

***Goellneriana deckerti* gen. nov. & spec. nov. (Heteroptera: Reduviidae: Phymatinae: Macrocephalini) from Namibia, with a review of the Afrotropical ambush bugs**

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Doesburg, P.H. van. *Goellneriana deckerti* gen. nov. & spec. nov. (Heteroptera: Reduviidae: Phymatinae: Macrocephalini) from Namibia, with a review of the Afrotropical ambush bugs.

Zool. Med., Leiden (7), 27.viii.2004: 147-159, figs. 1-7.—ISSN 0024-0672.

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Key words: Insecta; Heteroptera; Reduviidae; Phymatinae; *Goellneriana deckerti*; new genus; new species; Namibia; list of Afrotropical Phymatinae; distribution.

Goellneriana deckerti gen. nov. & spec. nov. (Heteroptera: Reduviidae: Phymatinae: Macrocephalini) from Namibia is described and illustrated. Keys to the tribes and to the Afrotropical genera and species of the subfamily Phymatinae are included, a checklist and a distribution map of the Afrotropical ambush bugs is added.

Introduction

At the request of Dr Jürgen Deckert of the Museum für Naturkunde, Berlin, the author studied two male phymatine specimens collected in Namibia in 2002 by Dr U. Göllner-Scheidig. The two ambush bugs belong to a new species of the tribe Macrocephalini and are conspecific. They could not be placed in one of the existing genera; therefore, a new genus is named to accommodate the new species.

This is also a good occasion to give an overview of the known Afrotropical Phymatinae. Some remarks about the distribution of the phymatids seem here to be appropriate. Till 1906 no phymatids from tropical Africa were known. Handlirsch (1897) in his brilliant monograph states: "Australien und die äthiopische Region mit Madagascar beherbergen keine Phymatiden". It is only in 1906 and 1911, that Distant described the first species from South Africa, although Westwood described in 1841 *Oxythyreus cylindricornis*, but the origin of the specimen was unknown. They are still not reported from Madagascar.

The new genus seems to be most close to *Oxythyreus* Westwood, 1841, having similar antenna and pronotum, but differs in having the head more compact, the eyes more anteriorly placed, the ocelli much larger, the scutellum much longer and its apex rounded, the very narrow coriaceous part of the fore wing almost rod-like and its apex rounded (figs 1, 2), the apex of abdomen smoothly rounded, not deeply excavated and the paramere differently shaped.

Classification

Four tribes are recognized within the Reduviidae-Phymatinae: Phymatini Laporte, 1832, Carcinocorini Handlirsch, 1897, Macrocephalini Handlirsch, 1897, and Themonocorini Carayon, Usinger & Wygodzinsky, 1958, as proposed by Carayon et al. (1958), and accepted by Schuh & Slater (1995).

Already in 1869 Schiødte recognized the close relationship of the Phymatidae with the Reduviidae and even proposed to include them, but this was rejected by Handlirsch (1897) and had therefore no follow-up till the mentioned investigations of Carayon et al. (1958).

The Themonocorini could, properly speaking, not be called ambush bugs because they are missing the characteristic highly specialized raptorial fore legs. With all respect for the brilliant research and the arguments of Carayon and his collaborators, I consider a classification in which the Themonocorinae are placed as a subfamily of the Reduviidae next to the Phymatinae (containing the tribes Phymatini, Carcinocorini and Macrocephalini) equally acceptable.

Key to the tribes of the Phymatinae

1. Fore legs not obviously raptorial **Themonocorini**
- Fore legs highly raptorial (chelate) 2
2. Fore femur finger-like prolonged beyond insertion of tibia, together forming a pincher **Carcinocorini**
- Insertion of tibia at top of femur 3
3. Scutellum small, triangular, head and propleuron with grooves to accomodate antennae in rest **Phymatini**
- Scutellum larger, no grooves **Macrocephalini**

In the Afrotropical region only representatives of the Macrocephalini and Themonocorini are found. The Macrocephalini comprises seven genera: *Eurymnus* Bergroth, 1917; *Narina* Distant, 1906; *Paragreuoocoris* Carayon, 1949; *Metagreuoocoris* Villiers, 1965; *Parabotha* Kormilev, 1984; *Oxythyreus* Westwood, 1841 and the new genus *Goellneriana*. The Themonocorini are only represented by the genus *Themonocoris* Carayon et al., 1958, and contains four species.

Key to the Afrotropical macrocephaline genera

1. Scutellum very long, reaching apex of abdomen 2
- Scutellum much shorter, remaining far removed from apex of abdomen 3
2. First rostral segment much longer than second, head posterior of eye at least two times length of eye *Paragreuoocoris* Carayon, 1949 (3 species)
- First rostral segment as long as second, length behind eye not more than one and a half times length of eye *Metagreuoocoris* Villiers, 1965 (1 species)
3. Posterolateral projections of pronotum strongly directed anteriorly, its anterior margin (sides of pronotum) deeply or sharply concave 4
- Posterolateral projections not directed anteriorly, sides of pronotum only shallowly concave 6
4. Scutellum short, not reaching level of corial apices of fore wings and more or less tapering towards apex *Eurymnus* Bergroth, 1917 (1 species)
- Scutellum reaching said level or longer 5
5. Scutellum reaching level of posterior border of connexivum VI *Narina* Distant, 1906 (1 species)

- Scutellum reaching level of posterior border of connexivum IV *Parabotha* Kormilev, 1984 (2 species)
- 6. Scutellum very short, tapering to an acute apex, corial part of fore wing broad, its apex tapering to a sharp point, apex of abdomen concave *Oxythyreus* Westwood, 1841 (2 species)
- Scutellum reaching level of posterior border of connexivum of segment VI, corial part of fore wing narrow, its apex rounded, apex of abdomen not concave *Goellneriana* gen. nov. (1 species)

