Results of the Austrian Hydrobiological Mission, 1974, to the Seychelles-, Comores- and Mascarene Archipelagos

Part VII: Dytiscidae, Gyrinidae (Coleoptera)

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with a contribution by P. Brinck (Lund)

(With 4 Figures)

Manuskript eingelangt am 11. November 1976

Abstract

12 species of Dytiscidae that is two from the Seychelles, two from the Comores, four from La Réunion and four from Mauritius were collected in the course of the hydrobiological mission 1974 of the 1st Zoological Institute of the Univ. of Vienna. A new species Ouignotus lobulatus n. sp. from La Réunion is described. Systematical and faunistical remarks are made on some of the other species.

Zusammenfassung


The hydrobiological mission 1974 of the 1st Zoological Institute of the University of Vienna explored running waters on the Seychelles, the Comores, La Réunion and Mauritius.

Starmühlner (1979) gives a general survey on the results of the expedition. The abundant zoological collections also contained 50 specimens of Dytiscidae assigned to 12 species which are discussed in the following.

I am very much obliged to Prof. Dr. F. Starmühlner for sending me this collection for examination.

SEYCHELLES

Seven species of Dytiscidae are recorded for the Seychelles. Copelatus pandanorum Scott and Copelatus gardineri Scott are endemic species. Uvarus sechellensis Régimbart, Hydrovatus humilis Sharp, Hydaticus servillianus

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Aubé and Rhantaticus congestus Klug are species also distributed on the African continent. By the record of Hydrocoptus subvittulus seychellensis Pedezani & Sanfilippo also connections to the indo-malayan region are indicated. The nominate-race of this species is known from Ceylon, India, Pakistan, Nepal, China and Indonesia.

Hydrocoptus subvittulus seychellensis Pedezani & Sanfilippo


Location: Seychelles, Mahé, backwater-pools at the Anse, North-West-coast, between road and sea, 14. 2. 1974, Sey/17b, in inundated ditches (about 35° C), 1 ♂, 1 ♀.

Pedezani & Sanfilippo (1978) recently described the subspecies seychellensis according to several specimens from Mahé. They distinguish this subspecies from the nominate race by a narrower shape, the lighter colour and the less impressed points. These differences are rather small but the geographical separation of the population of Mahé supports its acknowledgement as a geographical race.

Distribution: Seychelles: Mahé.

Copelatus gardineri Scott


Location: Seychelles, Mahé, upper part of Pleasance-river, North-East-coast, 100 m, 15. 2. 1974, Sey/18e, flood-pool besides the brook, 4 ♂♂, 3 ♀♀.

Pedezani & Sanfilippo (1978) first presented a drawing of the male genital of this species scarcely to be found in collections.

The species is endemic for the Seychelles.

Distribution: Seychelles: Mahé, Silhouette, Praslin.

COMORES

Guignot (1958 and 1961, p. 931) gave a synopsis of the Dytiscidae of the Comores. Hence from these islands 13 species are known. Four species (Hydrovatus humilis Sharp, Canthydrus biguttatus Réjimbart, Copelatus ornatipennis Zimmermann and Cybister tripunctatus africanus Castelnaud) are African elements, four species (Hyphydrus separandus Réjimbart, Liodessus luteopictus (Réjimbart), Laccophilus alluaudi Réjimbart and Copelatus vigintistriatus Fairmaire) are Madagascan elements and five species (Hyphydrus barysomus
GUIGNOT, *Hyphydrus maculifer* GUIGNOT, *Laccophilus tigrinus* GUIGNOT, *Copelatus mohelicus* GUIGNOT and *Aglymbus milloti* GUIGNOT are endemic ones.

The presently known distribution of the Dytiscidae among the four main islands of the Comores is very unequal. 11 species are recorded from Mohéli, two species from Grande Comore and only one from Mayotte. Three species are known from Anjouan, explored in the course of this mission. Two of these species are contained in the present collection.

*Hyphydrus (Apriophorus) separandus* Régimbart


Location: Comores, Anjouan, upper part of river Santsa near Adda-Douéni, 750 m, 21. 3. 1974, An/21b at the bank of a cascade-brook, 1 ♂.

