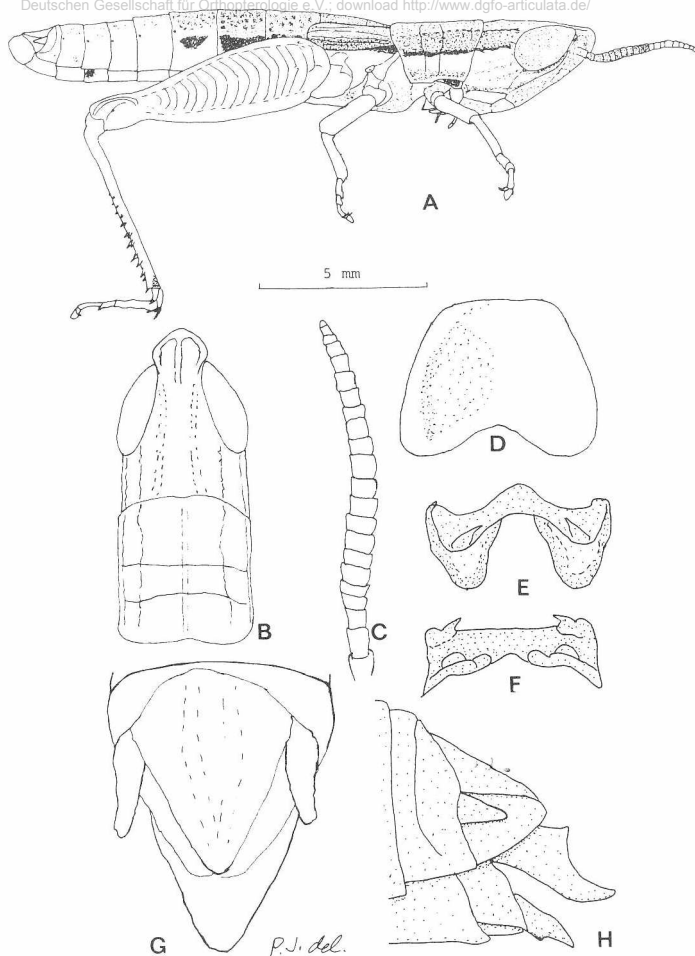


Fig. 2

Pseudotristiria isabelleae sp. n.

A: Male, habitus, lateral view. Paratype. B: Male, head and pronotum, dorsal view. Holotype. C: Male, right antenna, dorsal view. Paratype. D: Male, prosternal tubercle, ventral view. Holotype. E: Epiphallus with lophi horizontal. Holotype. F: Epiphallus with lophi vertical. Holotype. G: Male, end of abdomen, dorsal view. Holotype. H: Female, end of abdomen, lateral view. Allotype.

Description of male holotype: Head acutely conical. Frontal ridge widest between antennae, deeply sulcate above antennae, shallowly sulcate below medial ocellus. Median carina of fastigium weak, disappearing behind the narrowest space between the eyes. Antennae ensiform, but not with sharp edges, about as long as dorsum of head, with 22 joints.

Prothorax dorsally cylindrical with lateral carinae hardly indicated (in female allotype and in some male paratypes entirely absent). Pronotal hind margin with a vague medial incurvature, two sulci only on disc. Prosternal process transverse, curved caudad, bilobate at posterior margin.

Micropterous with the lateral tegmina reaching somewhat behind hind margin of 1st abdominal tergite. Tegminal front and hind margin rather straight, their apices broadly rounded. Wings shorter than tegmina, reaching only to about centre of tympanum.

Hind tibia with 10 outer and 10 inner spines, the antepenultimate spine of inner row absent - as in diagnosis of the genus. The inner pair of hind tibial spurs with the inner spur much longer than the outer one. Arolium of all legs large, much longer than claws. Hind femur not reaching end of abdomen; its ratio length to maximum height 3.4.

Abdomen dorsally in posterior half of 7th sternite (in both sexes) with a patch of tufted pale setae (likewise in *P. cylindrica*). Supra-anal plate triangular, forming an angle of 44° , rounded at apex. Cerci rather short and robust. Epiphallus as depicted.

Coloration of body and appendages generally dirty, mottled straw-colored; pronotal disc along anterior and posterior margin with darker reddish brown admixture. A postocular dark brown band continues laterally on all thoracic segments and includes the lower half of tegmen (in resting position), also continued laterally on abdominal tergites 1-4. Lower part of pronotal lateral lobe forming whitish band continued on the meso- and metapleura. Tegmen bluish in apical region. Hind femur with pale straw-yellow outer side; the inner side more pure yellow. Hind tibia greyish in distal half, blackish ventrally at apex.

Description of female allotype: Morphologically similar to male but much larger. Ovipositor valves as depicted, upper valves apically strongly concave on dorsal side. Generally more uniformly colored than male holotype, with lateral longitudinal dark band as in holotype. Inner medial area of hind femur orange-yellow.