Key to species of the genus *Paragreucoris* Carayon

- 1. Apex of postero-lateral pronotal extension truncate *P. nimbanus* Carayon, 1949
- Apex of postero-lateral pronotal extension concave or convex 2
- 2. Apex of postero-lateral pronotal extension concave ... *P. aethiopicus* Carayon, 1949
- Apex of postero-lateral pronotal extension convex *P. carayoni* Villiers, 1965

Key to species of the genus *Parabotha* Kormilev

- 1. Posterior margin of pronotum convex, apex of scutellum truncate *P. singularis* Kormilev, 1984
- Posterior margin of pronotum weakly emarginate, apex of scutellum rounded *P. whiteheadi* Kormilev, 1984

Key to species of the genus *Oxythyreus* Westwood

- 1. First antennal segment robust, wider than following two; scutellum reaching level of posterior margin of connexivum IV; length 10 mm *O. cylindricornis* Westwood, 1841
- First antennal segment slender cylindrical, scutellum reaching hind border of connexivum V; length 12 mm *O. ruckesi* Kormilev, 1962

Key to species of the genus *Themonocoris* Carayon, Usinger & Wygodzinsky

- 1. First antennal segment shorter than second, anterior disc of pronotum without spines *T. bambesanus* Carayon et al., 1958
- First antennal segment longer than second, anterior disc of pronotum with large spines 2
- 2. Membrane of hemelytra dark piceous; [length 4.5 – 4.8 mm] *T. tshikapanus* Carayon et al., 1958
- Membrane pale brown 3
- 3. Antennal segment 2 about 1/4 as long as 3, head, pronotum and margin of connexiva black; [length 4.8 mm] *T. aethiopicus* Kormilev & van Doesburg, 1986
- Antennal segment 2 about 1/3 as long as 3, head, pronotum and connexiva pale brown *T. kinkalanus* Carayon et al., 1958

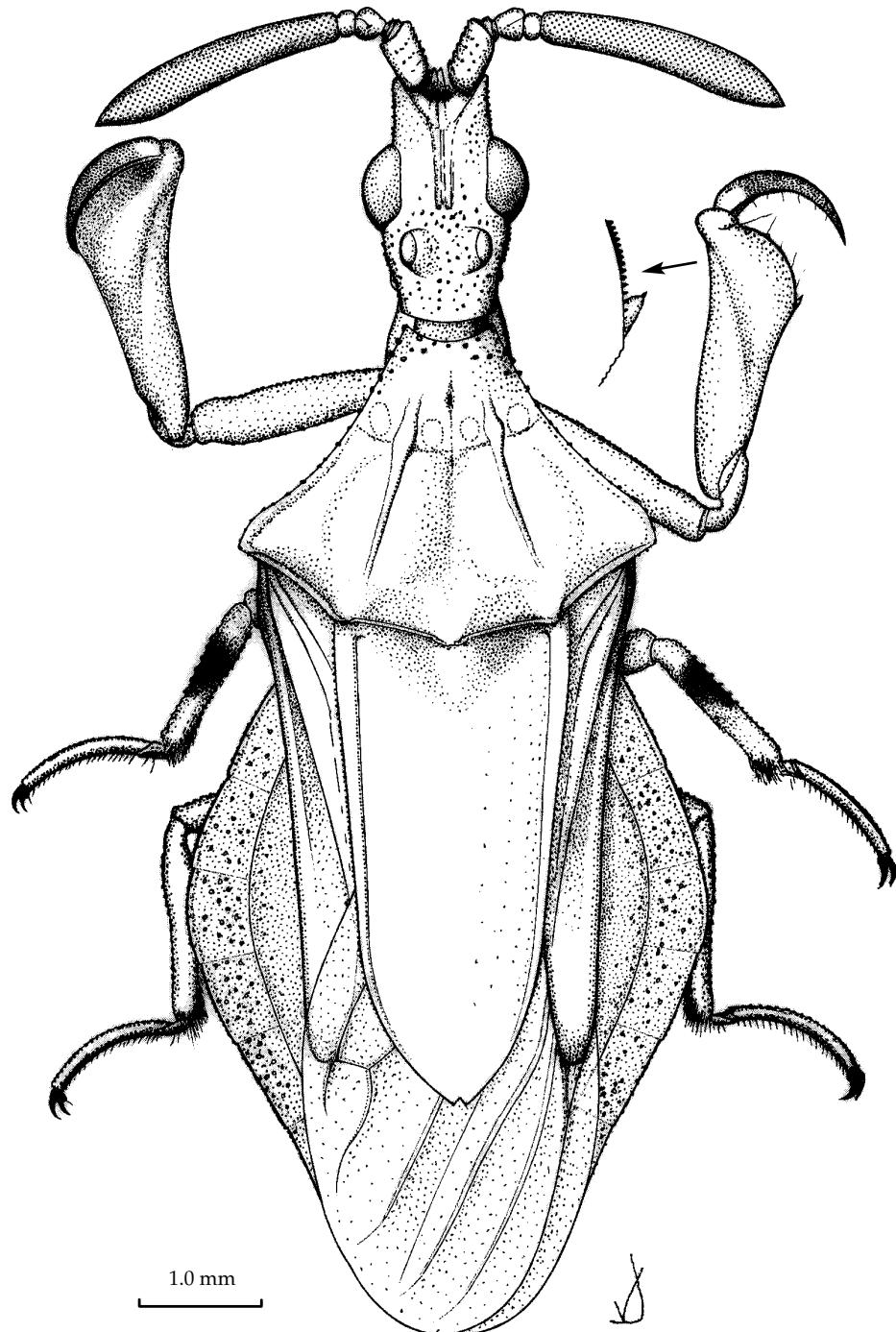


Fig. 1. *Goellneriana deckerti* spec. nov., dorsal aspect of holotype.

