

Review of *Aferos* Kazantsev (Coleoptera, Lycidae), with a note on *Staepteron cyanoxanthum* (Bourgeois)

SERGEY V. KAZANTSEV

Sergey V. Kazantsev, Insect Centre, Donetskaya 13-326, 109651 Moscow, Russia
kazantss@yahoo.com

Table of contents

Abstract	1
Introduction	2
Material and methods	2
Taxonomy and descriptions	2
<i>Aferos</i> Kazantsev, 1992 (Figs. 1–42)	2
<i>Aferos</i> (s. str.) <i>endroedyi</i> sp. n. (Figs. 17–18)	7
<i>Aferos</i> (s. str.) <i>natalensis</i> sp. n. (Figs. 19–21)	9
<i>Aferos</i> (s. str.) <i>rubellus</i> sp. n. (Figs. 22–23)	10
<i>Aferos</i> (s. str.) <i>silvestris</i> sp. n. (Figs. 24–25)	12
<i>Aferos</i> (s. str.) <i>transvaalensis</i> sp. n. (Figs. 26–28)	14
<i>Aferos</i> (s. str.) <i>youngai</i> sp. n. (Figs. 29–30)	15
List of 18 species of the genus <i>Aferos</i>	17
Key to the subgenera and species of <i>Aferos</i>	18
Acknowledgements	22
References	22

Abstract

The genus *Aferos* Kazantsev is redescribed and six new species, *A. endroedyi* sp. n., *A. natalensis* sp. n., *A. rubellus* sp. n., *A. silvestris* sp. n., *A. transvaalensis* sp. n. and *A. youngai* sp. n. are described from South Africa. A key to all 18 known species of *Aferos* is provided. *Aferotini* Kazantsev, 2004, syn. n. is synonymized with *Slipinskiini* Bocák et Bocáková, 1992. *Staepteron cyanoxanthum* (Bourgeois) is illustrated, and the genus *Staepteron* Kazantsev is tentatively placed in *Flagraxina* (Dictyopterini, Erotinae).

Key words: Coleoptera, Lycidae, *Slipinskiini*, *Flagraxina* (Dictyopterini), *Aferos*, *Staepteron*, new species, Africa

Introduction

The genus *Aferos* Kazantsev, 1992 is confined to the mountains of Southern and Eastern parts of Africa. From the morphological standpoint the genus is unique among the net-winged beetles in having noticeable elytral epipleura and a combination of a conspicuous median pronotal areola and asymmetrical twisted phallobase of the aedeagus. The first two species of this group were described by Kleine (1933) from South Africa who placed them in the genus *Stadenus* Waterhouse, 1879, the type species of which is an Australian insect. Another *Aferos* species, also from South Africa, was added by Gomes Alves (1967). In 1992 the African "*Stadenus*" species were revised and found to belong in three different genera, neither of them related to *Stadenus* (Metriorrhynchinae), and the latter was excluded from the Ethiopian fauna (Kazantsev, 1992). A further contribution to the knowledge of this genus was made shortly afterwards, when *Aferos* was divided into two subgenera (Kazantsev, 2000). Later on after a phylogenetic analysis the genus was separated as the tribe Aferotini (Kazantsev, 2004). However, the taxon Aferotini Kazantsev, 2004, syn. n. appeared to be a junior synonym of Slipinskiini Bocák et Bocáková, 1992. Although the type genus of the latter taxon, *Slipinskia* Bocák et Bocáková, 1992, was synonymized with *Aferos* (Kazantsev, 2002), Slipinskiini, in accordance with Article 40 of the Zoological Code, has priority. This paper presents redescription of the genus and description of another six new *Aferos* species discovered in the material of the Transvaal Museum of Natural History and the California Academy of Sciences.

The following abbreviations are used in the paper: CAS — California Academy of Sciences, San-Francisco; ICM — Insect Centre, Moscow; TMNH — Transvaal Museum of Natural History, Pretoria.

Material and methods

Specimens used as material for this study were dissected after being softened for several hours in water, the male genitalia were extracted and affixed with water-soluble glue on cardboard plates or placed in vials with glycerine. To study internal morphology and female genitalia some specimens were cleared with 10% KOH. All sutures, sulci, sclerites and appendages were studied on such KOH-treated specimens.

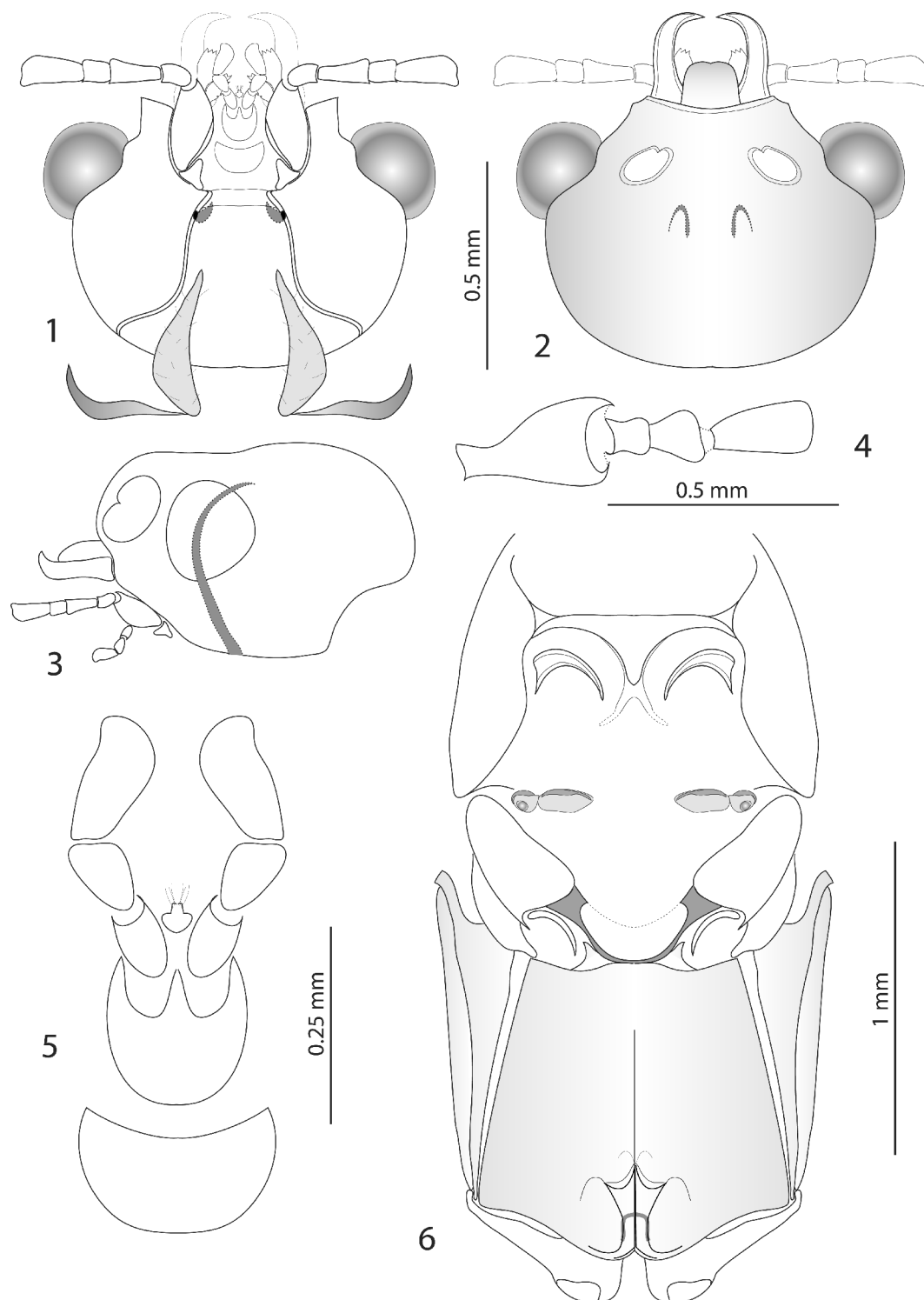
Taxonomy and descriptions

Aferos Kazantsev, 1992 (Figs. 1–42)

Type species: *Stadenus aethiops* Kleine, 1933.

Aferos Kazantsev, 1992: 44 type species: *Stadenus aethiops* Kleine, 1933

Slipinskia Bocák & Bocáková, 1992: 257 type species: *Stadenus aethiops* Kleine, 1933



FIGURES 1–6. Details of *Aferos* (s. str.) sp., female. 1 — head, ventrally; 2 — head, dorsally; 3 — head, laterally; 4 — antennomeres 1–4, ventrally; 5 — labium, ventrally; 6 — thorax, ventrally.

