

Glareadessus* gen.n. with description of two new species from the Persian Gulf Region (Coleoptera: Dytiscidae)

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Abstract

The genus *Glareadessus* (Coleoptera: Dytiscidae, Bidessini) is described from around the Persian Gulf. Two new species are described: *Glareadessus stocki* sp.n. (type species) was found in groundwater of wadis in the Oman, and *G. franzi* sp.n. was collected at light in southern Iran.

Key words: Coleoptera, Dytiscidae, Bidessini, *Glareadessus*, new genus, new species, subterranean species, taxonomy.

Introduction

During a research project on the biological composition of Omanese groundwater biotas by the late Prof. Dr. Jan H. Stock, (Institute of Systematics and Population Biology, Univ. of Amsterdam) some specimens of a Bidessini were collected in groundwater of wadis. These specimens belong to a new species of a new genus. The senior author successfully searched for this new species with a Bou - Rouch (B. - R.) pump at localities recorded by Prof. Stock. In the collection of the Natural History Museum, Vienna a second new species of the same genus collected at light in southern Iran was "discovered". The new genus which is possibly closest related to the genus *Hydroglyphus* MOTSCHULSKY is described below together with the two new species.

Material

The study material which consists of 17 specimens is deposited in the following institutions and private collections: Coll. Bilton, Plymouth, UK (CBP), Coll. Wewalka, Wien, Austria (CWW), Finnish Museum of Natural History, Helsinki, Finland (FMNH), Naturhistorisches Museum Wien, Austria (NMW), Oman Natural History Museum, Muscat, Oman (ONM), Zoological Museum Amsterdam, The Netherlands (ZMA).

***Glareadessus* gen.n.**

Type species: *Glareadessus stocki* sp.n.

DESCRIPTION: Habitus: body oblong, subparallel, depressed. Colour pale-brown. Length of body: 1.8 - 1.9 mm, width: 0.80 - 0.85 mm.

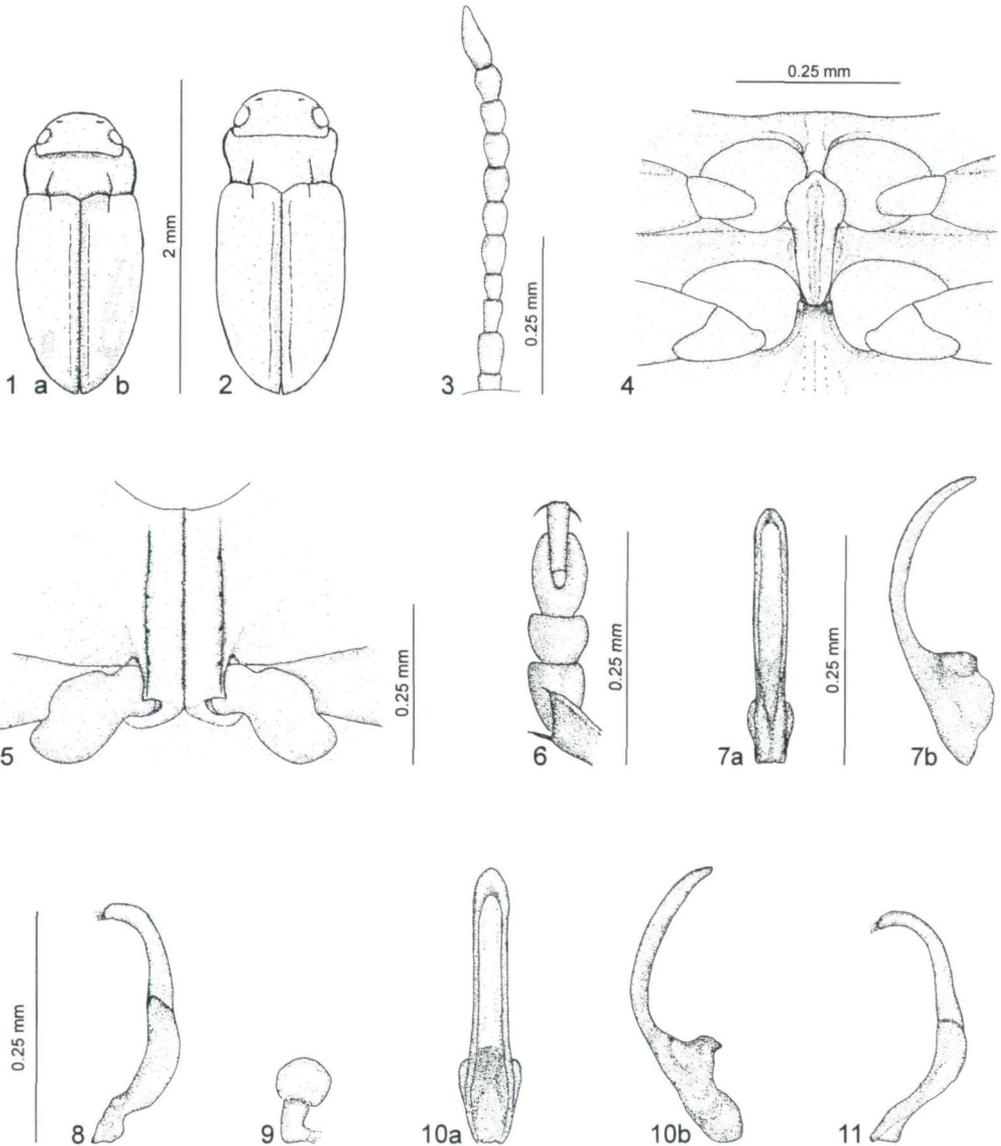
Head: without impressed cervical line; frontally not bordered, without tubercles.