Guignot (1959a) ranged *H. separandus* in the subgenus *Allophydrus* Zimmermann but this species differs very much from *H. grandis* Sharp, the type-species of this subgenus. In *H. separandus* the punctation of the pronotum and of the elytra is distinctly unequal, a pronoto-elytral angle is absent. The lateral side of the metatibias, closely and equally punctated in *H. grandis*, is punctated sparsely in *H. separandus* and shows an indistinct but yet present row of points. This row of points however should be absent in the subgenus *Allophydrus*.

If following the subdivision of the genus *Hyphydrus* according to Guignot (1936) *H. separandus* should better be ranged in the subgenus *Apriophorus* Guignot.

The specimen in question (aedeagus, fig. 1) has been compared with a ♂ syntype of the species from Madagascar.

Distribution: Madagascar, Comores: Anjouan.

**Fig. 1.** *Hyphydrus separandus* Régimbart (Comores); a) lateral view of penis; b) ventral view of penis
**Laccophilus tigrinus Guignot**


Location: Comores, Anjouan, upper part of river Santsa near Adda-Douéni, 750 m, 21. 3. 1974, An/21b, at the bank of a cascade-brook, 1 ♀.

This species is similar to *Laccophilus alluaudi* Régimbart by the design of the elytra. The minute reticulation of the elytra is distinct and regular. Only in the suturai region the network is longitudinal and irregular. A distinct coarser reticulation of the elytra is absent, therefore according to Guignot (1959) *L. tigrinus* should be ranged in the *lateralis*-group.

The specimen in question has been compared with a ♂ paratype. The aedeagus of the paratype is shown in fig. 2.

**Distribution:** Comores: Anjouan, Mohéli.

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**Fig. 2. Laccophilus tigrinus** Guignot (Paratype, Anjouan); a) lateral view of penis; b) ventral view of penis

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**LA RÉUNION**

Guignot (1957) gave a synopsis of the Dytiscidae of La Réunion in which he mentioned 13 species for this island. Including *Hydaticus inconspicuus* Régimbart, mentioned by Guignot 1961, and *Guignotus lobulatus* n. sp. the fauna of La Réunion comprises 15 species. Four of them are endemic species, three species are known also from other islands of the Mascarenes, five species are Madagascan elements and three species are also distributed on the African continent.
Results of the Austrian Hydrobiological Mission, 1974

Hyphydrus (Apirophorus) distinctus Aubé


Location: La Réunion, Grand Bras de la Ravin Seche in the Plaine de la Palmiste 500 m, 7. 4. 1974, Ré/8a, at the bank of a spring-pond, 1 ♂, 6 ♀♀.

The ♂ of this species is easily to be recognized by the enormous dilated pro- and mesotarsi. The ♀♀ are normally a little smaller and they are entirely mat by a close microreticulation. Thus the punctation of the elytra is almost extinguished. One ♀ of the present series shows only fine reticulation on the pronotum, on the shoulders and on the ends of the elytra. Therefore this specimen is bright. The existence of bright ♀♀ can already be suspected by the original description of Aubé (1838) who stated that the ♂ and ♀ are similar.

Vinson (1956) interpreted H. distinctus as a Synonym of H. scriptus Fabricius (not Aubé as Vinson published). He explained his opinion as follows: “The ranking of H. distinctus as a synonym of this species [H. scriptus] is based on the examination of the aedeagus”. This argument is by far insufficient with regard to the substantial differences between the two species mentioined by Peschet (1917) and Guignot (1959). Therefore I cannot follow the opinion of Vinson. H. distinctus is an endemic species of La Réunion.

Distribution: La Réunion.

Guignotus strigicollis (Fairmaire)

Hydroporus strigicollis Fairmaire, 1880, Naturalist 2: 293.

Location: La Réunion, Grand Bras de la Ravin Seche in the Plaine de la Palmiste 500 m, 7. 4. 1974, Ré/8d, in rook-pools of a spring-brook, 1 ♂, 2 ♀♀.

Distribution: Madagascar, La Réunion.

Guignotus lobulatus n. sp.

Length: 2.1—2.3 mm, Breadth: 1.1—1.2 mm, Form oblong-oval, sub-depressed, pubescence fine, upper surface brilliant.

Head ferruginous, Clypeus triangularly testaceous; punctation moderately strong, irregular; reticulation fine.

