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(Brussels)

HELOCHARES (HYDROBATICUS) ANDREINII n. sp.

H. melanophthalmus Reginbart, 1905
(nec Mulsant, non Reiche)

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In a memoire devoted to Hydrophilides reported from Erythraea by Dr. A. Andreini (1), Regimbart included in *Helochares melanophthalmus* Reiche (read Mulsant), the specimens collected from among the herbs in the vicinity of Sabarguma a pool of dirty water on 25th January, 1901. The Administration of the Zoological Museum of the University of Florence with whom M. Andreini had deposited his collections supplied this material to me which numbered 30 in all. On dissecting the ♂♂ of this lot were found to be much different from the typical *melanophthalmus*, as have been definitely explained by means of the unique type ♂ of Mulsant (2) (Museum of Lyon) and in accordance with two other ♂♂ from Shendi on the Nile (Anglo-Egyptian Sudan) (3). Although it was considered necessary to place them together (1), the grouping of *melanophthalmus* with *nigrifrens* Branesik (4) in the same species which were generally very widespread in Oriental Africa was therefore erroneous. The unique type of *nigrifrens*, of Nosi-Be kindly supplied by M. Knirsch of Kolin in Bohemy, is ♀; but some ♂♂ type of Madagascar (my collections) and Aldabra (British Museum) (1) belong to the same species, but are distinguished by the sculpture of the upper part and by the different type of aedeagus as well. *Helochares nigrifrens* seems specific to these insular regions; I have not found it among the abundant material of the African Continent which passed through my hands or which is still under study in view of the revision in the grouping of the species of sub-genus *Hydrobatius*

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- 1) Ann. Soc. Entom. Ital., XXXVI, (1904-1905), p. 213.
 - 2) Hist. Nat. Col. Fr., Palpic., 1844, p. 137 (*Helophilus Helochares*).
 - 3) A. d'Orchymont, Bull. Mus. roy. Hist. Nat. Belgique, XII, n. 23, 1936, p. 1-5, fig. 1.
 - 4) Ishresh. Yer. Trencsen, XVI, 1893, p. 219.

about the 5 specimens of Adi-Ugri (VI-1901) which Regimbart has arranged under nigrifrens; these are all of the ♀ sex (I have observed the mesocercus of the four first ones and the last subject is still a carrier of its packet of eggs). The elytra taken together are as compared to their width, longer than the specimens of Sabarguma, whose elytral series are more striiform. They belong to a different species, which is not the same as that of the Brancsik, because the points of the elytral series are less superficial than those of the latter. However, they are less profound than in the specimens of Sabarguma. These 5 ♀♀ could belong to menti-notus Kuwert, the species existing in Egypt and Abyssinia. However, without ♂♂ collected from the same place, it is not possible to say so without running the risk of being wrong. The French author could not be doubted. At a time when the study of the Hydrophilides was still in a less advanced stage, we could not doubt the French author that all the possible transitions to which he has made a reference, are in reality the indications that the neighboring species were indistinguishable. In fact, a comparative study of the aedeagus has proved that the Hydrobaticus group flourished in Africa in numerous very specific forms which were impossible to be separated with certainty without relying upon the form of these organs.

As far as I know the specimens of Sabarguma have no relativity with any of the 14 species of Africa described so far, nor with the numerous forms still unpublished. I, therefore, propose the name of Qrdreinii n. sp. for them and give below their characteristics.

Size and coloration, almost the same of a dirty testaceous as the true melanophthalmus, but with the elytra, which are shorter more arched and widened after the middle and more rounded entirely at back, the series, even the short juxta-scutellar, composed of stronger and profounder points, lodged in the veritable streaks, being sunken and continued; the inter-striae with less thickened and more spaced punctuation. In nigrifrens, the point series of elytra are even more superficial than these in melanophthalmus and by no means striiform as in the case of andreinii.

