

Systematics of the Southern African Hydarini (Insecta: Heteroptera: Coreidae: Coreinae)

With 19 Figures

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Abstract. The tribe Hydarini STÅL (Coreidae) from Southern Africa is revised; four genera and four species are included, two of them collected in Tanzania, Zambia, Zimbabwe, Namibia and South Africa being new to science. *Oannes spinosus* DISTANT, previously of uncertain suprageneric position, is now placed within the Hydarini. Illustrations of the habitus, head, pronotum and hemelytra, as well as of male and female genitalia are included. A key to the South African species of the tribe is provided.

Introduction

In the Ethiopian region the tribe Hydarini STÅL is represented by four genera: *Corduba* STÅL, with four species included in two subgenera: *Corduba* (*Corduba*) *macra* STÅL, and *Corduba* (*Acanthocorduba*) *echinops* LINNAVUORI, *C. (A.) maynei* SCHOUTEDEN, and *C. (A.) umbrina* LINNAVUORI; *Haidara* DISTANT with five species *H. angustula* LINNAVUORI, *H. kagoro* LINNAVUORI, *H. lamellaris* LINNAVUORI, *H. senegalensis* LINNAVUORI, and *H. shillukorum* LINNAVUORI; *Hydara* DALLAS, with two species *H. nigrofasciata* GARCIA VALERA, and *H. tenuicornis* (WESTWOOD); and *Oannes* DISTANT, with only one species, *O. spinosus* DISTANT.

The only species previously known from Southern Africa were *H. tenuicornis* (STÅL, 1865, 1873), and *O. spinosus*, the later of uncertain suprageneric position was considered as "incertae sedis" until now when is transferred to the Hydarini. The present paper adds two new species, one belonging to *Haidara* and collected in Tanzania and South Africa, and the second one included in *Corduba* (*Acanthocorduba*) from Zambia, Zimbabwe, Namibia and South Africa. New localities are given for *Hydara tenuicornis* and *Oannes spinosus*.

Key to genera and species of Hydarini from Southern Africa

- | | | |
|----|---|---|
| 1 | Antennal segment I incrassate, with three densely tuberculate, longitudinal keels (Fig. 3). | 2 |
| 1' | Antennal segment I slender, cylindrical, apically clavate (Fig. 1) | 3 |
| 2 | Buccula simple, short, not aerolate and not exceeding the apex of tylus (Figs. 4, 6); humeral angles armed with four or five acute processes; scutellar disc tumid. | |
| | <i>Oannes spinosus</i> DISTANT (Figs. 18–19) | |
| 2' | Buccula conspicuously raised, aerolate and surpassing the apex of tylus (Fig. 5); humeral angles unarmed; scutellar disc flat. | |
| | <i>Haidara viljoeni</i> spec. nov. (Fig. 15) | |

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- 3 Apical border of corium obliquely straight; body elongated, narrowed, parallel-sided (Fig. 7); posterior border of abdominal segment IX of female concave or bifid (Fig. 13); antennal segment IV short. *Corduba (Acanthocorduba) lurida spec. nov.* (Fig. 16)
- 3' Apical border of corium with posterior third strongly concave (Fig. 8); body elongate, robust; posterior border of abdominal segment IX of female truncated (Fig. 12); antennal segment IV longer. *Hydara tenuicornis* (WESTWOOD) (Fig. 17)

Haidara viljoeni spec. nov. (Figs. 3, 5, 11, 14–15)

Holotype male. Body distinctly broadening caudally, pear-shaped; upper surface flattish, rugose. Head, pronotum, scutellum, hemelytra, and connexival segments densely and coarsely punctate. Head elongate; tylus protruding, extending to middle of first antennal segment, provided with spiny median carina; jugae swollen, with short and acute spine; antenniferous tubercles prominent and apically bifid; antennal segment I long, incrassate, with three densely tuberculate longitudinal keels; segment II strongly flattened, margins tuberculate; segment III slender, cylindrical; segment IV club-shaped; buccula well developed, areolate, broad, extending to near basal margin of head; rostrum reaching middle coxae; rostral segment I extending until posterior gular region; segment II partially concealed. Thorax: Pronotum broadening caudad; frontal angle prominent, acute; anterolateral border emarginated, obliquely straight, weakly crenulate; humeral angle rounded (Fig. 3). Prosternal keels low; prosterna, mesosterna, and metasterna with median sulcus, which is delimited by longitudinal lateral elevations. Legs: Unarmed. Scutellum: Triangular, flatish; apex short, obtuse. Hemelytra: Macropterous, reaching middle third of the last abdominal segment; obsolete crenulate; hemelytral membrane with veins not reticulated. Genital capsule: Elongately, ovate, with posteroventral border entire. Parameres: Body short; anterior lobe convex, and posterior lobe elongated, slender, with numerous spines (Fig. 11).