Measurements: Length of body, male, holotype 17.0, variation in material 16.9-18.0. Female allotype 24.2, variation in material 22.0-25.7. Length of hind femur, male holotype 7.7. Female allotype 9.8.

Variation: One female paratype without lateral longitudinal, dark band, all other specimens with such band. The blue colour to apical part of

tegmen in holotype is present or absent in male paratypes. The number of hind tibial spines vary from 10-11 outer and 9-10 inner spines.

The sp. n. has been named after ISABELLE GRIGNON, who assisted the author with vegetational analysis while studying in Botswana.

Differential diagnosis: The sp. n. is different from the previously known two species in the genus, *P. cylindrica* (UVAROV, 1953) and *P. manicæ* (MILLER, 1949), in the vaguely incurved hind margin of pronotum, in the others excurved. The sp. n. is different from *cylindrica* in the lateral and lobiform tegmina, and different from *manicæ* in the regularly rounded apex of tegmen.

Discussion: The new species have some characters in common with the monotypic genus *Tristriella* DESCAMP & WINTREBERT, 1967 from Madagascar (with the species *T. malagassa* DES. & W. 1967), e.g. the size and shape of tegmina and the incurvature of pronotal hind margin. On the other hand in *P. isabelleae* the pronotal incurvature is very vague and it has an ensiform antenna (filiform in *Tristriella*) and only two sulci crossing pronotal disc (three in *Tristriella*) and has therefore been referred to *Pseudotristria* DIRSH, 1961.

Key to the species of *Pseudotristria*

1. Brachypterous, tegmina overlapping dorsally, not quite covering apex of abdomen.
 *cylindrica*
- Micropterous, tegmina lateral 2
2. Tegmina narrowly, sub-acutely produced apically.
 Pronotal hind margin excurved
 *manicæ*
- Tegmina rounded at apex. Pronotal hind margin slightly incurved
 *isabelleae* sp.n.

Pseudotristria cylindricy (UVAROV, 1953 (*Tropidopolinae*))

Fig. 3

Material: 1 male in Department of Entomology, University of Pretoria, R.S.Afr. (both hind legs missing) labelled „Stentor Estate, SE 2531Cb, IV.1983, HUYSER leg“. This locality is in Transvaal.

Description of male: Hitherto only the female was known. The male is quite similar to the description of the female but smaller. The tegmina and wings only a little abbreviated, reaching just past 8th abdominal tergite. The cerci are more slender and more pointed than in *p. isabelleae* sp. n. Some details of morphology of the male are depicted here. Its length of body is 18.4 mm.

Distribution: Republic of South Africa (Transvaal), first record.

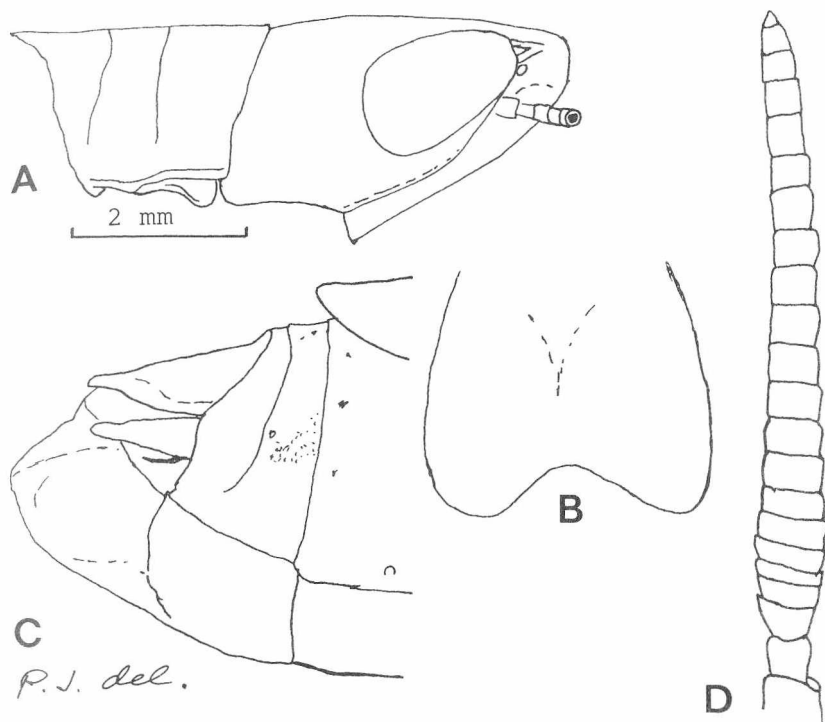


Fig. 3

Pseudotristria cylindrica, male. A: Head and pronotum, lateral view. B: Prosternal tubercle, ventral view. C: End of abdomen, with apex of tegmen shown, lateral view. D: Right antenna, dorsal view.

Previously known from Angola (DIRSH, 1966) and Zambia (VESEY-FITZGERALD, 1964).

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