Redescription

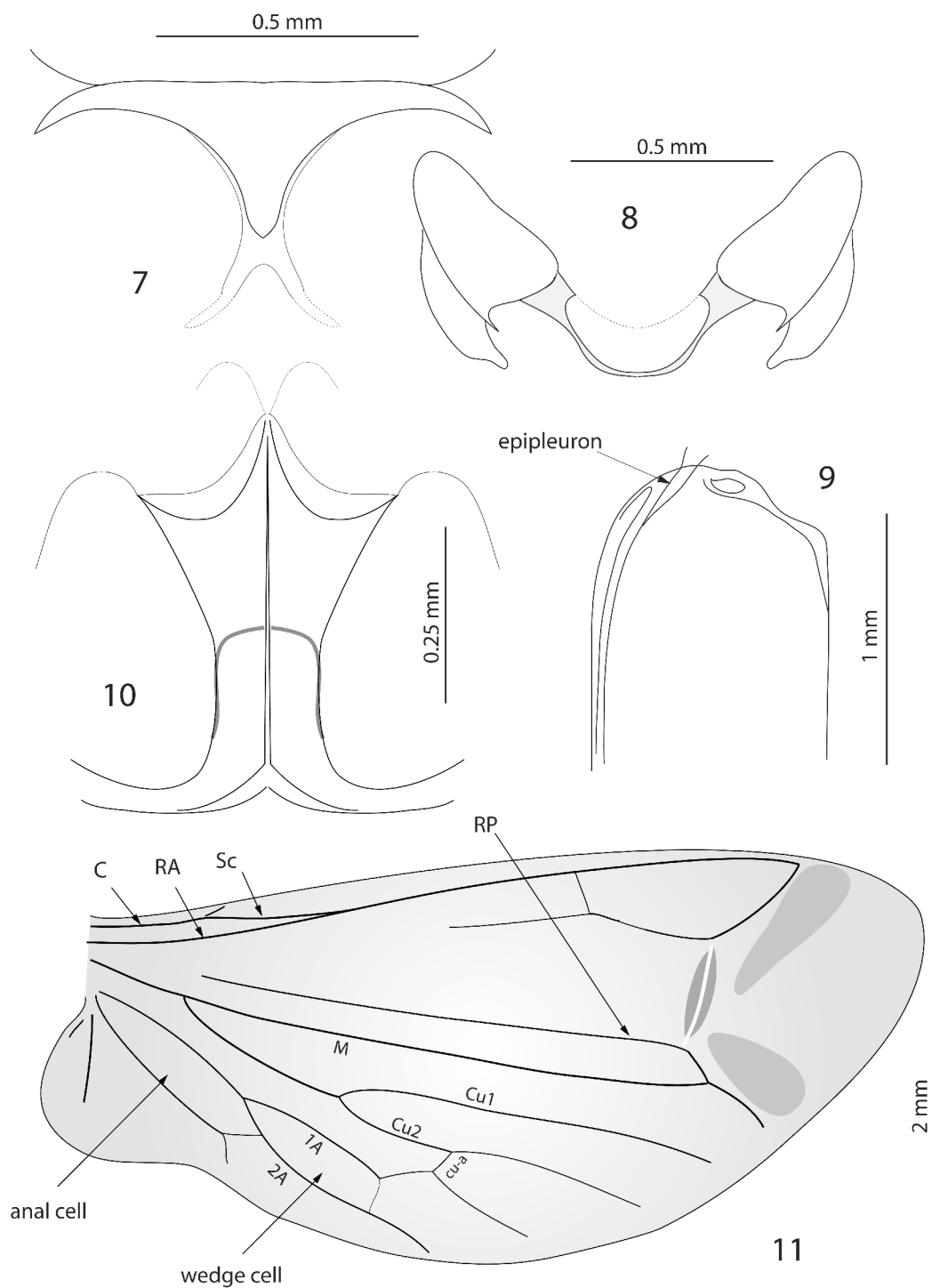
Head transverse, slightly narrowed behind eyes (Figs. 1–2). Fastigium blunt (Fig. 3). Labrum sclerotized and lying anterior of epistoma, not or feebly emarginated medially (Fig. 2). Eyes relatively small, spherical. Mandibles projected forward and evenly rounded distally, glabrous distally and pubescent basally (Fig. 2). Maxillary palps relatively slender, 4-segmented, with ultimate palpomere parallel-sided and flattened distally (Fig. 1). Prementum undivided, labial palps 3-segmented, slender, apical palpomere slightly widening and flattened distally, ligula present (Fig. 5). Gula absent, genal sclerites connected by narrow process lying anterior of posterior tentorial pits (Fig. 2). Ventral arms of tentorium long and narrow, almost attaining cranial dorsal surface (Fig. 3). Antennal prominence relatively inconspicuous, antennal sockets approximately broadly separated (Fig. 2). Antennae 11-segmented, relatively short, flattened from antennomere 3; antennomere 3 longer and wider than antennomere 2, but shorter than antennomere 4 (Fig. 4); antennal pubescence sparse and decumbent in all female and male antennomeres.

Pronotum subquadrate, with conspicuously produced medially posterior margin (Fig. 19), prominent median cell and approximately developed transverse carinae; posterior angles feebly produced laterally (Figs. 6, 19). Prosternum short, T-shaped (Fig. 7). Thoracic spiracles well sclerotized, but not protruding laterally beyond coxal limits (Fig. 6). Mesoventrite short, with weakly sclerotized median part; mesepimeron significantly shorter than mesepisternum, but extending beyond its base (Fig. 8). Scutellum relatively small, slightly emarginate at apex. Elytra almost parallel-sided, with four approximately equally developed primary costae, interstices with double rows of subquadrate cells; sparse elytral pubescence noticeable on longitudinal costae; elytron with noticeable epipleuron basally (Fig. 9). Metasternal suture not attaining to mesoventrite (Fig. 6). Metendosternite with transverse suture and lateral arms (Fig. 10). Metathoracic wings with wedge cell and cu-a brace; Cu₂ split into two branches (Fig. 11).

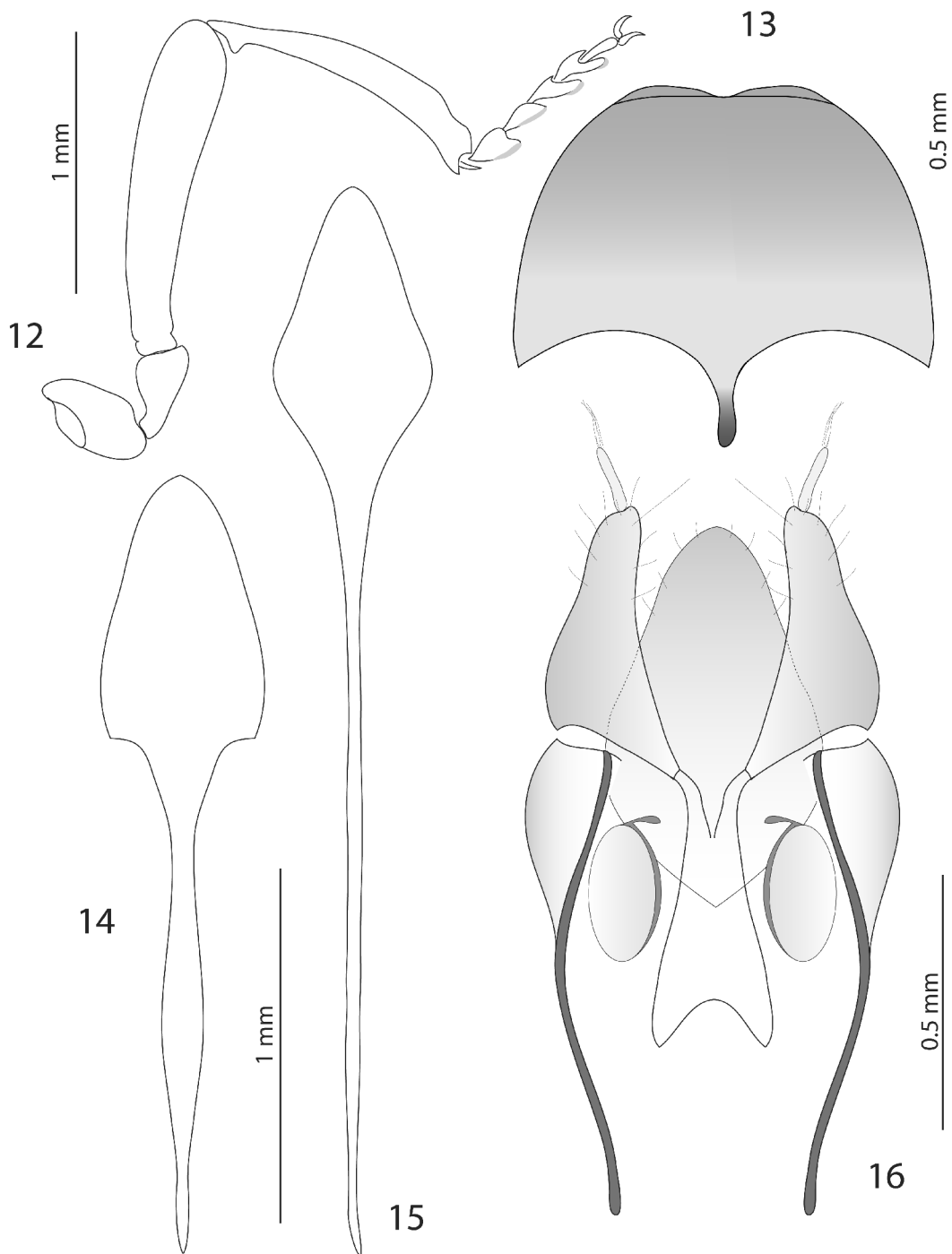
Mesocoxae widely separated; metacoxae with conspicuous trochantal suture (Fig. 6). Protrochantins considerably larger than mesotrochantins (Fig. 6). Trochanters elongate, widened distally, connected to femora distally; tibiae and femora curved, tibiae with pair of similar short apical spurs; tarsomeres 1–4 with plantar pads; all claws simple (Fig. 12). Abdominal spiracles located dorsally on sternite relatively distant from edge. Spiculum ventrale moderately long (Fig. 13); spiculum gastrale long to extremely long (Figs. 14–15). Valvifers free, styli long and narrow, coxites fused basally with proctiger (Fig. 16). Aedeagus with elongate, semi-fused parameres and asymmetric compound phallobase; median lobe with variously modified distal processes (Figs. 17–18, 20–43).