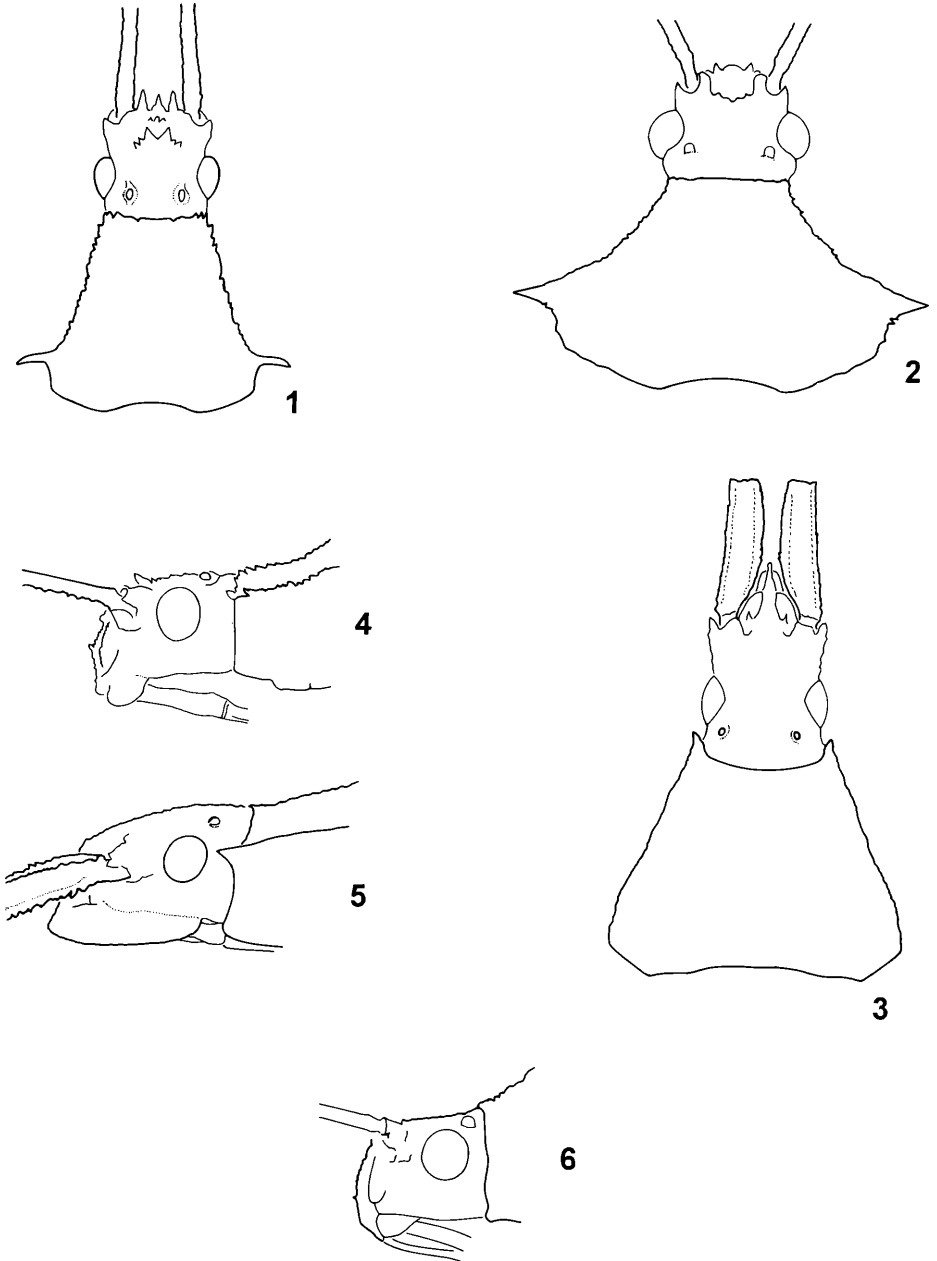
Dorsal coloration: Head light orange yellow with following areas reddish brown: six longitudinal stripes running across total length, and the area surrounding the ocelli; antennal segment I light orange yellow with some reddish brown spots, and with the longitudinal keels dirty creamy yellow; segments II–III light yellow, and IV reddish brown with apex orange hazel; pronotum light dirty ivory, punctures orange hazel to reddish brown, and the anterolateral and posterolateral margins dirty creamy white; scutellum light orange yellow, with apex dirty ivory, and two longitudinal stripes reddish brown; clavus and corium dirty ivory to grayish, punctures orange hazel, and veins surrounded by darker color; hemelytral membrane dirty white, with veins brown; connexival segments light dirty ivory, with the punctures orange hazel to reddish brown. Ventral coloration: Light ivory orange, punctures and granules light pink, with faint dark reddish brown longitudinal stripes on each side; rostral segment I yellow, segments II–IV dark orange hazel; legs yellow with longitudinal and discoidal reddish brown spots.