Goellneriana gen. nov.
(figs 1-6)

Type species: *Goellneriana deckerti* spec. nov., gender feminine.

Etymology.— The new genus is named after my friend and colleague, Dr Ursula Göllner-Scheiding, Emeritus Curator of Entomology at the Museum für Naturkunde, Berlin, in recognition of her important contributions to entomology and because of remembrances of pleasant cooperation.

Short diagnose.— Male: length 10 mm, head thickset, eyes anterior of middle, ocelli very large, antennae with small bead-like second and third segments and long, club-shaped fourth segment; pronotum wider than long, trapezoid, postero-lateral projections not directed anteriorly; scutellum lingulate with rounded apex, length 0.7 times of abdomen; coriaceous part of fore wing narrowly spatulate with apex rounded; abdomen laterally dilated at IV, its apex rounded.

Description.— Head thickset, its length (midline) 1.3 times width over eyes, Eyes large, moderately bulging, situated anterior of middle of head, postocular part twice as long as preocular part (dorsal view); ocelli extremely large, laterally directed, diameter about 0.4 of that of eyes; vertex between ocelli raised; antennae robust, first segment thick, short, length about twice its width, their bases almost touching each other; second as long as wide connected to first with a small constricted basal part; third segment even shorter than wide, fourth segment longest, about 3.5 times length of first segment, faintly club shaped. Rostrum short, fist segment robust, second and third tapering to a point, segments decreasing in length; genal, jugal and maxillary lobes large, the latter two meeting in front of head, buccular lobes small.

Pronotum trapezoid, wider than long (1.3 times), anterior margin concave, antero-lateral margins only slightly concave, posterior margin between lateral angles four-sided convex, its edge finely raised; anterior margin of propleurae concave, ventrad with a anterior projection armed with strong teeth; prosternum small, central furrow narrowing posteriorly, lodging only tip of second and last rostral segments; mesothorax large, with two adjacent, deep longitudinal sulci to accommodate the anterior coxae in rest.

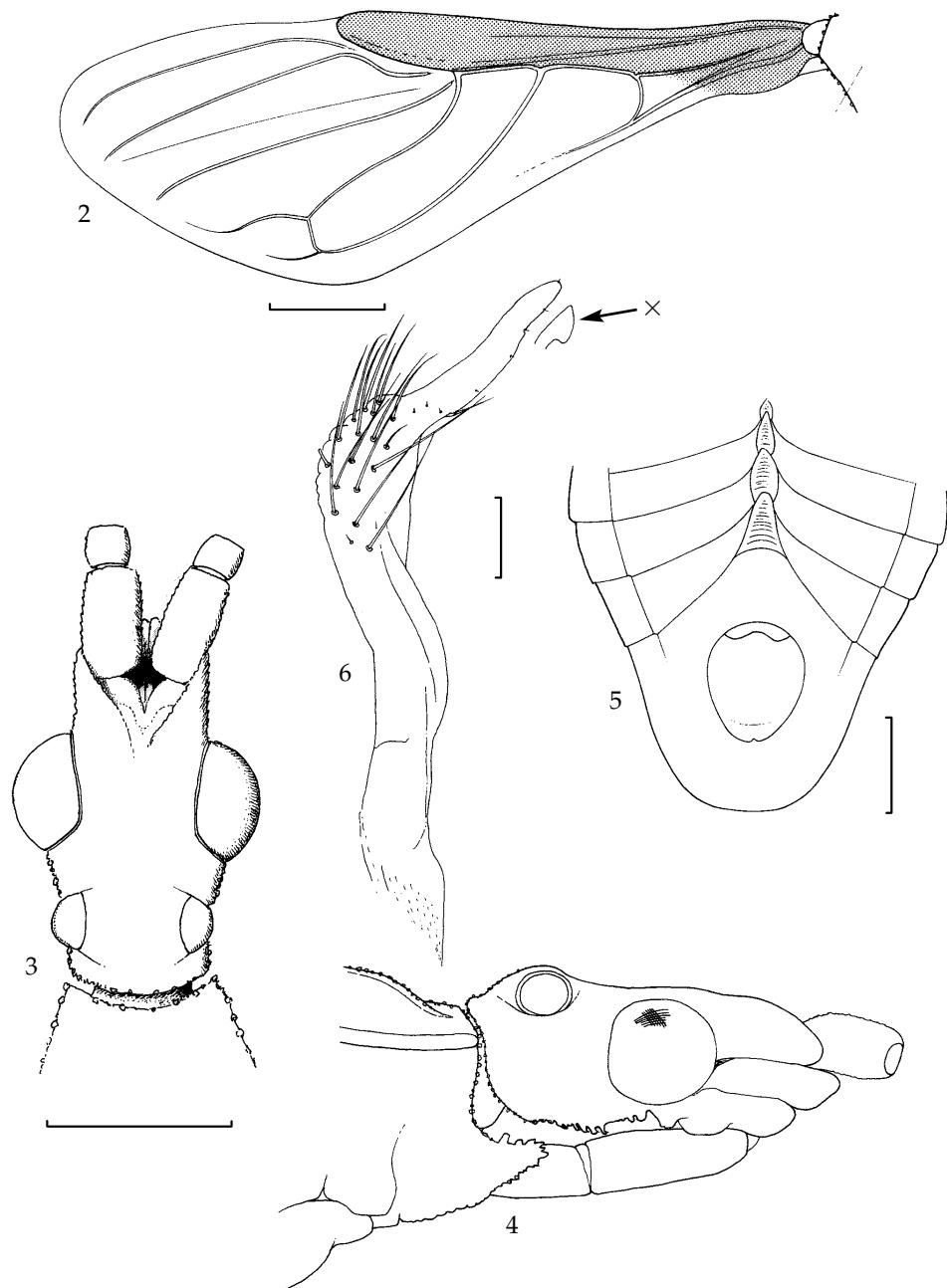
Scutellum lingulate, slightly tapering to rounded tip, much longer than pronotum (almost 1.5 times) reaching level of end of abdominal connexivum VI.