Comments

Aferos, the monophyly of which is supported by the noticeable elytral epipleura and the asymmetric compound phallobase of the aedeagus, is divided into two subgenera, *Aferos* s. str. and *Aferos* subgen. *Ukachaka* Kazantsev, 1992, differing by the structure of



FIGURES 7–11. Details of *Aferos* (s. str.) sp., female. 7 — prosternum, ventrally; 8 — mesosternum, ventrally; 9 — proximal part of elytron, ventrally; 10 — metendosternite; 11 — metathoracic wing.



FIGURES 12–16. Details of *Aferos*. 12 — *Aferos* (s. str.) sp., female, middle leg; 13 — same, ultimate sternite; 14 — *A.* (s. str.) *londonianus* Kazantsev, male, ultimate sternite; 15 — *A.* (s. str.) *flavohumeralis* Kazantsev, male, ultimate sternite; 16 — *Aferos* (s. str.) sp., female, genitalia.

maxillary and labial palps and elytral reticulation. The pointed maxillary and labial palps are hypothesized to be a plesiomorphy of *Ukachaka*, the reduced elytral reticulation and the very long and narrow median lobe of the aedeagus (Figs. 42–43) assumed to be its apomorphies. The approximately parallel-sided ultimate palpomeres and the shortened and variously modified distal process of the median lobe appear to be apomorphic for *Aferos* s. str. The relatively long and simple distal process of the median lobe of *A.* (s. str.) *andrei* and *A.* (s. str.) *flavohumeralis* (Figs. 31, 40) is probably in the plesiomorphic condition.

On the other hand, two groups may be distinguished within *Aferos* s. str., the *aethiops* group and the *walteri* group, the phylogenetic relationships of which need further study based on more representative material. The *aethiops* group is characterized by the flattened antennomeres 3–11 and relatively large and mostly elongate irregular elytral cells, whereas the *walteri* group, including two species, the second one being *A. rubellus* sp. n., is recognized by the filiform antennae and small and mostly square regular elytral cells.

Distribution

Eleven of the 18 known species of *Aferos* are endemic to South Africa, with five species occurring in Natal (*A. aethiops*, *A. brincki*, *A. walteri*, *A. londonianus*, *A. natalensis* sp. n.), three in Cape (*A. flavocoeruleus*, *A. londonianus*, *A. rubellus* sp. n.) and five in Transvaal (*A. transvaalensis* sp. n., *A. endroedyi* sp. n., *A. silvestris* sp. n., *A. rubellus* sp. n., *A. youngai* sp. n.). The remaining seven species of the genus are evenly distributed on the mountain ridge extending along the Eastern coast of Africa towards the equator, with one species known from each of Zimbabwe (*A. leleupi*), Mozambique (*A. zambezianus*), Malawi (*A. andrei*), Tanzania (*A. orientalis*), Rwanda (*A. basilewskyi*) and Congo (*A. dewittei*), and one species occurring in both Uganda and Kenya on the Mt. Elgon massif (*A. flavohumeralis*) (Fig. 46).

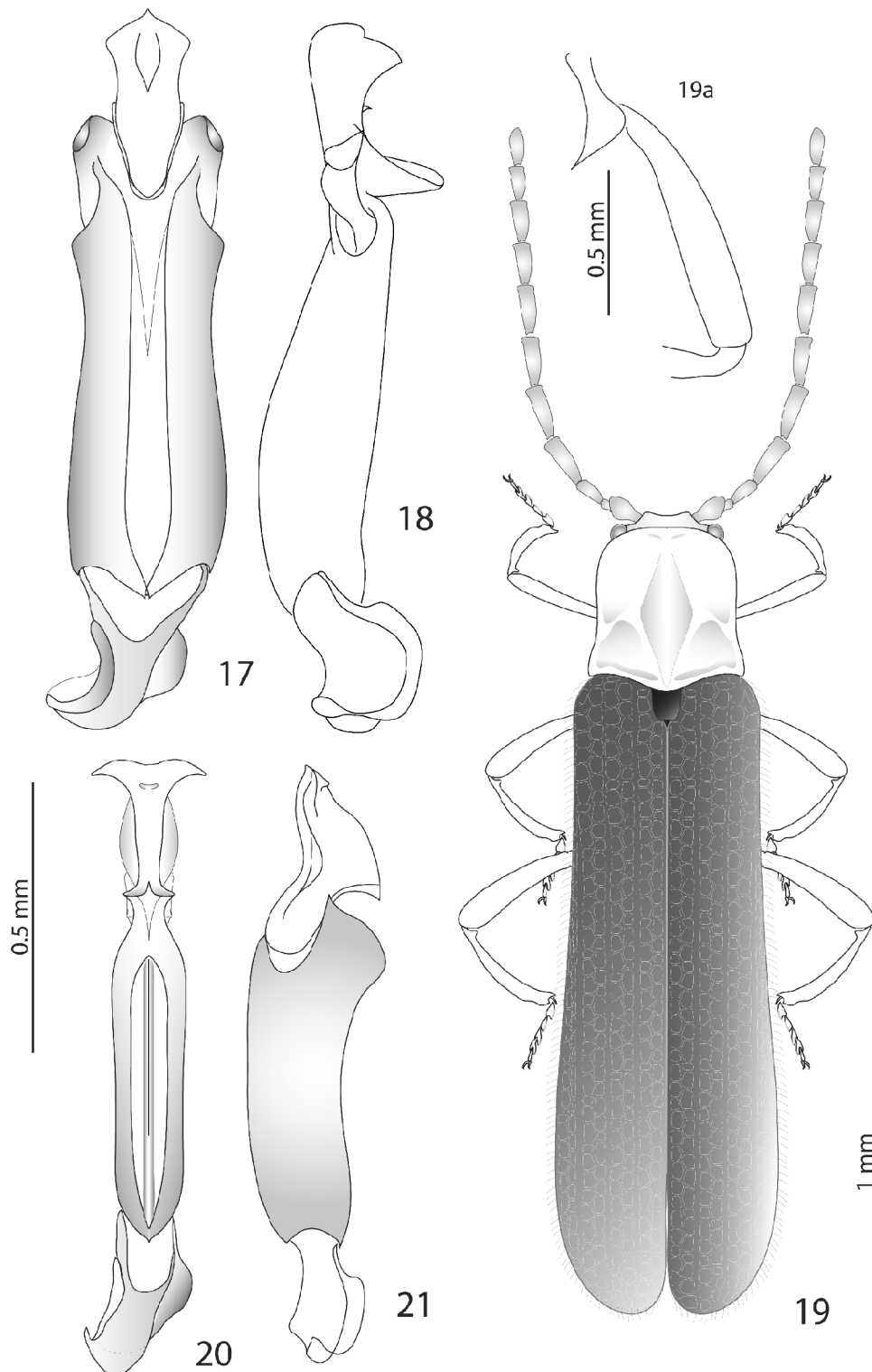
Biology

No preimaginal forms have been observed or collected in *Aferos*. The known elevations where adults of this genus were taken range from 1000 m (*A. transvaalensis*, Transvaal, South Africa) to 2300 m above sea level (*A. basilewskyi*, Rwanda). Dr. Endrödy-Younga collected these beetles on fungous bearing tree trunks, *Cussonia* logs and in forest litter, including very wet litter. The most productive methods to collect *Aferos* species appear to be beating, grass netting, UV light collecting and using intercept traps, which yielded most of the specimens studied.