Head length: 1.37 mm; width across eyes: 0.90 mm; interocular space: 0.58 mm; interocellar space: 0.40 mm; preocular distance: 0.87 mm; length of antennal segments: I, 1.06 mm; II, 0.60 mm; III, 1.06 mm; IV, 0.62 mm. Pronotum: Total length: 1.35 mm; width across frontal angles: 1.00 mm; width across humeral angles: 1.92 mm. Scutellar length: 0.60 mm; width: 0.63 mm. Body length: 7.00 mm.

Female. Similar to the holotype. Dorsal abdominal segments VIII–IX, and genital plates light yellow; connexival segments VIII–IX dark brown.

Head length: 1.37 mm; width across eyes: 0.97 mm; interocular space: 0.67 mm; interocellar space: 0.47 mm; preocular distance: 0.88 mm; length of antennal segments: I, 1.06 mm; II, 0.60 mm; III, 1.05 mm; IV, 0.60 mm. Pronotum: Total length: 1.46 mm; width across frontal angles: 1.07 mm; width across humeral angles: 2.12 mm. Scutellar length: 0.65 mm; width: 0.75 mm. Body length: 7.58 mm.

Variation. 1. Dorsal coloration light yellow. 2. Longitudinal stripes running across dorsal head orange hazel. 3. Dorsal abdominal segment VII yellow, with two longitudinal black stripes.



Figs. 1–3: Head and pronotum in dorsal view:

1 – *Corduba (Acanthocorduba) lurida* spec. nov.; 2 – *Hydara tenuicornis* (WESTWOOD); 3 – *Haidara viljoeni* spec. nov. – Figs. 4–6: Head in lateral view: 4 – *Corduba (Acanthocorduba) lurida* spec. nov.; 5 – *Haidara viljoeni* spec. nov.; 6 – *Hydara tenuicornis* (WESTWOOD).

Host plant. Swept from *Helichrysum kraussii* Sch. Bip. (Compositae).

Holotype ♂: SOUTH AFRICA: Transvaal, Happy Rest Nature Reserve, 22°59'S, 29°46'E, 1990. III. 10. M. Stiller. Type material in the National Collection of Insects, Pretoria. Paratypes: 1 ♂: SOUTH AFRICA: Transvaal, Meintjies Kop, Pretoria, 1968. III. 19. J.A. Slater, S. Slater and T. Schuh. In the National Collection of Insects, Pretoria. 2 ♂♂ and 12 ♀♀: TANZANIA: (Tanganyka), Ukiriguru, 1960. XII. 9–19. I.A.D. Robertson, C. Prochera, and S. Net. 5 ♀♀ and 1 ♂ in James A. Slater collection; 2 ♀♀ in The Natural History Museum, London; 3 ♀♀ and 1 ♂ in the Colección Entomológica del Instituto de Biología de la Universidad Nacional Autónoma de México, 2 ♀♀ in the American Museum of Natural History, New York.

Remarks. This species appears to be closely related to *H. senegalensis* LINNAVUORI (1989) particularly due to the possession of a broad buccula, which extends nearly to the basal margin of the head. Both also share a cylindrical antennal segment III and the body broadening caudad. *H. viljoeni* spec. nov. can be distinguished by having the prosternal keels of the thorax low, rostral segment II partially concealed, anterolateral margins of pronotum and basal third of costal margins of corium weakly crenulate, frontal angles of pronotum prominent and acute, and hemelytral membrane without reticulated veins. In contrast, *H. senegalensis* has the pronotal keels broad and raised, rostral segment II practically concealed, anterolateral margins and basal third of costal margins strongly crenulate, frontal angles shorter and wide, and hemelytral membrane with reticulated veins.

Distribution. Tanzania and Southern Africa.