Fore wings with coriaceous part very narrow, slightly club shaped, almost entirely consisting of the emboliar part and the almost disappeared remnants of the endocorium.

Abdomen with flat laterally dilated connexiva, greatest width at segment IV, about 1.6 times the width between the costea of the fore wings in rest position, posteriorly broadly rounded.

Note.— The new genus get stuck in couplet 14 (for *Oxythyreus* and *Eurymnus*) of the “Key to genera of Macrocephalinae” by Froeschner & Kormilev (1989: 13). Accepting priority in couplet 11 for “postero-lateral projections of pronotum not directed anteriorly” it runs to couplet 14 because the scutellum is longer than its basal width. The new genus could be included by adapting this key as follows:

- | | |
|---|-----|
| 13. Scutellum longer than its basal width | 13a |
| - Scutellum short | 15 |



Figs 2-6. *Goellneriana deckerti* spec. nov. 2, left fore wing of holotype; 3, 4, head of paratype, in dorsal and lateral view, respectively; 5, posterior half of abdomen, ventral view, holotype; 6, right paramere of holotype, dorsal aspect; x: tip of paramere in lateral view showing a small ventral lobe. Bars of figs 2-5 represent 1 mm; that of fig. 6, 0.1 mm.

- 13a. Apex of scutellum rounded, at least reaching connexival segment VI, corial part of hemelytra narrow, its apex rounded *Goellneriana* gen. nov.
- Scutellum shorter, its apex more or less pointed, corial part of hemelytra wider, its apex sharp 14

Goellneriana deckerti spec. nov.
(figs 1-6)

Material.— Holotype ♂ (NNMW), [S-Namibia] Keetmanshoop, Distr.: Gellap Ost 3, S-Rand des Observatoriums, ca 26°24'S/18°00'E, lux [taken at light], leg. U. Göllner. 16.x.2002./ Zoolog. Museum Berlin. Paratype: ♂, (ZMB) of same data as holotype. The female is unknown.

Description.— Colour pale yellow to orange-yellow, but alive specimens are green (Dr Jürgen Deckert, pers. comm.).

Head (figs 3, 4).— Thickset, length about 1.4 times its width over eyes, surface irregularly verrucose, eyes large, round in lateral view, comprising about 0.65 mm or 40% of length of head; ocelli very large, far apart on locally raised vertex, pointing dorso-laterally, diameter 0.3 mm or 45% of diameter of eyes.

Antennifers pointing anteriorly, in between minute bilobed tylus visible; tylus laterally covered by far anteriorly produced genae; underneath juga (mandibular plates) and maxillary plates, respectively, anteriorly both enclosing the rostral base; bucculae very small, at base of maxillary plates.

Antennae robust, nearly 3 mm long, first segment short, thick, verrucose, second and third very short, square, fourth longest slightly curved, club-shaped, apex pointed, surface smooth, densely set with light brown, fine microsetae (0.024 mm), ventrally intermingled with some thicker black ones; ratio of antennal segments roughly 26:10:6:85.

Rostrum reaching middle of procoxal cavities, ratio of segments: 8:5:3; first segment stout, width 0.35 mm, second and third tapering to 0.13 mm.

Thorax.— Pronotum. Anterior border concave, angles sharp; anterior part small, convex, verrucose, centrally with a small deep pit; shallow depression between anterior and posterior part with four smooth, semi matt patches; posterior part (disc) large, undulate, transversally convex, by two longitudinal carinae divided into three depressed sections; carinae arise from posterior margin of anterior part, running backwards over transversal depression and disc, evanescent towards posterior border; lateral margin posteriorly rounded and carinate, lateral angles blunt, forming obtuse angles with postero-lateral raised borders; surface of disc crenulate and areolate, its depressions punctate; margins all around, except the posterior proper, irregularly crenate; prosternum short, medial sulcus deep, sides rounded and anteriorly tapering to pointed apex rendering prosternum bifid; sulcus anteriorly broad, posteriorly tapering to narrow, harboring third rostral segment; thoracic pleurae crenulate, propleurae anteriorly almost straight, ventral corner produced anteriorly into small spiny apex; dorsal part of meso- and metapleurae with some larger granulae.

Scutellum lingulate, much longer than width at base (1.5 times), sides slightly tapering toward apex; base raised and crenulate, surface of rest densely punctate to feebly areolate, rounded apex centrally with a very small indentation, sides laterally irregular-

ly crenulate, lateral margins dorsally carinate which fades to smooth toward apex.

Wings.— Fore wings (fig. 2) a little surpassing apex of abdomen, corial part narrow with rounded tip, smooth, reaching middle of sixth abdominal segment; subcosta and medial vein proximally raised, forming in between a deep longitudinal furrow which vanishes gradually towards apex. Hind wings well developed, reaching level of middle of seventh abdominal segment.