Pronotum: with two latero-basal striae.

Elytra: with short but distinct basal striae, these being the continuation of the latero-basal striae of the pronotum; sutural lines complete but not very distinct; without longitudinal costae or distinct discal rows of punctures.

* Groundwater survey of Oman no. 3 of the Inst. of Systematics and Population Biology, Univ. of Amsterdam

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Figs. 1 - 2: Body outline and colour pattern: 1) *Glareadessus stocki*, a) paratype, b) holotype; 2) *G. franzi*, holotype. Figs. 3 - 6: *G. stocki*, 3) left antenna; 4) prothorax with prosternal process and mesothorax; 5) metacoxae and metatrochanter; 6) left protarsus. Figs. 7 - 9: *G. stocki*, 7) penis, (a) dorsal view, (b) lateral view; 8) paramere; 9) spermatheca. Figs. 10 - 11: *G. franzi*, 10) penis, (a) dorsal view, (b) lateral view; 11) paramere.

Ventral side: epipleura lack a basal cavity which is posteriorly limited by a transverse carina; prosternal process (fig. 4) reaching metasternum, medially deeply grooved. Metasternum without lateral keels and without rows of punctures at midline; metacoxal lines (fig. 5) longer than distance between them, parallel; posterior edge of last abdominal sternite not marginate.

Legs: fourth segment of protarsi (fig. 6) and mesotarsi concealed within lobes of third segment; hind legs with swimming hairs.

Male genitalia: penis simple; parameres with two segments.

DIAGNOSIS: *Glareadessus* gen.n. is similar to *Hydroglyphus* (see also keys published by BISTRÖM (1988a) and PEDERZANI (1994)). These genera share the following characters: head without impressed cervical line; pronotum with latero-basal striae; elytra with latero-basal and sutural lines; epipleura basally without a cavity posteriorly limited by a transverse carina; prosternal process fairly elongate, narrow and with ventral surface shallowly excavated, reaching metasternum. *Glareadessus* gen.n. is distinguishable from *Hydroglyphus* by the narrow, flat and oblong body, and by the two-segmented paramere (cf. also BISTRÖM 1986). In the key published by BISTRÖM (1988a) *Glareadessus* runs to *Uvarus* GUIGNOT and *Microdessus* YOUNG. They both lack sutural lines which distinguish them from *Glareadessus*. Additionally, the body shape of the new genus distinguishes it from *Uvarus* and *Microdessus* (regarding *Uvarus* and *Microdessus*, cf. also BISTRÖM 1988b and YOUNG 1967). The basally somewhat constricted (heart-shaped) pronotum of *Glareadessus* could represent a synapomorphy supporting the monophyly of the new genus.