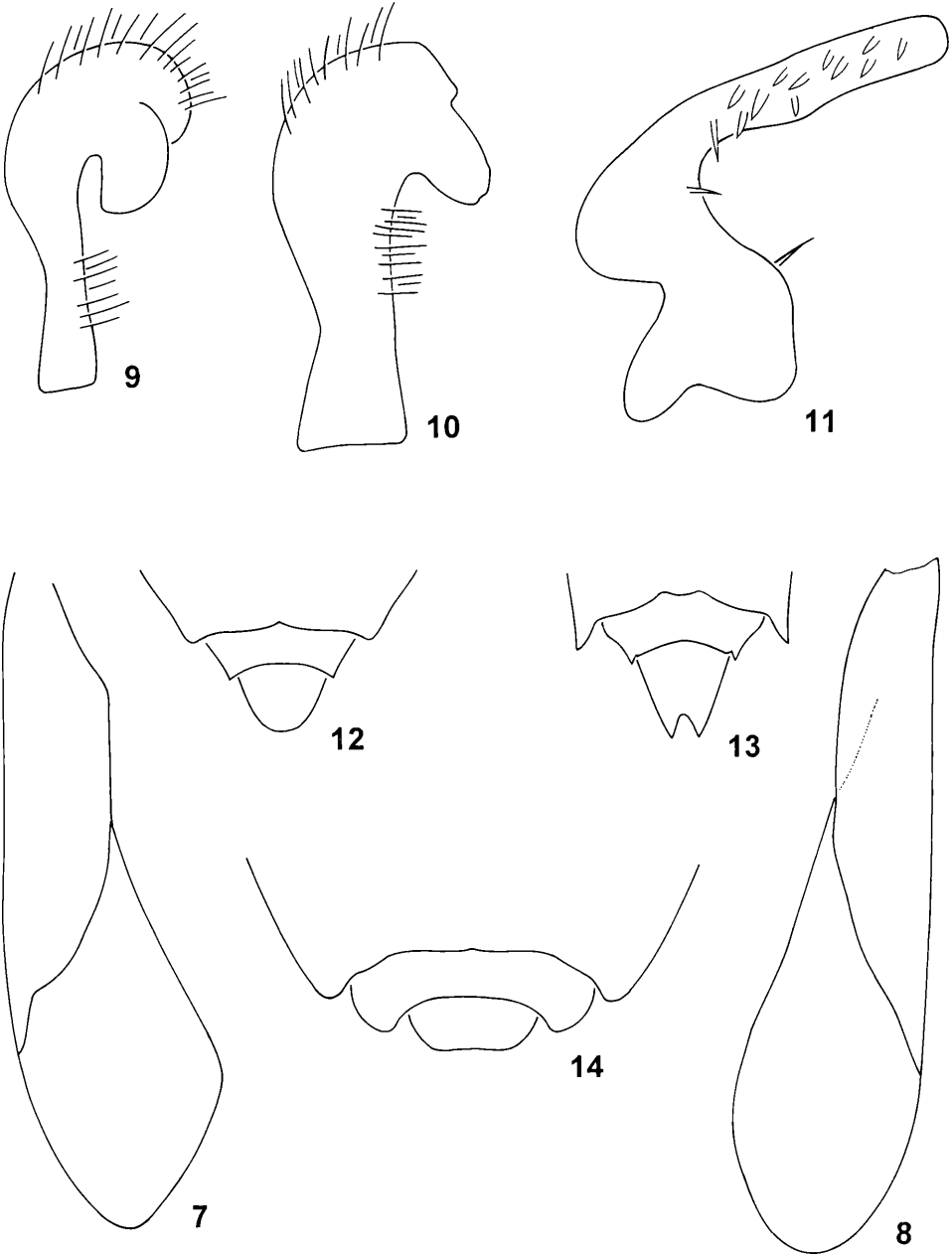
Etymology. Named after the distinguished diplomat FRANCOISE VILJOEN.

***Corduba (Acanthocorduba) lurida* spec. nov.** (Figs. 1, 4, 7, 13, 16)

Holotype male. Body elongate, narrow, distinctly broadening caudally; head, pronotum, scutellum, thorax, and abdominal sterna granulate; pronotum, scutellum, clavus, and corium densely and coarsely punctate. Head subquadrate, almost as longer as wide, anterior third moderately produced, and never suddenly bending downward; dorsally with two rows of thick, medium-sized spines, and a single spine between them; tylus protruding, surface granulate with two or three short spines, little more than a sharp tubercle; juga swollen; antenniferous tubercle with short external expansion; antennal segment III the longest, IV the shortest, and I longer than II; rostrum reaching posterior border of metathorax; rostral segment I almost reaching the anterior border of prosternum. Thorax: Pronotum wider than long, moderately declivous; anterolateral margins straight, crenulated; posterolateral margins obliquely straight; posterior margin smooth, concave in middle third; humeral angles with straight, long spine, projected obliquely backwards; pronotal disc without spines (Figs. 1, 4). Anterior lobe of metathoracic peritreme elongate and apically globose, posterior lobe short. Legs: Slender, unarmed, with apex of femora moderately thickened. Scutellum: Longer than wide, triangular, without spines. Hemelytra: Macropterous reaching the apex of the last abdominal segment; costal margin serrate; apical margin slightly sinuate (Fig. 7). Abdomen: Connexival segments with upper border crenate. Genital capsule: Posterior margin with the middle lobe broad, globose, and exposed, and the lateral lobes shorter, and rounded.