***Aferos* (s. str.) *endroedyi* sp. n. (Figs. 17–18)**

Description

Male. Dark brown. Pronotum rufous.



FIGURES 17–21. Details of *Aferos* spp. 17 — *A.* (s. str.) *endroedyi* sp. n., aedeagus, ventrally; 18 — same, laterally; 19 — *A.* (s. str.) *natalensis* sp. n., habitus; 19a — male metatrochanter with metafemur; 20 — same, aedeagus, ventrally; 21 — same, laterally.

Head with shallow roundish impression and inconspicuous longitudinal median groove behind antennal prominence. Antennal sockets separated by approximately half their transverse diameter. Eyes small (interocular distance nearly 5 times as long as the radius). Labrum transverse, with straight margin. Labial and maxillary palpi slender, with ultimate joints almost parallel-sided and flattened distally. Antennae attaining to about elytral middle, with antennomeres 3–11 slightly flattened and almost parallel-sided; antennomere 3 2.4 times longer than antennomere 2 and about 1.25 times shorter than antennomere 4; antennal pubescence sparse and decumbent.

Pronotum slightly (1.2 times) wider than long, with conspicuous median areola and relatively inconspicuous transverse carinae, more prominent near lateral margins; anterior margin slightly convex; lateral margins almost parallel-sided, slightly incised posteriorly, with hind angles acute. Scutellum elongate, narrowing distally and rounded at apex.

Elytra long, 3.2 times longer than wide at humeri and 4.2 times longer than pronotum, almost parallel-sided, with 4 equally developed primary costae; interstices with double rows of relatively irregular elongate cells. Decumbent and sparse pubescence distributed along longitudinal costae.

Legs slender, with conspicuously curved tibiae; metacoxae produced posteriorly into acute spines; tarsomeres 1–4 with plantar pads.

Aedeagus with robust parameres and relatively short median lobe (Figs. 17–18).

Length: 5.5–6.2 mm. Width (humeraly): 1.3–1.6 mm.

Female. Similar to male, but antennae shorter and eyes smaller.

Type material

Holotype male: S. Afr., N Transvaal, Soutpansbg Hanglip, 23°02' S–29°47' E, grass netting, 14.III.1973, Endrödy-Younga leg. (TMNH); paratypes, male and female, same label (TMNH and ICM); paratypes, 2 males and female, "Louis Trichardt Hanglip Forestry, 23–24.IV.1956, v. Son & Vari" (TMNH and ICM).

Diagnosis

A. endroedyi sp. n. differs from the similarly coloured *Aferos* species by the details of the elongate and slightly flattened dorso-ventrally aedeagus (Figs. 17–18).

Etymology

Named after Dr. Endrödy-Younga who collected the type series.

***Aferos* (s. str.) *natalensis* sp. n. (Figs. 19–21)**

Description

Male. Dark brown. Pronotum testaceous.

Head with shallow roundish impression behind antennal prominence. Antennal sockets separated by approximately third their transverse diameter. Eyes small (interocular distance ca. 5 times as long as the radius). Labrum transverse, straight anteriorly. Mandibles relatively small, only slightly curved. Labial and maxillary palpi slender, with ultimate joints almost parallel-sided and flattened distally. Antennae attaining to elytral middle, with antennomeres 3–11 slightly flattened and nearly parallel-sided; antennomere 3 2.2 times longer than antennomere 2 and ca. 1.3 times shorter than antennomere 4 (Fig. 19); antennal pubescence sparse and decumbent.

Pronotum square, with conspicuous median areola and inconspicuous transverse carinae, noticeable near lateral margins; anterior margin slightly convex; lateral margins almost parallel-sided, with hind angles slightly produced laterally (Fig. 19). Scutellum elongate, narrowing distally, rounded at apex.

Elytra long, 3 times longer than wide at humeri and 3.9 times longer than pronotum, almost parallel-sided, with 4 equally developed primary costae; interstices with double rows of irregular elongate cells. Erect pubescence distributed along longitudinal costae. Legs relatively slender, with conspicuously curved tibiae; metatrochanters produced posteriorly into acute spines (Fig. 19a); tarsomeres 1–4 provided with plantar pads.

Aedeagus with laterally flattened parameres and bifurcate apex of distal median process (Figs. 20–21).

Length: 5.0–5.8 mm. Width (humeraly): 1.3–1.5 mm.

Female. Unknown.

Type material

Holotype male: S. Afr., Zululand Empangeni Univ., 10.VII.1976, P. C. Reavell leg. (TMNH); paratype male: same label (ICM).

Diagnosis

A. natalensis sp. n. differs from all species of *Aferos* by the erect hairs of its elytral pubescence, spinose metatrochanters and the shape of the aedeagus (Figs. 20–21).

Etymology

Named after the type locality.

***Aferos* (s. str.) *rubellus* sp. n. (Figs. 22–23)**

Description

Male. Dark brown. Head, palps, except ultimate palpomeres, 2 basal antennomeres, prothorax, procoxae, protrochanters and profemora rufous.

Head with inconspicuous roundish impression behind antennal prominence. Antennal sockets separated by minute lamina. Eyes small (interocular distance 3.6 times as long as

eye radius). Labrum inconspicuous. Mandibles small, strongly curved. Labial and maxillary palpi slender, with ultimate joints dilated and flattened distally. Antennae extending nearly to elytral mid-point; antennomeres 3–11 filiform; antennomere 3 about twice as long as antennomere 2 and 1.5 times shorter than antennomere 4; antennal pubescence sparse and decumbent.

Pronotum transverse, 1.3 times wider than long, with conspicuous median areola and transverse carinae, more prominent near lateral margins; anterior margin almost straight; lateral margins almost parallel-sided, with slightly produced laterally hind angles. Scutellum elongate, narrowing distally, rounded at apex.

Elytra long, 3.3 times longer than wide at humeri and 6.25 times longer than pronotum, slightly narrowing posteriorly, with primary costa 2 conspicuously weaker than the rest primary costae in proximal elytral half; costae 3 and 4 more prominent in distal elytral half; interstices with double rows of small regular quadrate cells. Minute, but relatively dense pubescence distributed along costae.

Legs slender, with conspicuously curved tibiae; tarsomeres 1–4 provided with plantar pads.

Aedeagus with relatively short, not distally produced parameres and narrowed preapical portion of median lobe (Figs. 22–23).

Length: 5.9–7.5 mm. Width (humeral): 1.5–2.2 mm.

Female. Similar to male, but antennae shorter and eyes smaller.

Type material

Holotype male: "S. Africa, R. E. Turner, Brit. Mus., 1923-547", "Port St. John, Pondoland, Oct. 1923" (TMNH); paratypes, male: S.Afr., E Transvaal, Berlin F. S. gorge, 25°32' S–30°44' E, intercept trap, 42 d., 23.X.1986, Endrödy-Younga leg. (ICM); female: S. Afr., Tvl, Uitsoek, Grootkloof ind. for. 25°15' S–30°33' E, fungus trunks, 14.XII.1986, Endrödy-Younga leg. (TMNH).

Diagnosis

A. rubellus sp. n. is evidently close to *A. walteri* Kazantsev, differing by the relatively short, not distally produced parameres and narrowed preapical portion of median lobe of the aedeagus (Figs. 22–23).

Etymology

The name is derived from the Latin for "reddish" alluding to the coloration of the head and prothorax of the new species.

Aferos (s. str.) *silvestris* sp. n. (Figs. 24–25)*Description*

Male. Dark brown. Pronotum rufous.

Head with shallow roundish impression and inconspicuous longitudinal median groove behind antennal prominence. Antennal sockets separated by approximately half their longitudinal diameter. Eyes small (interocular distance 4.7 times as long as the radius). Labrum transverse, conspicuously convex anteriorly. Labial and maxillary palpi slender, with ultimate joints almost parallel-sided and flattened distally. Antennae extending to elytral mid-point, with antennomeres 3–11 slightly flattened and parallel-sided; antennomere 3 three times longer than antennomere 2 and 1.3 times shorter than antennomere 4; antennal pubescence sparse and decumbent.

Pronotum almost square, with prominent median areola and inconspicuous transverse carinae, more developed near lateral margins; anterior margin convex; lateral margins almost parallel-sided, very slightly incised posteriorly, with hind angles nearly right. Scutellum elongate, narrowing distally, rounded at apex.

Elytra long, 3.1 times longer than wide at humeri and 4 times longer than pronotum, slightly widening posteriorly, with 4 equally developed primary costae; interstices with double rows of small, somewhat irregular elongate cells. Minute and sparse pubescence distributed along longitudinal costae.