Legs.— Fore legs: coxae pale yellow, trochanters colourless, femora reddish, tibiae except light base, blackish brown spotted; femora a little longer than coxae (13:11), apically with a double row of about 40 black denticles each, at inner side with an extended row of one small and four large yellow setae, one more near the joint and a denticle-tipped conical process at proximal side of row; tibiae sickle formed, ending with a sharp black spine; outer side with a row of about forty short black spines, at inner side with an extended row of eight long yellow setae; proximal half of anterior side setose with a very small comb-like row of about ten spinules like a "ctenidium". Middle and hind legs: coxae light yellow, trochanters colourless, femora and tibiae yellow, reddish tinged; middle tibiae with a large dorsal spot and apex blackish brown, apical setosity yellowish, end of tibiae heavily dark setose; tarsi dark grey with blackish brown underside, its ventral setosity colourless, claws black.

Abdomen.— Longer than wide (5:4), width as in generic description, apex in middle faintly shallowly indented, dorsal connexiva granulate, lateral margins feebly crenulate; pygophore (fig. 5) broadly oval, a little egg-shaped, anteriorly narrowly covered by sinuous posterior margin of eighth sternite, posteriorly feebly transversally concave, sinuous in lateral view; genital cavity caudo-dorsal, antero-dorsal wall with a central posterior lobe, posterior wall bilobed; paramere (fig. 6) slender, dug-head-shaped (Carayon et al., 1958), swelling between shaft and hook set with long setae, apex with a minute ventral lobe (fig. 6).

Colour.— Predominantly pale yellow, abdomen orange-yellow. Some red on: apical rim of first antennal segment, second segment, eyes, costal margin of fore wings near basis, apical rim of scutellum, upper surfaces of femora, upper surfaces of mid and hind tibiae. Black: row of teeth on apex of fore femora and tibiae and claws of tarsi. Dark brown: fore tibiae except yellow base. Blackish brown: a marking on middle tibiae and underside of tarsi.

Measurements (in mm).— Total length of specimen: 9.6; length without head: 8.0; length of head: 1.8; width of head over eyes: 1.34; length between eyes: 0.67; width over ocelli: 0.78; between ocelli: 0.5; length of antenna: 3.0; length of ant. IV: 2.0; length of rostrum: 1.9; length of pronotum: 2.45, width of pronotum: 3.25; length of anterior coxa: 2.0; length of anterior femur: 2.4; length of fore wing: 6.5; length of scutellum: 3.7; width of scutellum: 1.9; width of both fore wings in rest position: 2.44; length of abdomen: 5.3; width of abdomen: 4.2. The measurements of the paratype are very similar: total length: 9.5; width over ocelli: 1.9; between ocelli: 0.55, length of fourth antennal segment: 2.04.

Distribution.— Only known from the type locality Keetmanshoop in (S) Namibia (ca 26°24'S-18°00'E).

Note.— It is a great pleasure to name this species after its co-collector and eminent entomologist and friend, Dr Jürgen Deckert, entomologist and Curator of Entomology at the Museum für Naturkunde, Berlin. The specimens were caught at light; therefore,

the exact biotope is not known. The direct environment of the type locality is a semi-arid area, characterized by Dr Deckert (pers. comm.) as “..... karg, sie gehört zur Nama-Karoo”. The green colour of live specimens points to a life on the foliage.

Checklist of Afrotropical Phymatinae (Heteroptera: Reduviidae)

Macrocephalini Handlirsch, 1897

***Euryynnus* Bergroth, 1917**

Botha Distant, 1911: 44, (preoccupied). Type species: *Botha insignis* Distant, 1911.

Euryynnus Bergroth, 1917: 284. New name for *Botha* Distant.

***Euryynnus insignis* (Distant, 1911)**

Botha insignis Distant, 1911: 45, 1 fig. Holotype (BMNH), sex unknown, loc.: South Africa, Cape Colony [Western Cape], Mossel Bay. (Mosselbaai: 34°10'S-22°07'E); redescribed by Kormilev, 1984: 628 (female).

Euryynnus insignis; Bergroth, 1917: 284.

***Goellneriana* gen. nov.**

Type species: *Goellneriana deckerti* spec. nov.

Goellneriana deckerti spec. nov. Holotype ♂, (NNMW), 1 paratype ♂, (ZMB), Namibia, Keetmanshoop, ca 26°24'S-18°00E, Distr.: Gellar Ost 3.

***Metagreucoris* Villiers, 1965**

Metagreucoris Villiers, 1965: 1176. Type species: *Metagreucoris inflatus* Villiers, 1965.

Metagreucoris inflatus Villiers, 1965: 1177, fig. 23. Holotype (MNHN), gender not given; female according to Kormilev (1987: 160). Loc.: Central African Republique, “haut Oubangui” [upper course of Oubangi River], upstream of Fort de Possel (5°01'N-19°14'E). 1 ♂ (MNHN), Ivory Coast, Savane à Andropogonées, D 1-19.iii.1971 (Kormilev, 1987: 160).

***Narina* Distant, 1906**

Narina Distant, 1906: 413. Type species: *Narina capensis* Distant, 1906.

Narina capensis Distant, 1906: 414, 1 fig. Holotype (BMNH) sex unknown. Loc.: South Africa, Cape of Good Hope, Table Mountain 33°58'S-18°25'E; 1 ♂, [western] Cape Prov., Swellendam, 34°01'S-20°25'E; 1 ?, [Western] Cape prov., Ceres 33°21'S-19°18'E (Kormilev, 1962b: 351).

Narina elizabetha Distant, 1906: 414, 1 fig. Holotype (BMNH), Loc.: South Africa, Cape Colony, Port Elizabeth. Synonymized by Kormilev, 1962b: 351.

***Oxythyreus* Westwood, 1841**

Macrocephalus (*Oxythyreus*) Westwood, 1841: 27. Type species *Macrocephalus* (*Hemithyreus*) *cylindricornis* Westwood, 1841: 28.