Coloration: Body including antennal segments I to III, and rostral segments I to IV (apex of IV black) pale yellow; antennal segment IV reddish brown with apex yellow; anterolateral margins of the pronotum, apical angle of the corium, and anterior third of connexival segments IV to VII and eventually the posterior third of VII pale brown to reddish brown; hemelytral membrane translucent; abdominal segments yellow with two lateral longitudinal stripes bright orange.

Head length: 0.92 mm; width across eyes: 0.94 mm; interocular space: 0.60 mm; interocellar space: 0.28; preocular distance: 0.56 mm; length of antennal segments: I, 2.92 mm; II, 1.16 mm; III, 3.44 mm; IV, 0.98 mm. Pronotum: Total length: 1.24 mm; width across frontal angles: 0.76 mm; width across humeral angles: 1.36 mm. Scutellar length: 0.76 mm; width: 0.52 mm. Body length: 7.80 mm.



Figs. 7–8: Hemelytra: 7 – *Corduba (Acanthocorduba) lurida* spec. nov.; 8 – *Hydara tenuicornis* (WESTWOOD). – Figs. 9–11: Parameres: 9–10 – *Hydara tenuicornis* (WESTWOOD); 11 – *Haidara viljoeni* spec. nov. – Figs. 12–14: Dorsal view of posterior border of abdominal segment IX (female): 12 – *Hydara tenuicornis* (WESTWOOD); 13 – *Corduba (Acanthocorduba) lurida* spec. nov.; 14 – *Haidara viljoeni* spec. nov.

Female. Similar to the holotype. Posterior angle of abdominal segment VIII long, acute; abdominal segment IX as longer as wide, with posterior border deeply concave (Fig. 13); gonocoxae I short, obliquely directed, with external surface entire; paratergite VIII triangular; paratergite IX longer, rectangular.

Head length: 1.04 mm; width across eyes: 0.96 mm; interocular space: 0.62 mm; interocellar space: 0.31 mm; preocular distance: 0.60 mm; length of antennal segments: I, 2.84 mm; II, 1.13 mm; III, 3.40 mm; IV, 0.98 mm. Pronotum: Total length: 1.28 mm; width across frontal angles: 0.76; width across humeral angles: 1.44 mm. Scutellar length: 0.80 mm; width: 0.52 mm. Body length: 8.76 mm.

Holotype ♂: SOUTH AFRICA: Natal, Mkuze Game Reserve, 1967.XI.8–10. J.A. Slater, S. Slater and T. Schuh. Type material in the American Museum of Natural History, New York. Paratypes: 1 ♂: SOUTH AFRICA, Natal, Umkomaas, 1951. III. 9–13. A.L. Capener. In James A. Slater Collection. 1 ♀: SOUTH AFRICA: Transvaal, Kruger National Park, on the confluence of Limpopo and Luvuvho Rivers (Pafuri), 7–8.V. 1968.V.7. J.A. Slater, S. Slater, T. Schuh and M.H. Sweet. In the Colección Entomológica del Instituto de Biología, Universidad Nacional Autónoma de México. 1 ♀: SOUTH AFRICA: Ndabeni Forest, nr., Josini, 27°22'S, 32°00'E, 1983. I. 24. D.H. Jacobs. In the National Collection of Insects, Pretoria. 1 ♀: SOUTH AFRICA: Balloon Forest, nr., Trichardsdal, 24°12'S, 30°20'E, 1984. IV. 5–8. D.H. Jacobs. In the National Collection of Insects, Pretoria. 1 ♀: SOUTH AFRICA: Eiland Resort, nr. Tzaneen, 1990. VI. 1–3. D.H. Jacobs. In the Colección Entomológica del Instituto de Biología, Universidad Nacional Autónoma de México. 3 ♂♂ and 1 ♀: ZAMBIA: Chunga Camp, Kafue Nat. Park, 15°02'S, 26°00'E, 1993. III. 26–29. U. Göllner. Im Museum der Humboldt-Universität zu Berlin. 1 ♂: ZAMBIA: South Luangwa Nat. Park, Mfuwe Crocodile Farm, 13°06'S, 31°47'E, 450 m, 1993. III. 21–24. U. Göllner. In the Colección Entomológica del Instituto de Biología, Universidad Nacional Autónoma de México. 1 ♀: NAMIBIA: Kavango, Mahango Game Reserve, 18°17'S, 21°43'E, 1993. XI. 23–24. J. Deckert. Im Museum der Humboldt-Universität zu Berlin. 1 ♂: NAMIBIA: Kavango, Camp Popsa, 18°07'S, 21°34'E, 1994. II. 28.–III.5. U. Göllner. In the Colección Entomológica del Instituto de Biología, Universidad Nacional Autónoma de México. 2 ♀♀: ZIMBABWE: Matabeleland, Lake Mutirikwi, Masvingo Kyle Nat. Park, 1100 m, 20°13'S, 31°00'E, 1993. XII. 1–4. J. Deckert. Im Museum der Humboldt-Universität zu Berlin. 1 ♀: ZIMBABWE: Matopos Nat. Park, 20°33'S, 28°30'E, 1993. XI. 30. F. Koch. In the Colección Entomológica del Instituto de Biología, Universidad Nacional Autónoma de México.