Legs slender, with conspicuously curved tibiae; metacoxae produced posteriorly into acute spines; tarsomeres 1–4 with plantar pads.

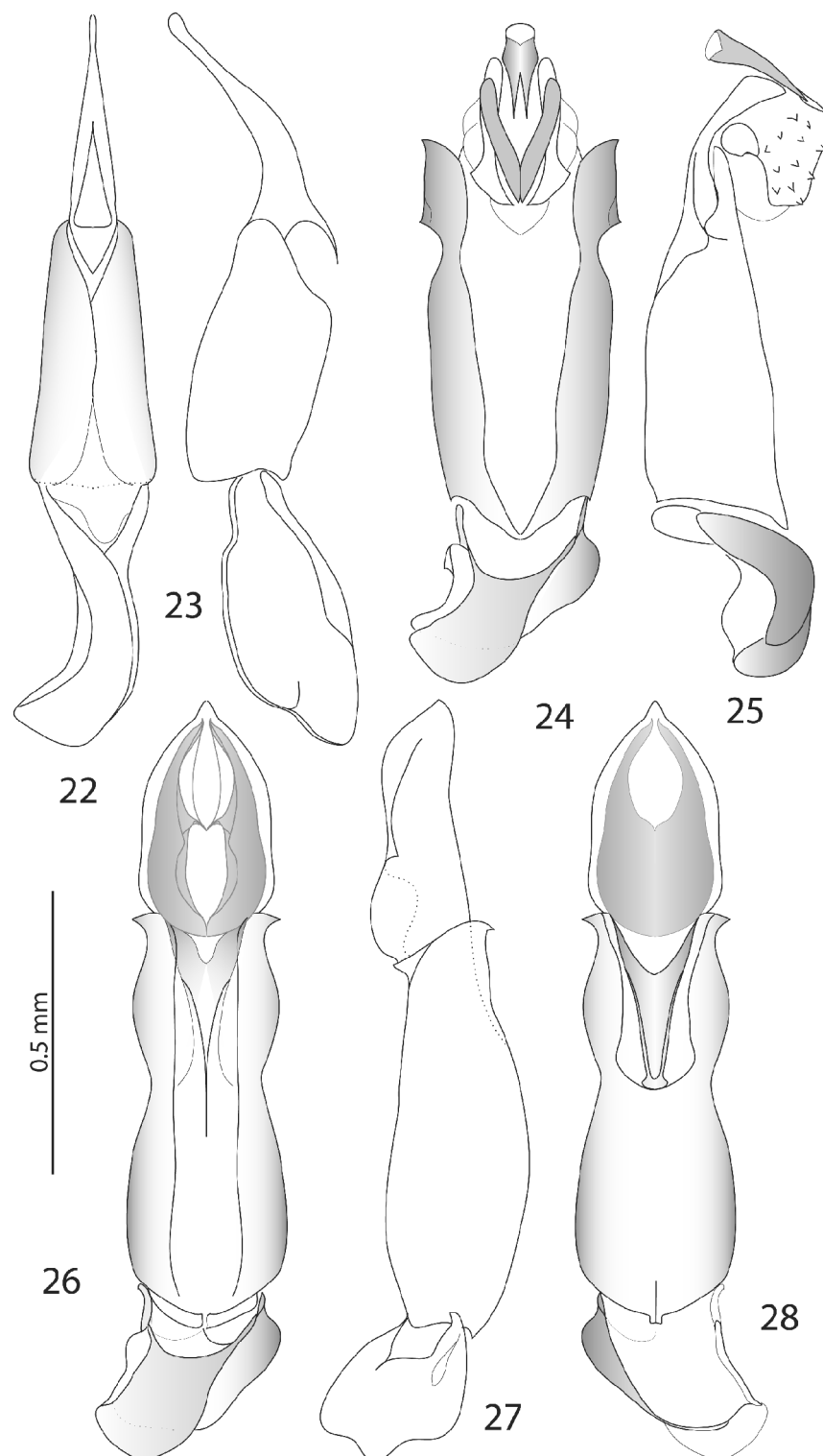
Aedeagus with broad parameres; distal process of median lobe with aculeate ventral surface (Figs. 24–25).

Length: 6.1 mm. Width (humeraly): 1.6 mm.

Female. Unknown.

Type material

Holotype male: S. Afr., TvI, Uitsoek, Grootkloof ind. for. 25°15' S–30°33' E, for. litter, bef. rain, 16.XII.1986, Endrödy-Younga leg. (TMNH).



FIGURES 22–28. Aedeagi of *Aferos* spp. 22 — *A. (s. str.) rubellus sp. n.*, ventrally; 23 — same, laterally; 24 — *A. (s. str.) silvestris sp. n.*, ventrally; 25 — same, laterally; 26 — *A. (s. str.) transvaalensis sp. n.*, ventrally; 27 — same, laterally; 28 — same, dorsally.

Diagnosis

A. silvestris sp. n. differs from other *Aferos* species with uniformly black elytra by the aculeate ventral surface of the distal process of median lobe of its aedeagus (Figs. 24–25).

Etymology

The name is derived from the Latin for "of woods" alluding to the fact that the new species was collected in the floor litter of an indigenous forest.

Aferos* (s. str.) *transvaalensis* sp. n. (Figs. 26–28)Description*

Male. Dark brown to black. Pronotum rufous.

Head with shallow roundish impression and inconspicuous longitudinal median groove behind antennal prominence. Antennal sockets separated by approximately their longitudinal diameter. Eyes small (interocular distance nearly 6 times as long as the radius). Labrum transverse, slightly convex anteriorly. Labial and maxillary palpi slender, with ultimate joints almost parallel-sided and flattened distally. Antennae attaining to elytral third, with antennomeres 3–11 flattened and parallel-sided; antennomere 3 2.5 times wider and longer than antennomere 2 and about twice as short as antennomere 4; antennal pubescence sparse and decumbent.

Pronotum slightly (1.1 times) wider than long, with conspicuous median areola and relatively inconspicuous transverse carinae, more prominent near lateral margins; anterior margin slightly convex; lateral margins almost parallel-sided, slightly incised posteriorly, with hind angles nearly right. Scutellum elongate, narrowing distally, finely emarginate at apex.

Elytra long, 3.1 times longer than wide at humeri and 4 times longer than pronotum, slightly narrowing posteriorly, with 4 equally developed primary costae; interstices with double rows of relatively irregular subquadrate cells. Minute and sparse pubescence distributed along longitudinal costae.

Legs relatively robust, with conspicuously curved tibiae; tarsomeres 1–4 provided with plantar pads.

Aedeagus with outwardly hooked parameres (Figs. 26–28).

Length: 5.2–6.0 mm. Width (humeraly): 1.5–1.6 mm.

Female. Similar to male, but antennae shorter.

Type material

Holotype male: Transvaal, Drakensberg Mts., 8 mi W of Klaserie, 1000 m, 29.III.19(58), E. S. Ross & R. E. Leech coll. (CAS); paratype female: Transvaal, Drakensberg Mts., 12 mi W of Klaserie, 1275 m, 29.III.19(58), E. S. Ross & R. E. Leech coll. (CAS).

Diagnosis

A. transvaalensis sp. n. differs from all other *Aferos* species with uniformly black elytra by the outwardly hooked parameres of its aedeagus (Figs. 26–28).

Etymology

Named after the type locality.

Aferos* (s. str.) *youngai* sp. n. (Figs. 29–30)Description*

Male. Black. Antennomere 1 anteriorly and metacoxal spines brownish; pronotum rufous.

Head with shallow roundish impression behind antennal prominence. Antennal sockets separated by approximately half their transverse diameter. Eyes small (interocular distance nearly 6 times as long as the radius). Labrum transverse, almost straight anteriorly. Labial and maxillary palpi slender, with ultimate joints almost parallel-sided and flattened distally. Antennae widening distally, extending nearly to elytral mid-point, with antennomeres 3–11 flattened and almost parallel-sided; antennomere 3 2.4 times longer than antennomere 2 and 1.25 times shorter than antennomere 4; antennal pubescence sparse and decumbent.

Pronotum slightly (1.1 times) wider than long, with conspicuous median areola and relatively inconspicuous transverse carinae, more prominent near lateral margins; anterior margin convex; lateral margins almost parallel-sided, slightly incised posteriorly, with hind angles slightly produced laterally. Scutellum elongate, narrowing distally, rounded at apex.

Elytra long, 3.2 times longer than wide at humeri and 4.4 times longer than pronotum, slightly widening posteriorly, with 4 equally developed primary costae; interstices with double rows of irregular elongate cells. Minute and sparse pubescence distributed along longitudinal costae.

Legs relatively robust; metacoxae produced posteriorly into acute spines; tibiae curved; tarsomeres 1–4 with plantar pads.