Oxythyreus; Amyot & Serville, 1843: 291.

***Oxythyreus cylindricornis* (Westwood, 1841)**

Holotype ♀ (MNHN) “Habitat ignotus” (South Africa?); 1 ♂ (NMP), South Africa, Natal, Drakensberg Area, Cathedral Peak, Arensig Mt. 1465 m, 28°54'S-29°09'E (Kormilev & van Doesburg, 1986a: 123, figs 10, 11). Schuh, R.T. & J.A. Slater, 1995 (2nd ed. 1996): 151, fig. 48.1 [?deformed].

Oxythyreus ruckesi Kormilev, 1962a: 3, figs 1-7. Holotype ♂ (AMNH), South Africa.

***Parabotha* Kormilev, 1984**

Parabotha Kormilev, 1984: 629. Type species: *Parabotha singularis* Kormilev, 1984.

Parabotha singularis Kormilev, 1984: 629, fig. 8. Holotype ♂ (BMNH), South Africa, Hermanus [Western Cape], 34°24'S-19°13'E; 1 ♂ (NCIP), South Africa, Cape prov., [Western Cape], Stellenbosch (Jonkershoek), 33°55'S-18°52'E. (Kormilev & van Doesburg, 1986b: 274, figs 2, 3).

Parabotha whiteheadi Kormilev, 1984: 630, figs 9, 10. Holotype ♀ (SAM), South Africa, Clan William, Narduissberg, [Western Cape], Clanwilliam: 32°10'S-18°53'E; paratype ♀ (NMNH) South Africa.

***Paragreuoocoris* Carayon, 1949**

Paragreuoocoris Carayon, 1949: 6. Type species: *Paragreuoocoris nimbanus* Carayon, 1949.

Paragreuoocoris nimbanus Carayon, 1949: 7, figs 1-3. Holotype ♀ (MNHN), Guinea, near Keoulenta

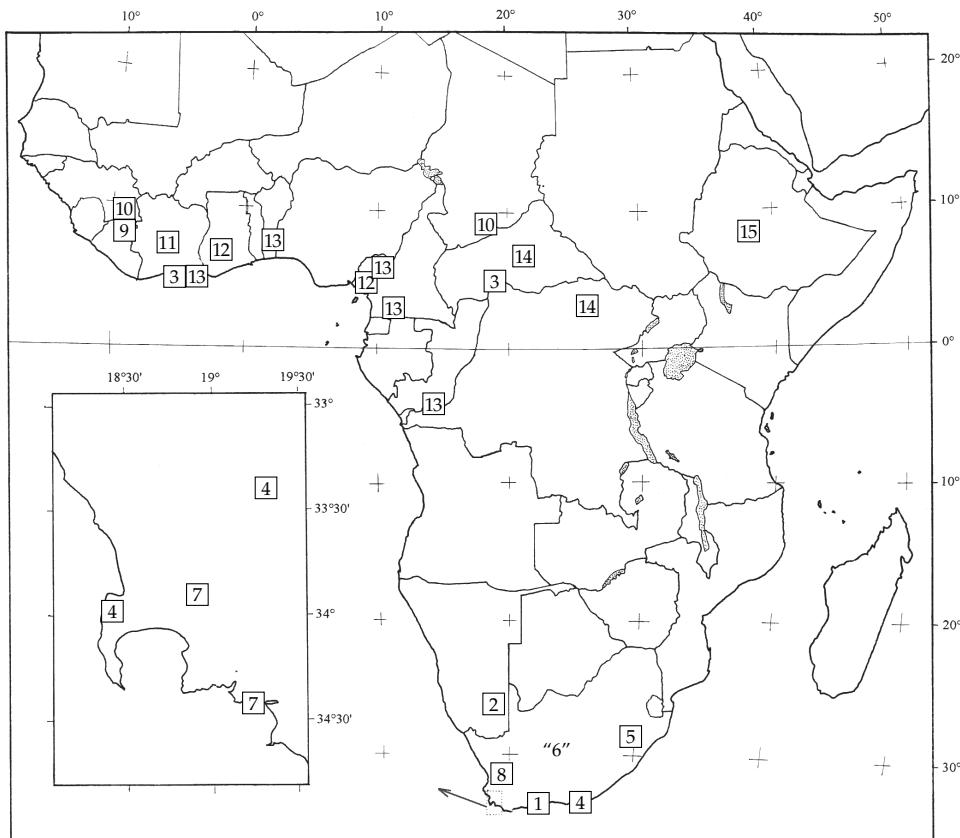


Fig. 7. Distribution of the Afro-tropical species of the Phymatinae. 1 = *Eurymnus insignis* (Distant, 1911); 2 = *Goellneriana deckerti* spec. nov.; 3 = *Metagreuoocoris inflatus* Villiers, 1965; 4 = *Narina capensis* Distant, 1906; 5 = *Oxythyreus cylindricornis* (Westwood, 1841); 6 = *Oxythyreus ruckesi* Kormilev, 1962; 7 = *Parabotha singularis* Kormilev, 1984; 8 = *Parabotha whiteheadi* Kormilev, 1984; 9 = *Paragreuoocoris nimbanus* Carayon, 1949; 10 = *Paragreuoocoris aethiopicus* Carayon, 1949; 11 = *Paragreuoocoris carayoni* Villiers, 1965; 12 = *Themonocoris tshikapanus* Carayon et al., 1958; 13 = *Themonocoris kinkalanus* Carayon et al., 1958; 14 = *Themonocoris bambesanus* Carayon et al., 1958; 15 = *Themonocoris aethiopicus* Kormilev & Doesburg, 1986.