ETYMOLOGY: The generic name is derived from the Latin glarea which means gravel.

BIOLOGY: The type species was found in groundwater of wadis, the second species though collected at light also might be predominantly subterranean because of its habitus and pale colour.

Glareadessus stocki sp.n.

Type locality: Oman, 65 km W Muscat, Halban area, Wadi Taww.

Holotype ♂ (NMW): "Oman, 65 km W Muscat, S \ Halban, Wadi Taww, B. - R. \ pump, 80 cm deep, 22.2.98 \ leg. Wewalka (12)". **Paratypes:** 3 ♂♂, 7 ♀♀, with same data as the holotype (CBP, CWW, FMNH, ONM); 1 ♀, Oman, 65km W Muscat, Halban area, Wadi Taww, on dry gravel bank, B. - R. pump, at 1 m, 23°34'N, 57°01'E, leg. Stock (96-37) 28.III.1996 (ZMA); 1 ♀, Oman, Wadi Nakhal, B - R. pump at 75 cm, 23°26'14"N, 57°49'53"E, leg. Vermeulen (96-126) 9.IV.1996 (ZMA); 2 ♂♂, 1 ♀, Oman, Dhufar, 35 km E Salalah, Wadi Darbat, 17°06'40"N, 54°27'09"E, in muddy gravel, B. - R. pump at 80 cm, leg. Stock (96-88) 4.IV.1996 (CWW, ZMA).

DESCRIPTION: Habitus (fig. 1): head relatively large, body oblong, subparallel, depressed, pronoto-elytral angle distinct. Length of body: 1.8 - 1.9 mm, width: 0.80 - 0.85 mm.

Head: flavo-testaceous, dark brown along eyes; clypeus regularly rounded, not bordered and without tubercles but with flat lacunas medially to eyes; very finely and sparsely punctured anteriorly, more dense and irregular posteriorly; densely but finely microreticulate. Antennae (fig. 3) flavo-testaceous, rather long and slender.

Pronotum: flavo-testaceous, narrowly darker on the base; lateral margin finely bordered, regularly rounded anteriorly almost straight in the posterior half; latero-basal striae distinct, slightly curved, converging anteriorly, length more than half of the length of the pronotum; very finely and very densely punctured, some coarser punctures along the anterior margin and very sparsely on the rest; densely but very finely microreticulate.

Elytra (fig. 1): flavo-testaceous, darker along the suture and at the base between the basal striae and with more or less extended indistinctly darker bands on the posterior half; basal striae about two third the length of the striae on the pronotum; sutural lines almost reaching the base and the apex; very distinct, very finely and very densely and regularly punctured even finer than on the pronotum, coarser punctures distributed sparsely and somewhat irregularly all over the elytra; very sparsely pilose with fine testaceous hairs.

Ventral side: epipleura, head, pronotum, first, second and last sternite flavo-testaceous, third sternite and metasternum flavo-testaceous medially, the rest more or less ferruginous; prosternal process (fig. 4) reaching metasternum, with a deep longitudinal furrow; metacoxal lines (fig. 5)

longer than distance between them, parallel; thorax and abdomen very finely, very densely and regularly punctured, coarser punctures distributed sparsely and somewhat irregularly on the sides of the metasternum.

Legs: flavo-testaceous; left protarsus (fig. 6).

Male: penis (fig. 7); parameres (fig. 8); without secondary sexual characters.

Female: sclerotized spermatheca (fig. 9) very small.

ETYMOLOGY: Dedicated to the late Prof. Dr. Jan H. Stock, Serooskerke, The Netherlands.