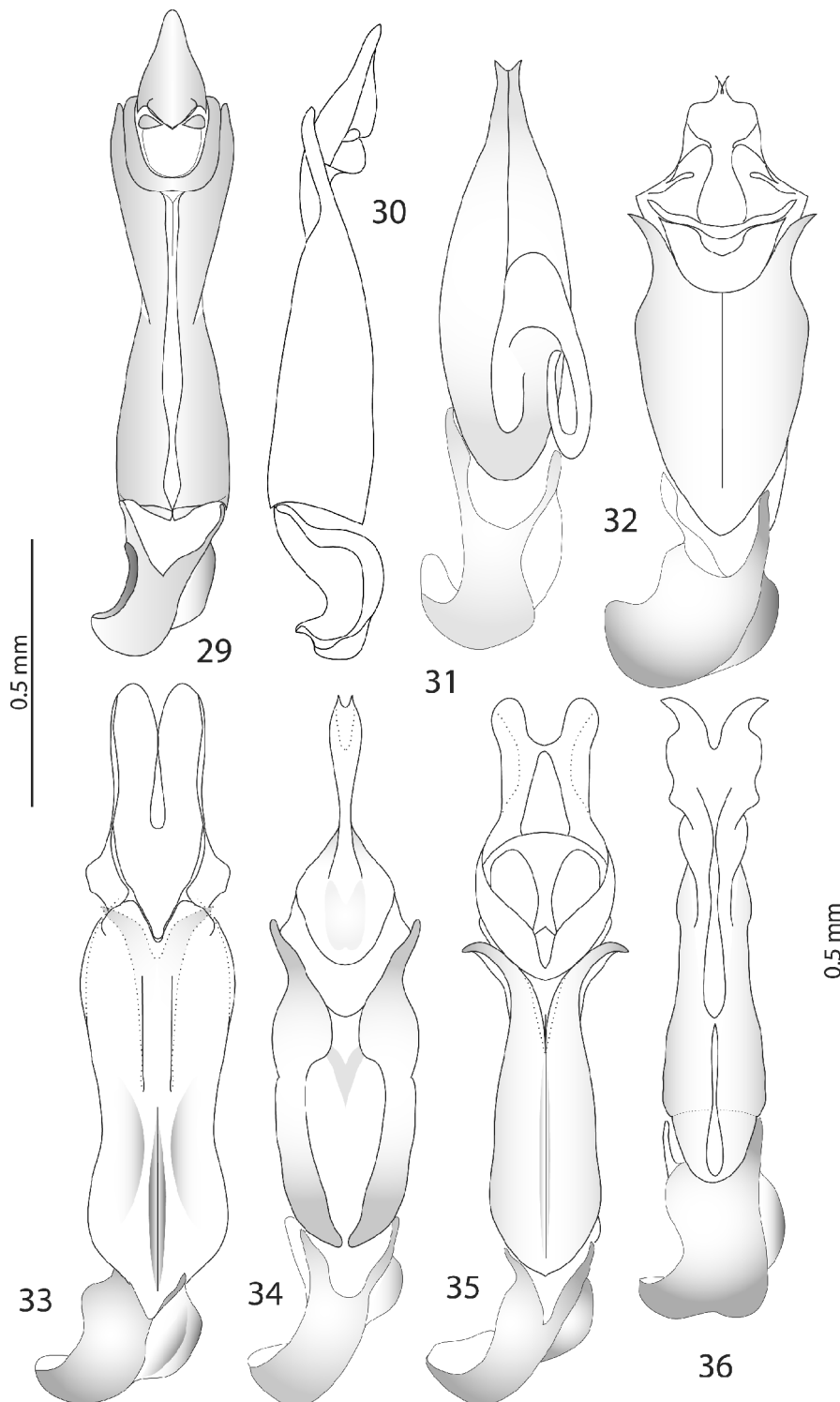
Aedeagus with long, acute distally parameres, narrowed in the middle (Figs. 29–30).

Length: 6.1–7.2 mm. Width (humeraly): 1.5–1.9 mm.

Female. Similar to male, but more robust, antennae shorter and eyes smaller.

Type material

Holotype male: S. Afr., Tv., Nelshoogte, Knuckles Rocks For., 25°47' S–30°50' E, very wet for. litter, 11.II.1987, Endrödy-Younga leg. (TMNH); paratype female: S. Afr., Tvl, Uitsoek, Waterfall area, 25°16' S–30°33' E, beating, 7.II.1987, Endrödy-Younga leg. (TMNH); paratype male: S. Afr., Tvl, Uitsoek, Grootkloof ind. for. 25°15' S–30°33' E, *Cussonia* logs, 6.II.1987, Endrödy-Younga leg. (ICM).



FIGURES 29–36. Aedeagi of *Aferos* spp. 29 — *A. (s. str.) youngai* **sp. n.**, ventrally; 30 — same, laterally; 31 — *A. (s. str.) andrei* Kazantsev; 32 — *A. (s. str.) zambezianus* Kazantsev; 33 — *A. (s. str.) aethiops* (Kleine); 34 — *A. (s. str.) leleupi* Kazantsev; 35 — *A. (s. str.) orientalis* Kazantsev; 36 — *A. (s. str.) londonianus* Kazantsev.

Diagnosis

A. youngai sp. n. differs from the other species of *Aferos* by the coloration of antennomere 1 and long, acute distally and narrowed in the middle parameres of its aedeagus (Figs. 29–30).

Etymology

Named after Dr. Endrödy-Younga who collected the type series.

List of 18 species of the genus *Aferos*

Aferos Kazantsev, 1992: 44

type species: *Stadenus aethiops* Kleine, 1933

Slipinskia Bocák & Bocáková, 1992: 257 type species: *Stadenus aethiops* Kleine, 1933

Aferos (s. str.) Kazantsev, 1992: 44

type species: *Stadenus aethiops* Kleine, 1933

Slipinskia Bocák & Bocáková, 1992: 257 type species: *Stadenus aethiops* Kleine, 1933

1. *A.* (s. str.) *aethiops* (Kleine, 1933). South Africa (Drakensberg Mts., Natal).
Stadenus aethiops Kleine, 1933: 4
Aferos obscuricollis Kazantsev, 1992: 46
2. *A.* (s. str.) *andrei* Kazantsev, 2000: 244. Malawi.
3. *A.* (s. str.) *brincki* (Gomes Alves, 1967). South Africa (Natal).
Stadenus brincki Gomes Alves, 1967: 55
4. *A.* (s. str.) *endroedyi* **sp. n.** South Africa (Northern Transvaal).
5. *A.* (s. str.) *flavocoeruleus* (Kleine, 1933). South Africa (Port St. John [=Umzimvubu], Eastern Cape).
Stadenus flavocoeruleus Kleine, 1933: 3
6. *A.* (s. str.) *flavohumeralis* Kazantsev, 1992: 48. Kenya (Kitale), Uganda (Mt. Elgon).
7. *A.* (s. str.) *leleupi* Kazantsev, 2000: 244. Zimbabwe ("South Rhodesia").
8. *A.* (s. str.) *londonianus* Kazantsev, 2000: 243. South Africa (East London, Eastern Cape, Natal).
9. *A.* (s. str.) *natalensis* **sp. n.** South Africa (Natal).
10. *A.* (s. str.) *orientalis* Kazantsev, 1992: 48. Tanzania ("Tanganika, D.O.A.").
11. *A.* (s. str.) *silvestris* **sp. n.** South Africa (Transvaal).
12. *A.* (s. str.) *rubellus* **sp. n.** South Africa (Transvaal).
13. *A.* (s. str.) *transvaalensis* **sp. n.** South Africa (Drakensberg Mts., Transvaal).
14. *A.* (s. str.) *walteri* Kazantsev, 2000: 243. South Africa (Natal).
15. *A.* (s. str.) *youngai* **sp. n.** South Africa (Transvaal).
16. *A.* (s. str.) *zambeziianus* Kazantsev, 1992: 46. Mozambique (?) ("Zambeze").

Aferos (Ukachaka) Kazantsev, 2000: 244

type species: *Aferos (Ukachaka) basilewskyi* Kazantsev, 2000: 244

17. *A. (U.) basilewskyi* Kazantsev, 2000: 244. Rwanda.

18. *A. (U.) dewittei* Kazantsev, 2000: 245. Congo (Mt. Sesero).