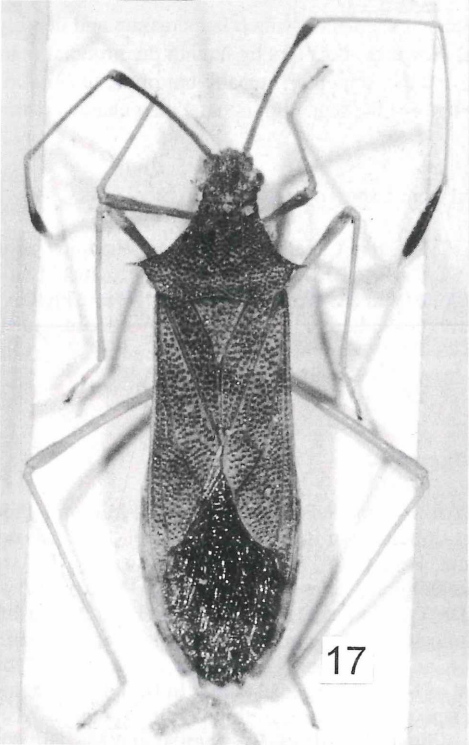
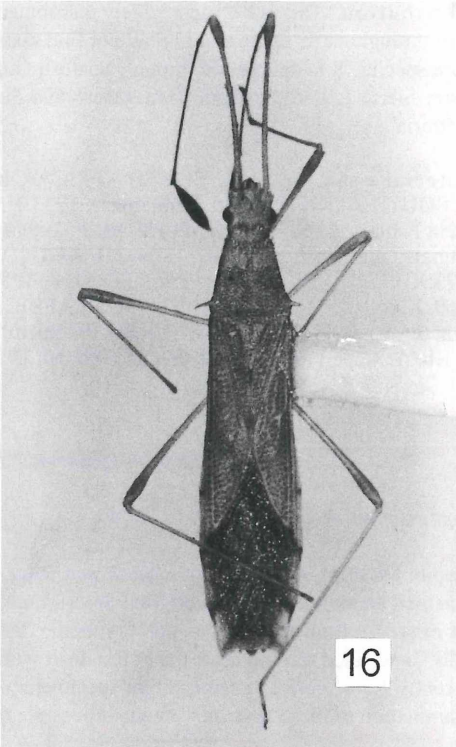
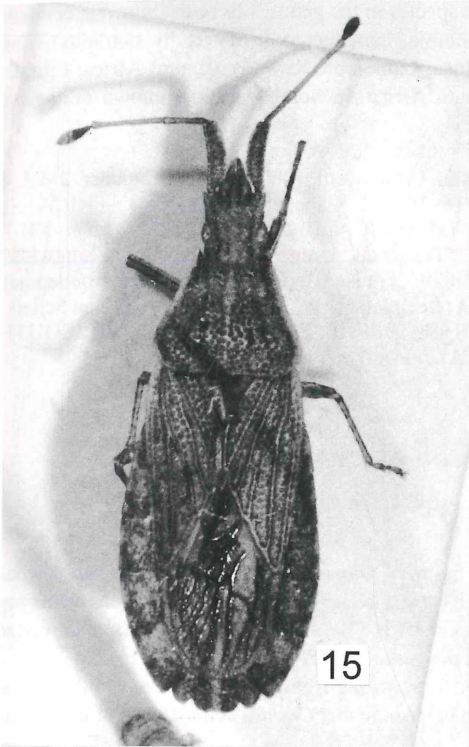
Remarks. This species is extremely similar to *C. (A.) echinops* LINNAVUORI (1978), agreeing in almost all details of structure and color; however, the pattern of spine distribution on head and pronotal disc are quite different. In *C. (A.) lurida* spec. nov., distributed in Zambia, Zimbabwe, Namibia and South Africa, the tylus has two or three small spines, little more than sharp tubercles, the head has two rows of medium-sized spines, humeral angles with one long spine, and the anterior border of the pronotum lacks spines. By contrast in the closer species known from Northern Africa (Somalia, Yemen, Sudan and Chad), the tylus has three long and acute spines, the head has three rows of long spines, the anterior border of the pronotum has several acute spines and the humeral angles has two long and acute spines.