BIOLOGY: This species lives in groundwater of wadis. It was collected in gravel banks by B. - R. pumps, 75 - 100 cm under the surface.

DISTRIBUTION: Oman.

Glareadessus franzi sp.n.

Type locality: Iran, Kerman, Manujan.

Holotype ♂ (NMW): "IRAN - 2.6.1974 Manujan \ 110km E Bandarabess (26) \ leg. Pretzmann, Lichtfang \ Exp. Nat.Hist.Mus.Vind."

DESCRIPTION: Habitus (fig. 2): head relatively large, pronotum heart-shaped, body oblong, subparallel, depressed, pronoto-elytral angle distinct.

Length of body: 1.90 mm, width: 0.85 mm.

Head: flavo-testaceous, dark brown along eyes; clypeus regularly rounded, not bordered, without tubercles but with flat lacunas medially of eyes; very finely and sparsely punctured anteriorly, more densely and irregularly medially and posteriorly; densely but finely microreticulate. Antennae flavo-testaceous, rather long and slender.

Pronotum: flavo-testaceous; lateral margin finely bordered, regularly rounded anteriorly, sinuated in the posterior half; latero-basal striae distinct, almost straight, length about half of the length of the pronotum; very finely and very densely punctured, some coarser punctures along the anterior margin; densely but very finely microreticulate.

Elytra (fig. 2): flavo-testaceous, somewhat darker along the suture; basal striae about half the length of the striae on the pronotum; sutural lines not very distinct, almost reaching the base and the apex; very finely and very densely and regularly punctured, even finer than on the pronotum, coarser punctures distributed very sparsely and somewhat irregularly all over the elytra; very sparsely pilose with fine testaceous hairs.

Ventral side: completely flavo-testaceous; prosternal process reaching the metasternum, with a deep longitudinal furrow; thorax very finely and very densely and regularly punctured, without coarser punctures; abdomen not punctured but finely and densely microreticulate.

Legs: flavo-testaceous.

Male: penis (fig. 10); parameres (fig. 11); without secondary sexual characters.

Female: not known.

DIAGNOSIS: *G. franzi* is distinguishable from *G. stocki* by the heart-shaped pronotum, the shorter basal striae of the elytra, the elytra and the abdomen missing dark markings, the sparser coarse punctures on the pronotum and the elytra and the abdomen not punctured.

ETYMOLOGY: This species is dedicated to Prof. DI DDr. h.c. H. Franz, Mödling.

BIOLOGY: The type specimen was collected at light.

DISTRIBUTION: Southern Iran.



Fig. 12: Wadi Taww near Halban, Oman, with Bou - Rouch pump, type locality of *Glareadessus stocki*.

Key to the species of *Glareadessus*

- 1 Pronotum not clearly heart-shaped; basal striae of the elytra a little longer, about two thirds the length of the basal striae of the pronotum..... *G. stocki* sp.n.
- Pronotum distinctly heart-shaped; basal striae of the elytra very short, about half the length of the basal striae of the pronotum *G. franzi* sp.n.

Acknowledgements

We thank Dr. R. Vonk, Zoological Museum, Univ. of Amsterdam, The Netherlands, Dr. M. Gallagher, Oman Natural History Museum and Prof. Dr. R. Victor, Inst. of Biology, Sultan Qaboos University, Al Khod, Oman, for valuable information on aquatic biotas in the Sultanate of Oman. Prof. Dr. F. Schiemer and Dr. P. Pospisil, Inst. of Zoology, Univ. of Vienna, Austria and Prof. Dr. D. Danielopol, Inst. of Limnology, Austrian Academy of Sciences are gratefully acknowledged for lending a groundwater pump and Dr. D.T. Bilton, Plymouth, England, for the linguistic revision of the manuscript.

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Zeitschrift/Journal: [Koleopterologische Rundschau](#)

Jahr/Year: 1998

Band/Volume: [68_1998](#)

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Artikel/Article: [Glareadessus gen.n. with description of two new species from the Persian Gulf Region \(Dytiscidae\). 59-63](#)