($7^{\circ}42'N$ - $8^{\circ}20'W$), foot of Mt Nimba ($7^{\circ}39'N$ - $8^{\circ}25'W$); 1♂, 1♀ paratypes (MNHN) of same data. Villiers, 1965: 1175, Lamto, Côte d'Ivoire.

Paragreucoris aethiopicus Carayon, 1949: 8, fig. 4. Holotype ♂ (MNHN), Guinea, near Keouenta ($7^{\circ}42'N$ - $8^{\circ}20'W$), foot of Mt Nimba ($7^{\circ}39'N$ - $8^{\circ}25'W$); 1♂, 1♀ paratypes (MNHN), Chad, Fort Archambault [= Sarh] ($9^{\circ}08'N$ - $18^{\circ}23'E$). Villiers, 1965: 1175, Lamto, Côte d'Ivoire.

Paragreucoris carayoni Villiers, 1965: 1175, fig. 22. Holotype ♀ (MNHN), Ivory Coast.

Themonocorini Carayon, Usinger & Wygodzinsky, 1958

Themonocoris Carayon, Usinger & Wygodzinsky, 1958

Themonocoris Carayon et al., 1958: 258. Type species: *Themonocoris tshikapanus* Carayon, c.s., 1958.

Themonocoris tshikapanus Carayon et al., 1958: 262, figs 1, 2, 11. Holotype ♂, paratype ♂ (MRCB), (Belgian) Congo, Kasai, Tshikapa ($6^{\circ}24'S$ - $20^{\circ}46'E$), Kabuya; paratypes: 1♀, 2 nymphs (MNHN), Kasai, Mukendi; 1paratype ♂ (MNHN), Cameroon, Nkongsamba $4^{\circ}57'N$ - $9^{\circ}56'E$; 1♂, 1♀ (CRI), Ghana, Tafo (Kormilev, 1966: 277). Villiers, 1965: 1175, Lamto and Dabou, Côte d'Ivoire.

Themonocoris kinkalanus Carayon et al., 1958: 264, figs 3-10, 13-35. Holotype ♂, paratype ♀, 2 paratypes (MNHN), Kinkala, Middle Congo, French Equatorial Africa [Congo Brazzaville]; 8 paratypes (MNHN): Cameroon, Central Plateau near Dschang $5^{\circ}27'N$ - $10^{\circ}03'E$, 1300 m; Cameroon, near Ebolowa $2^{\circ}55'N$ - $11^{\circ}08'E$; Dahomey [Benin]; Ivory Coast, near Bingerville $5^{\circ}21'N$ - $3^{\circ}53'E$, Adiopodoumé [Adiapo-Doumé] $5^{\circ}20'N$ - $4^{\circ}07'E$ and Dabou $5^{\circ}18'N$ - $4^{\circ}23'E$; (French) Guinea, near Macenta $8^{\circ}32'N$ - $9^{\circ}28'W$.

Themonocoris bambesanus Carayon et al., 1958: 269, fig. 12. Holotype ♀ (MRCB), (Belgian) Congo (Kinshasa), Bambesa on Uele River $3^{\circ}27'N$ - $25^{\circ}42'E$; 2♂♂, 2♀♀ (MNHN), République Centro-Africaine, La Maboké (Kormilev, 1966: 277).

Themonocoris aethiopicus Kormilev & van Doesburg, 1986a: 114. Holotype ♀ (BMNH), Central Abyssinia, Maraquo [Marequo?]. Marequo area: $8^{\circ}06'N$ - $38^{\circ}38'E$ (Gazetteer).

Acronyms of depositories

AMNH	American Museum of Natural History, New York.
BMNH	British Museum of Natural History, now the Natural History Museum, London.
CRI	Cocoa Research Institute, Tafo, Ghana.
MNHN	Musée National d'Histoire Naturelle, Paris.
MRCB	Musée royal de l'Afrique Centrale, Tervueren.
NCIP	National Collection of Insects, Pretoria.
NMNH	National Museum of Natural History, Washington.
NNMW	Namibian National Museum, Windhoek.
NMP	Natal Museum, Pietermaritzburg.
ZMB	Zoologisches Museum (Museum für Naturkunde), Berlin.

Acknowledgements

I wish to express my sincere gratitude to Dr Ursula Göllner-Scheiding and Dr Jürgen Deckert (Zoological Museum Berlin) for giving me the opportunity to study the two specimens from Namibia, to Dr J.A. Slater (Storrs, CT), to Prof. Dr Ing. C. van Achterberg (Leiden) for his valuable suggestions, to Dr A.C. van Bruggen (Leiden) for advice concerning a distribution map of Africa, to Mr G.D.M. Tweehuysen (NEV, Amsterdam) for help in obtaining literature, to Dr E.J. van Nieukerken (Leiden) for help in photographing the specimens.