Etymology. Named for its light coloration; from the latin, *luridus*, pale yellow.

Hydara tenuicornis (WESTWOOD) (Figs. 2, 6, 8–10, 12, 17)

Coreus tenuicornis WESTWOOD, 1842: 24.

The only other known species included in *Hydara* DALLAS, is *H. nigrofasciata* GARCIA VALERA (1913) described from Spanish Guinea and Cameroon. In *H. nigrofasciata* the antennal segments I to III are mostly black, and the pronotum has a black transverse stripe running across the humeral angles and which is absent in *H. tenuicornis* (WESTWOOD). In the latter antennal segments I to III are yellow ochre or hazel yellow orange.



Distribution. This is the most widely distributed species in the genus. I have examined specimens from throughout its range and I could not find taxonomic characters to justify its division into two or more species. It is distributed through Spanish Guinea, Cameroon, Rwanda, Central Africa, Liberia, Zaire, Sierra Leone, Senegal, Madagascar and South Africa. In South Africa is known only from Caffraria.

Material examined. 1 ♂: SOUTH AFRICA: Natal, Umtweni, 1959.VII. A.L. Capener. 2 ♂♂, 1 ♀: SOUTH AFRICA: Natal, Umkomaas, 1953.II. 16–19. A.L. Capener. 1 ♀: SOUTH AFRICA: St. Lucia Estuary, 1966.X.22. G. du Plessis. 1 ♂: SOUTH AFRICA: Blyder River, 1975.XI.24.–XII.1. Potgieter and Scobble. 2 ♀♀: SOUTH AFRICA: Transvaal, Kruger National Park, Shingwidzi, 1973.XII.1. J. van Reenen. 1 ♀: SOUTH AFRICA: Transvaal, Pretoria District, Roodeplaat, 1960.X.8–10. F. Neubecker. 1 ♀: SOUTH AFRICA: Leeipan, NKW, 1969.III.4. H.A.D. van Schalkwyk. 2 ♀♀: SOUTH AFRICA: Letaba Proejplan, 1981.IV.1–10. F. Haniball. 1 ♂, 1 ♀♀: SOUTH AFRICA: Cape Prov., Fort St. Johns, 1969.III.19. A. Pienaar.

Oannes spinosus DISTANT (Figs. 18–19)

Oannes spinosus DISTANT, 1911: 39–40.

Despite DISTANT's inclusion of a black and white figure of *Oannes spinosus*, the genus *Oannes* has remained an enigma since its original description. DISTANT related it to *Atractaria* but the veins are not originate from the base of the membrane. BERGROTH's (1913) Catalogue listed it as „incertae sedis“, and since then no other paper has dealt with the genus.

Recently I was able to examine five specimens of *O. spinosus* from Western Cape, South Africa. Examination of these specimens made it possible to determine that *Oannes* is a member of the Hydarini.