Pronotum testaceous, along the anterior border narrowly and the posterior border broadly ferruginous; punctation rather strong and rather sparse; reticulation distinct. Latero-basal plica well impressed, incurved, about half
the length of the pronotum. Sides of the pronotum slightly convergent to the front.

Elytra testaceous with the following markings (fig. 3), ferruginous along the base and the sutural margin, two longitudinal ferruginous lines, the inner confluating with the sutural line and in some specimens with the basal badge, the outer occasionally touching the inner line and the base; occasionally the ferruginous markings are enlarged to a big spot covering most of the elytra (fig. 3b); punctation rather strong and sparse; reticulation distinct, only missing in the scutellar region; discal striae equal in length to the pronotal plicae. Sutural striae distinct, shortened at the base. Antenae and legs testaceous. Ventral side ferruginous, brilliant; punctation very sparse. Aedeagus (fig. 4), Penis lobed on both sides at the apex.

*G. lobulatus* n. sp. comes near to *G. pusillus* (F.) from which it can be distinguished by its more elongated and subdepressed form, by more distinct
punctuation and the elytral marking. *G. lobulatus* n. sp. is also similar to *G. farquharensis* Scott but it is bigger and the punctuation is more distinct.

Presently the new species is only known from La Réunion.

**Holotypus:** ♂ La Réunion, upper part of River Langevin, above St. Philippe 400 m, 9. 4. 1974, Ré/11a, in flood-pools (in Coll. Wewalka).


**Laccophilus irroratus** Aubé


Location: La Réunion, upper part of river Langevin upon St. Philippe, 400 m, 7. 4. 1974, Ré/11a, in a flood-pool, 1 ♀.

La Réunion, Bras de la Ravine Seche in the Plaine de la Palmiste 500 m, 7. 4. 1974, Ré/8d, small rock-pool, 1 ♀.

**Distribution:** Mauritius, La Réunion.

**MAURITIUS**

At least 26 species of Dytiscidae are known to me from Mauritius. They are enlisted in the schedule (tab. 1).

**Hyphdra (Apriophorus) scriptus** (Fabricius)

*Dytiscus scriptus* Fabricius, 1782, Ent. Syst. Suppl. p. 65.


Location: Mauritius, River des Gallets in the Plaine Champagne, 700 m, 2. 5. 1974, Mau/14a, under waterplants at the banks of a spring-brook 1 ♀.

**Distribution:** La Réunion, Mauritius, Madagascar?

**Herophydrus vittatus** Régimbart


Location: Mauritius, River des Gallets in the Plaine Champagne, 700 m, 2. 5. 1974, Mau/14b, under waterplant at the banks of a spring-brook 1 ♂, 2 ♀♀.

**Distribution:** Mauritius.
Table 1. Dytiscidae of Mauritius

<table>
<thead>
<tr>
<th>Species</th>
<th>Mauritius</th>
<th>Madagascar</th>
<th>Seychelles</th>
<th>Comores</th>
<th>Africa</th>
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<td>Liodessus luteopticus (Rég.)</td>
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<td>Hydrocoptus seriatus SHARP</td>
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<td>Copelatus guerini AUBÉ</td>
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<td>Hydaticus exclamationis AUBÉ</td>
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<td>Hydaticus sobrinus AUBÉ</td>
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<td>Cybister vulneratus KLUG</td>
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<td>Cybister dejardinii AUBÉ</td>
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<td>Cybister tripunctatus OL.</td>
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**Hydaticus (Guignotites) bivittatus CASTELNAU**


Location: Mauritius, Black-River-gorge, middle part of the river at the South-West-coast, 40 m, 1. 5. 1974, Mau/13b, in inundated ditches at the banks 1 ?.

This wide-spread species is common also in great parts of Africa and Madagascar.

Distribution: Africa, Madagascar, Mauritius.
Results of the Austrian Hydrobiological Mission, 1974

Cybister (Melanectes) desjardinsi AUBÉ


Location: Mauritius, River des Gallets in the Plaine Champagne, 700 m, 2. 5. 1974, Mau/14b, under waterplants at the banks of a spring-brook, 1 ♀.

Distribution: Mauritius.