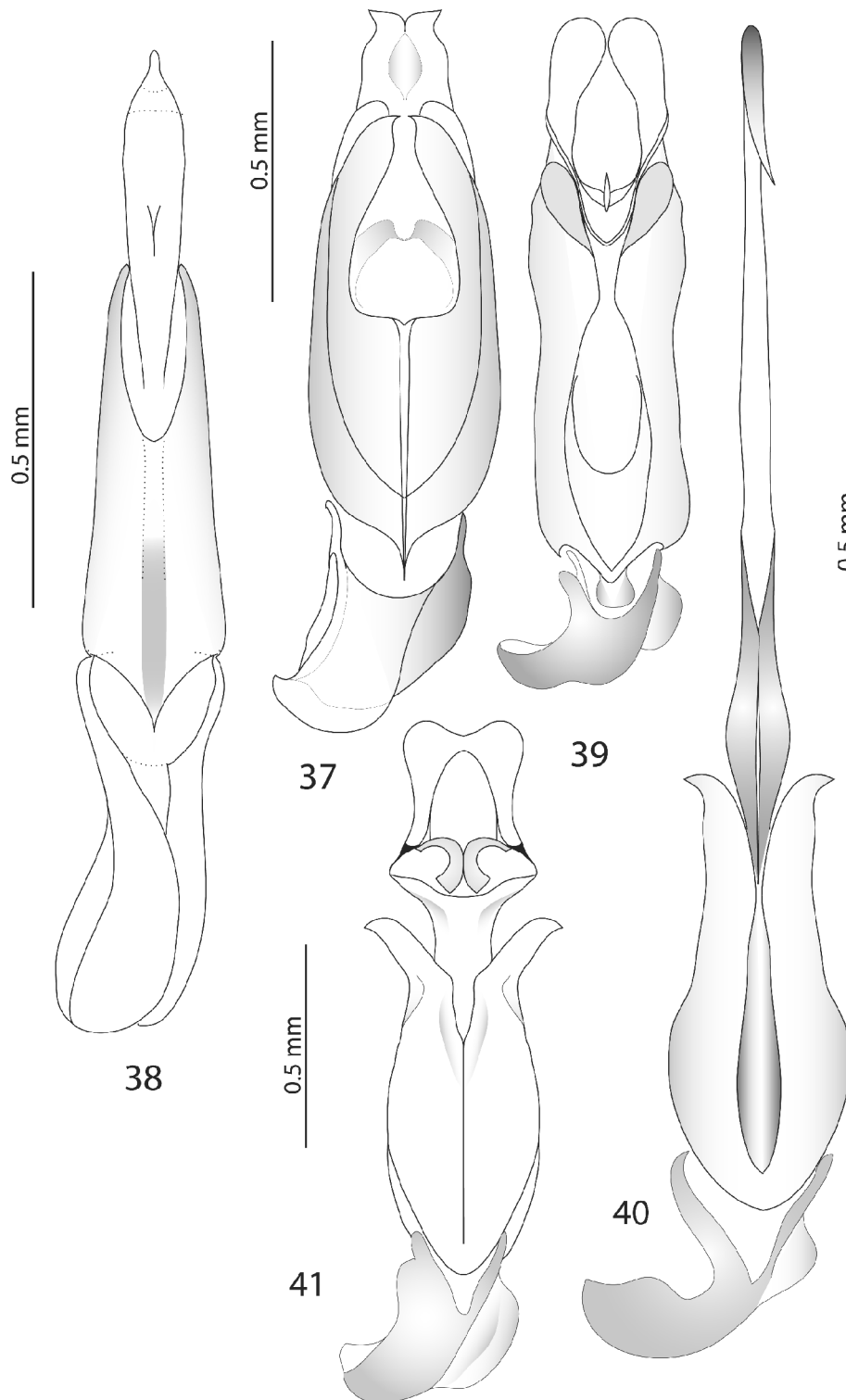
Calopteron ruficolle Boheman described from South Africa (L. Gariep, Eastern Cape), the type of which has not been found in the National Museum of Natural History in Paris, may also belong to *Aferos*; it is not included in the key given below.

The genus *Staepteron* Kazantsev, 1992, both sexes of the type species, *S. cyanoxanthum* (Bourgeois), studied, was found to belong to Erotinae, and is tentatively placed in the subtribe Flagraxina within Dictyopterini. The aedeagus of *S. cyanoxanthum*, unlike that of *Aferos* species, has symmetric phallobase and simple trilobe structure (Fig. 45). Although its male penultimate abdominal segments are not invaginated in the abdomen and the male penultimate ventrite appears to be incised, it is provided with a distal median process (Fig. 44), which is a possible synapomorphy with the slightly produced medially distal margin of the penultimate ventrite in certain Flagraxina, i.e. in *Phaneros* Kazantsev, 1992.

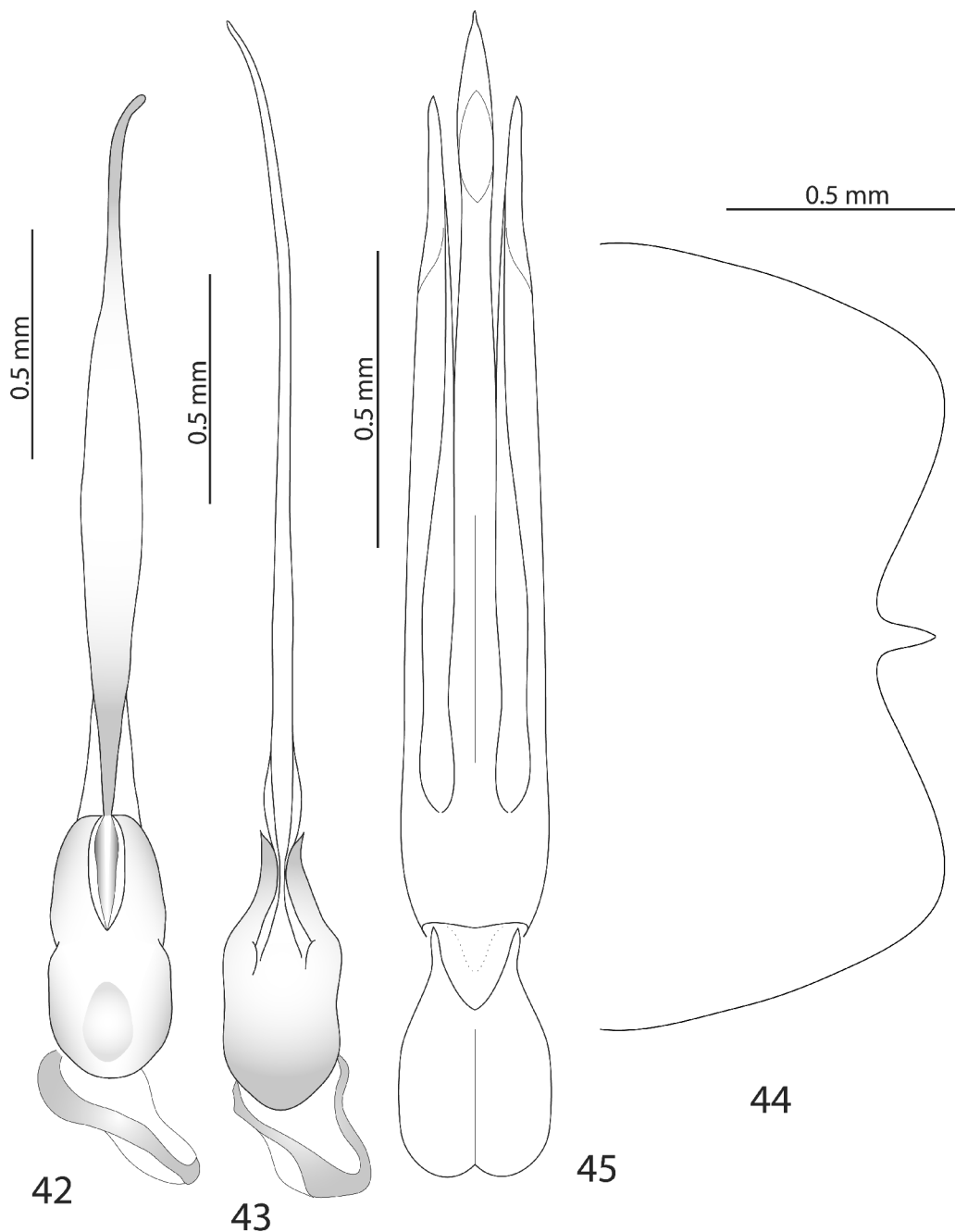
Key to the subgenera and species of *Aferos*

1. Elytral pubescence distributed along costae, their interstices with double rows of reticulate cells. Ultimate maxillary palpomere parallel-sided and flattened distally (*Aferos* s. str.) 2
- Elytra glabrous, at least last elytral interstice with one row of cells. Ultimate maxillary palpomere tapering distally (*Aferos* subgen. *Ukachaka*) 18
- 2 (1). Elytra fulvous with darkened apices. Aedeagus - Fig. 31
.....*A. (s. str.) andrei* Kazantsev
- Elytra black, at most with rufous humeri 3
- 3 (2). Elytra uniformly black 4
- Elytra black with rufous humeri 14
- 4 (3). Scutellum rufous. Aedeagus - Fig. 32*A. (s. str.) zambezianus* Kazantsev
- Scutellum black 5
- 5 (4). Disk of pronotum conspicuously darkened. Aedeagus - Fig. 33
.....*A. (s. str.) aethiops* (Kleine)
- Pronotum uniformly rufous or testaceous 6
- 6 (5). Elytra with erect hairs (Fig. 19). Male metatrochanters spinose. Aedeagus - Figs. 20–21
.....*A. (s. str.) natalensis* **sp. n.**
- Elytra with decumbent pubescence. Male metatrochanters simple 7
- 7 (6). Antennomere 1 anteriorly brownish. Aedeagus - Figs. 29–30
.....*A. (s. str.) youngai* **sp. n.**