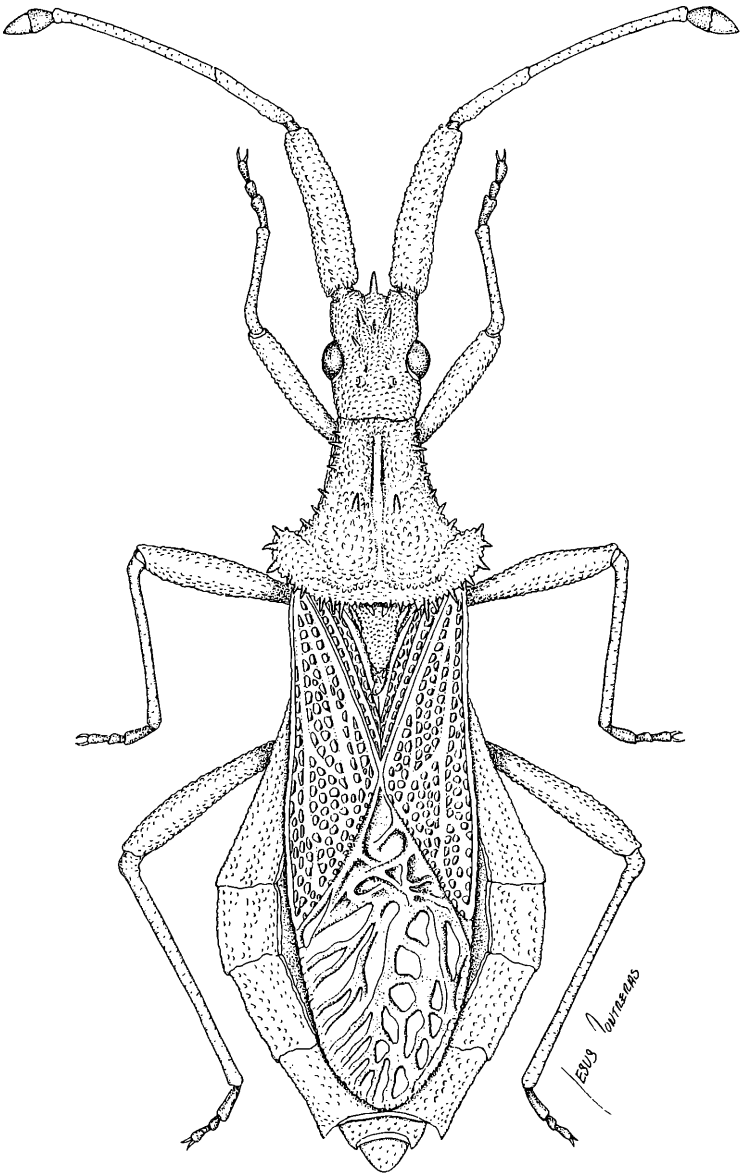
This genus is clearly recognized by the shape of antennal segment I, which is incrassate and densely tuberculate as in the close genus *Haidara* DISTANT. However, it differs by having the pronotal margins densely spinose, the head dorsally with spines, and the scutellum apically upturned. In *Haidara* the pronotal margins and head are unarmed, and the apex of the scutellum is flat. Other characteristics are given in the key.

Distribution. This species has only been recorded from Cape Town in South Africa.

Material examined. 1 ♂, 2 ♀♀: SOUTH AFRICA: Western Cape Province, Farm Wiedouw, near Vanrhynsdorp, 1984.IX.18–21. D.H. Jacobs. 1 ♀: SOUTH AFRICA: Western Cape Province, Ladismith District, Seven Weeks Poort, 1968.XII. R.H. Jones and J.H. Potgieter. 1 ♂: SOUTH AFRICA: Western Cape Province, Karroo at junction of Calvinia-Sutherland Road, near Inverdoorn Ceres, 1959.X.2–3. B. and P. Stuckenberg.

Acknowledgements

I want to express my gratitude to Drs. S. ENDRÖDY-YOUNGA and R.B. TOMS (Transvaal Museum, Pretoria), Drs. G.L. PRINSLOO and A. MILLAR (National Collection of Insects, Pretoria), Dr. D.H. JACOBS (Pretoria), Dr. I.M. KERZHNER (Zoological Institute, Leningrad), Drs. P. GROOTAERT and J. VAN STALLE (Institut Royal des Sciences Naturelles de Belgique, Brussel), Mrs. JANET MARGERISON-KNIGHT (The Natural History Museum, London), Dr. J. DECKERT (Humboldt-Universität zu Berlin, Germany), and Dr. J.A. SLATER (James A. Slater Collection) for the loan of material under their care. My appreciation also goes to Dr. R.T. SCHUH (American Museum of Natural History, New York) for organizing the loan of the LINNAVUORI type material of Hydarini. Special thanks to Biol. E. BARRERA (Instituto de Biología, UNAM) and Biol. J. CONTRERAS for the preparation of the drawings. Also thanks to Mr. PIETER WOLVAARD, Mr. FRANCOISE Viljoen, Mr. HENK PRETORIUS, and Mr. DIETER PECHT, for their personal support.



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Fig. 19: Dorsal view of
Oannes spinosus DISTANT.

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(Received on August 18, 1997)

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Autor(en)/Author(s): Brailovsky Harry

Artikel/Article: [Systematics of the Southern African Hydarini
\(Insecta: Heteroptera: Coreidae: Coreinae\) 165-174](#)