References


Appendix: Determinations of the Gyrinidae, collected by the Mission 1974 at the Comores, La Réunion and Mauritius

by Per BRINCK (Lund)

ANJOUAN (Comores-Archipelago):

Orectogyrus speculum (Aube): F/An/4a/4. 3. 1974: Riv. Mutsamudu (1 ♂, 1 ♀); F/An/5a/5. 3. 1974: Riv. Mutsamudu, upper course, affluent (6 ♂, 7 ♀); F/An/12/1a/11. 3. 1974: Upper course of the Riv. Tatinga (11 ♂, 13 ♀); F/An/14a/12. 3. 1974: River source of the Riv. Mdzihe (2 ♂, 7 ♀); F/An/23/1/22. 3. 1974: Middle course of the Riv. Tatinga (1 ♀); F/An/24a/25. 3. 1974: Upper course of the Riv. Pomoni (45 specimens).

Dineutus sinuosipennis Cast. ssp. comorensis REG.: F/An/4a/4. 3. 1974:
Riv. Mutsamudu (1 ♂); F/An/5a/5. 3. 1974: Riv. Mutsamudu, upper course, affluent (27 specimens); F/An/10a/ 8. 3. 1974: Riv. Ouani, upper course (1 ♀); F/An/12a/9. 3. 1974: River source and reservoir of water near Bazmini (56 specimens); F/21b/21. 3. 1974: Riv. Santsa, upper course near Adda-Douéni (2 ♂, 1 ♂).

Per BRINCK writes in a letter from the 8. 3. 1976: It is now very probably that the typus-specimes of Dineutus sinuosipennis ssp. comorensis RÉGIMBART, which are provided only with the notice: Iles Comores, L. HUMBOLT, 1885—1886 are collected from Anjouan. The types of RÉGIMBART are nearly identically with the specimens collected by the Austrian Mission 1974 at Anjouan, but little different from specimens collected from Mohéli and Mayotte.

LA RÉUNION (Mascarene Archipelago):

**Gyrinus nitidulus** FABR.: F/Ré/8a/7. 4. 1974: Ravine Seche, pool (2 ♂, 3 ♀); **Dineutus aereus** KLUG.: F/Ré/4a/5. 4. 1974: Riv. du Mât, lower middle course (1 ♂); F/Ré/25e/17. 4. 1974: Affluent of the Riv. Galets (1 ♂);

**Dineutus indus** F. ssp. olivaceus RÉGIMBART: F/Ré/1a/4. 4. 1974: Riv. du Mât, upper course (1 ♂); F/Ré/19a/14. 4. 1974: Bras des Sources Thermales de Riv. du Cilaos, near Cilaos (1 ♂, 5 ♀).

MAURITIUS (Mascarene Archipelago):


**Dineutus aereus** KLUG.: F/Mau/1c/27. 4. 1974: Drain in the Botanical Gardens of Pamplemousses (2 ♂, 5 ♀); F/Mau/18a/3. 5. 1974: Riv. Tombeau, middle course (1 ♂, 2 ♀); F/Mau/20a/3. 5. 1974: Riv. Remparts-Est, lower course (1 ♀).

**Dineutus indus** (F.) f. typ.: F/Mau/4a/28. 4. 1974: Affluent of the Riv. Baie du Cap, middle course (3 ♂, 4 ♀); F/Mau/9a/30. 4. 1974: Riv. Rempart, middle course (1 ♀); F/Mau/11a/1. 5. 1974: Riv. Gallets, middle course (2 ♂, 3 ♀); F/Mau/12a/1. 5. 1974: Riv. Patates, upper course (3 ♂, 1 ♀); F/Mau/14a/ 2. 5. 1974: River source of the Riv. Gallets in the Plaine Champagne (1 ♀); F/Mau/15a/2. 5. 1974: River source of the Riv. Gallets (1 ♂); F/Mau/21a/ 4. 5. 1974: Affluent of the Riv. Moka (1 ♂, 1 ♀); F/Mau/23a/5. 5. 1974: Riv. des Anguilles, lower course (1 ♂, 1 ♀); F/25a/6. 5. 1974: Riv. Doudy, affluent of the Grand Riv. North West (1 ♂); F/26a/6. 5. 1974: Riv. du South-Est, upper course (2 ♂, 1 ♀), F/27a/7. 5. 1974: Riv. des Anguilles, upper course (1 ♂, 2 ♀).

**Dineutus subspinous** (KLUG): F/26a/6. 5. 1974: Riv. du South-Est (1 ♀).
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