The maxillary palps are entirely yellow and unobscured at the end. The sculpture of the head and pronotum is a bit more spaced and less equipped than in the two compared species. The elytral striae comprise the inscribed points,

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- 1) As informed by H. Scott under melanophthalmus in Trans. Linn. Soc. Lond., 2d. Ser., Zool., Vol. XVI, 2, 1913, p. 203.

which are 3-4 times as big towards the front as the points of the inter-striae, and become bigger towards the back where they are about 4-5 times as large as those of the intervals. The striae have no more posterior profundity and are transformed in some simple series of big points. The punctuation of the interstriae becomes gradually finer and particularly more spaced and is less furnished from front to back. The claws of the tarsus are simple, without lobes hardly a bit widened entirely interiorly at the base.

Although real, these characteristics alone did not permit the separation of the species with certitude: it is necessary to complete the diagnosis by an appreciation of the major details of the aedeagus (fig. I). In the present case, it carries at the dorsal extremity, a strongly enlarged and sclerotised piece, pointed on the sides after the base, narrowly rounded at the end, and having the form of an iron spear. Any other aedeagus of *Hydrobaticus* does not present this peculiarity. Moreover, from each side of the spear, there arises, a long and very narrow small stalk. In *nigrifrons* (fig. II) the median lobe, visible between the obscure hooks - fitted into the organ at repose - is long and slim, imperfectly sclerotised and only longitudinally in the middle. In the *melanophthalmus* (fig. III), the organ which is much more shortly attenuated at the end, is membranous at the place where spear is found in *Andreinii*.

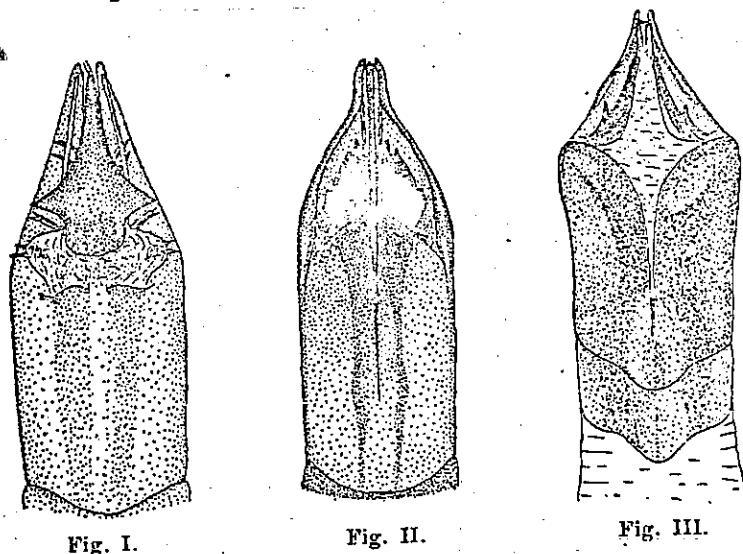


Fig. I: *Helochares (Hydrobaticus) Andreinii* n. sp.
 Fig. II: *H. (H.) nigrifrons* Brancsik, 1893.
 Fig. III: *H. (H.) melanophthalmus* Mulsant, 1844.

(Aedeagus from dorsal view x 50).

In these three species, as in the case of other Hydrobaticus, the organic aspect in a state of erection, with its crochets or other appendices, extricated and stretched, should be much different from the appearance of the aedaegus in a state of repose, as is found in all the specimens, dissected for this purpose (fig. I to III). The difference among the species would increase notably if the genitals could be displayed and examined. Of course, it is not at all easy to provoke them to such a condition artificially, in the specimens deprived of life and preserved in dried form the tissues have been more or less altered by the cadaverio decomposition. I could succeed only partially in causing the endosmosis in these subjects, which belonged to a species which is present in sufficient quantities and therefore the wastage of some units could be well afforded. One is often well served by the hazard. It happened to me indeed many times to obtain the Helochares (***)

***) The text abruptly ends here.