References

- Amyot, J.C.B. & J.G.A. Serville, 1843. Histoire naturelle des insects. Hemiptères. i-lxxvi + 1-681, 12 plates.— Paris.
- Bergroth, E., 1917. Notes sur le genre *Carcinochelis* Fieb. et description d'une espèce nouvelle, des îles Philippines (Hem. Macrocephalidae).— Bull. Soc. ent. Fr. 16: 282-284.
- Carayon, J., 1949. Phymatides nouveaux d'Afrique tropicale (Hem. Heteroptera).— Bull. Soc. ent. Fr. 1949 (1): 5-8, 6 figs.
- Carayon, J., R.L. Usinger and P. Wygodzinsky, 1958. Notes on the higher classification of the Reduviidae, with the description of a new tribe of the Phymatinae (Hemiptera-Heteroptera).— Rev. Zool. Bot. afr. 57 (3-4): 256-281, 67 figs.
- Distant, W.L., 1906. Some undescribed genera and species of South African Rhynchota. Heteroptera Family Phymatidae.— Trans. S. Afr. phylos. Soc. 16: 413-415, 2 figs.
- Distant, W.L., 1911. On some South African Rhynchota in the South African Museum.— Ann. S. Afr. Mus., 10(2): 39-49, 9 figs.
- Froeschner, R.C. & N.A. Kormilev, 1989. Phymatidae or ambush bugs of the World: A synonymic list with keys to species, except *Lophoscutus* and *Phymata* (Hemiptera).- Entomography 6: 1-76, 8 figs.
- Handlirsch, A., 1897. Monographie der Phymatiden.— Ann. K.-k. Naturhistorischen Hofmuseums 12 (2): 127-230, 35 figs, 6 plts.
- Kormilev, N.A., 1962a. Notes on African and Asiatic Macrocephalinae (Hemiptera, Phymatidae).— Am. Mus. Novit. 2107: 1-15, 20 figs.
- Kormilev, N.A., 1962b. Notes on Phymatidae in the British Museum (Natural History), (Hemiptera-Heteroptera).— Ann. Mag. nat. Hist. [13], 5: 349-367, 20 figs.
- Kormilev, N.A., 1984. Keys to the genera and descriptions of new taxa of macrocephaline ambush bugs (Heteroptera: Phymatidae).— J. nat. Hist. 18: 623-637, 11 figs.
- Kormilev, N.A. & P.H. van Doesburg, 1986a. Notes on Phymatidae (Heteroptera).— Zool. Med. Leiden 60 (8): 113-127, 11 figs.
- Kormilev, N.A. & P.H. van Doesburg, 1986b. Notes on Asiatic and African Macrocephalinae (Heteroptera: Phymatidae) with description of a new genus.— Zool. Med. Leiden 60 (18): 273-276, 3 figs.
- Kormilev, N.A., 1987. On African Macrocephalinae (Hemiptera, Phymatidae).— Revue fr. Ent., (N.S.), 9 (4): 159-161, fig. 1.
- Schiødte, J.M.C, 1869. Nogle nye hovedsaetninger af Rhynchoternes morphologi og systematik.— Naturhist. Tidsskrift (3) 6: 237-266. English translation (abridged): On some new fundamental principles in the morphology and classification of Rhynchota.— Ann. Mag. nat. Hist. (4) 6: 225-249 (1870).
- Schuh, R.T. & J.A. Slater, 1995 (2nd ed., 1996). True bugs of the world (Hemiptera: Heteroptera) classification and natural history: i-xii, 1-336, ill.— New York (Phymatinae: 151, 154, fig. 48.1.)
- Villiers, A., 1965. Hemiptères Reduviides, Phymatides et Henicocephalides de Côte d'Ivoire.— Bull. Inst. fr. Afr. Noire, Sér. A, 27 (3), Phymatidae: 1175-1178, figs. 22-24.
- Westwood, J.O., 1841. Observations upon the Hemipterous Insects composing the genus Syrtis of Fabricius, or the Family Phymatites of Laporte, with a monograph of the genus *Macrocephalus*.— Trans. ent. Soc. Lond. 3: 18-28, Pl. 2.

Received: 9.i.2004

Accepted: 24.vi.2004

Edited: C. van Achterberg

Appendix

List of localities

CAR = Central African Republic; FEA = French Equatorial Africa; SA = South Africa

Adiopodoumé (Adiapo-Doumé), Ivory Coast	5°20'N-4°07'W
Bambesa, Congo (Kinshasa)	3°27'N-25°42'E
Bingerville, Ivory Coast	5°21'N-3°53'W
Cathedral Peak, Drakensberge, Kwazulu-Natal 1465 m	28°54'S-29°09'E
Ceres, South Africa	33°21'S-19°18'E
Clanwilliam, South Africa	32°10'S-18°53'E
Dabou, Ivory Coast	5°18'N-4°23'W
Dahomey (Benin)	
Dschang, Cameroon, Central Plateau near	5°27'N-10°03'E
Ebolowa, Cameroon	2°55'N-11°08'E
Fort Archambault (= Sarh), Chad	9°08'N-18°23'E
Haut Oubangui, upstream of Fort de Possel, CAR	5°01'N-19°14'E
Hermanus, Western Cape, SA	34°24'S-19°13'E
Ivory Coast, Savane à Andropogonées	?
Kasai, Mukendi, Zaïre ??	?
Kasai, Tshikapa Kabuya, Zaïre	6°24'S-20°46'E
Keetmanshoop, Namibia	26°24'S-18°00E
Keoulenta /foot Mt Nimba, Guinea, respectively	7°42'N-8°20'W- 7°39'N-8°25'W
Kinkala, Middle Congo, FEA (Congo Brazzaville)	4°21'S-14°45'E
La Maboké, CAR	(=? Mabeko) 5°18'N-26°52'E) ?
Macenta, (French) Guinea	8°32'N-9°28'W
Maraquo, Marek'o(?), C. Ethiopia (120 km S of Addis Abeba)	8°01'N-38°34'E
Marequo area (Gazetteer)	8°06'N-38°38'E
Mossel Bay (Mosselbaai), SA	34°10'S-22°07'E
Nkongsamba, Cameroon	4°57'N-9°56'E
Port Elizabeth, South Africa	33°56'S-26°34'E
Sarh, Chad, see Fort Archambault	
Stellenbosch (Jonkershoek), SA	33°55'S-18°52'E
Swellendam, South Africa	34°01'S-20°25'E
Table Mountain, South Africa	33°58'S-18°25'E
Tafo, N of Kumasi (Ashanti), Ghana	6°43'N-1°37'W