- Antennomere 1 uniformly black 8
- 8 (7). Male metacoxae with posterior spine 9
- Male metacoxae simple 11
- 9 (8). Distal process of median lobe long and narrow (Fig. 34).....
..... *A. (s. str.) leleupi* Kazantsev
- Median process short and variously modified 10
- 10 (9). Aedeagus relatively narrow; distal process of median lobe not aculeate (Figs. 17-18)
..... *A. (s. str.) endroedyi* **sp. n.**
- Aedeagus broad; distal process of median lobe with aculeate ventral surface (Figs.
24-25)..... *A. (s. str.) silvestris* **sp. n.**
- 11 (8). Aedeagus with medially produced distal process of median lobe; parameres dis-
tally outwardly hooked (Figs. 26–28)..... *A. (s. str.) transvaalensis* **sp. n.**
- Aedeagus with bifurcate distal process of median lobe..... 12
- 12 (11). Aedeagus with rounded apices of bifurcate distal process (Fig. 35)
..... *A. (s. str.) orientalis* Kazantsev
- Aedeagus with pointed apices of bifurcate distal process 13
- 13 (12). Aedeagus relatively narrow; distal process deeply incised (Fig. 36)
..... *A. (s. str.) londonianus* Kazantsev
- Aedeagus relatively broad; distal process feebly incised (Fig. 37)
..... *A. (s. str.) brincki* (Gomes Alves)
- 14 (3). Head and basal antennomeres testaceous 15
- Head and antennae uniformly black. 16
- 15 (14). Aedeagus with relatively long, distally produced parameres and widened preapical
portion of median lobe (Fig. 38)..... *A. (s. str.) walteri* Kazantsev
- Aedeagus with relatively short, not distally produced parameres and narrowed
preapical portion of median lobe (Figs. 22–23)..... *A. (s. str.) rubellus* **sp. n.**
- 16 (14). Front tibiae testaceous. Aedeagus - Fig. 39 *A. (s. str.) flavocoeruleus* (Kleine)
- All tibiae black..... 17
- 17 (16). Humeri broadly testaceous. Aedeagus - Fig. 40
..... *A. (s. str.) flavohumeralis* Kazantsev
- Humeri with small testaceous spots. Aedeagus - Fig. 41
..... *A. (s. str.) kraatzi* Kazantsev
- 18 (1). Median pronotal cell closed both anteriorly and posteriorly. Male antennae attain-
ing to elytral middle. Median lobe of aedeagus comparatively broad; parameres
hooked inwardly (Fig. 42) *A. (U.) basilewskyi* Kazantsev
- Median pronotal cell open anteriorly. Male antennae attaining only to elytral
fourth. Median lobe of aedeagus very long and narrow; parameres hooked out-
wardly (Fig. 43) *A. (U.) dewittei* Kazantsev



FIGURES 37–41. Aedeagi of *Aferos* spp. 37 — *A. (s. str.) brincki* Gomes Alves; 38 — *A. (s. str.) walteri* Kazantsev; 39 — *A. (s. str.) flavocoeruleus* (Kleine); 40 — *A. (s. str.) flavohumeralis* Kazantsev; 41 — *A. (s. str.) kraatzi* Kazantsev.



FIGURES 42–45. Details of *Aferos* and *Staeperton* spp. 42 — *Aferos (Ukachaka) basilewskyi* Kazantsev; 43 — *A. (Ukachaka) dewittei* Kazantsev; 44 — *Staeperton cyanoxanthum* (Bourgeois), male penultimate sternite; 45 — same, aedeagus, ventrally.

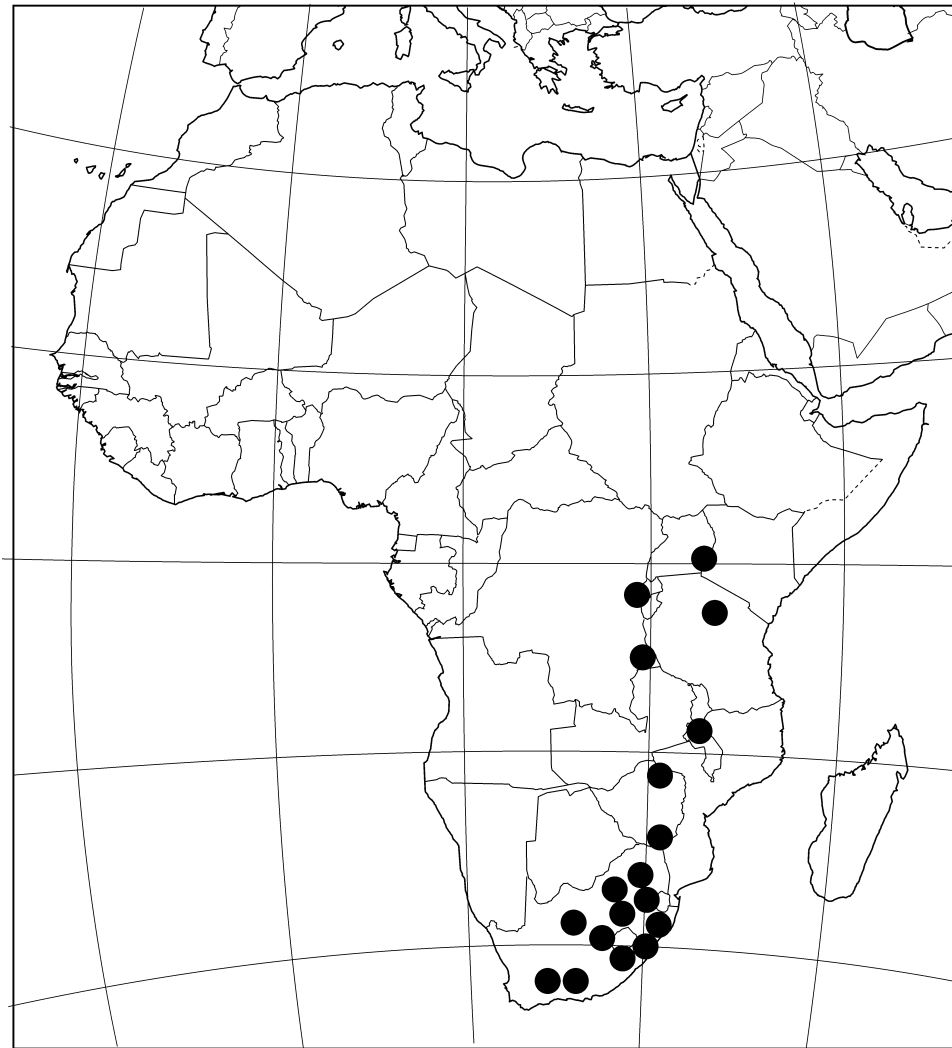


FIGURE 46. Distribution of *Aferos* species (shown by black circles).

Acknowledgements

It is my pleasant duty to express gratitude to Dr. R. Müller (Transvaal Museum of Natural History) and Dr. D. Kavanaugh (California Academy of Sciences) who kindly helped to arrange loans of material from South Africa that included the new species.

References

Bocák, L. et Bocáková, M. (1992) Notes on some genera of the family Lycidae (Insecta: Coleoptera). *Entomologica Basiliensia*, 15, 255–260.

- Gomes Alves, M.-L. (1967) Coleoptera: Lycidae. In: *South African Animal Life. Results of the Lund University Expedition in 1950–1951*, 8, Stockholm, 45–56.
- Kazantsev, S. (1992) Revision of the genus *Stadenus* (Coleoptera, Lycidae) of Africa. *Russian Entomological Journal*, 1(1), 1992, 37–50.
- Kazantsev, S. (2000) New and little known African lycids (Coleoptera). *Russian Entomological Journal*, 9(3), 241–248.
- Kazantsev, S. (2004) Phylogeny of the tribe Erotini (Coleoptera, Lycidae), with descriptions of new taxa. *Zootaxa*, 496, 1–48.
- Kleine, R. (1933) Neue Lyciden und Bemerkungen zum Cat. Col. Junk-Schenkling Lycidae. *Stettiner Entomologische Zeitung* 94(1), 1–20.
- Waterhouse, C.O. (1879) *Illustrations of Typical Specimens in the collection of the British Museum. Part 1 - Lycidae*. London, pp. 93.