On the Identity of *Hydroporus levanderi* J. Sahlb. (Col. Dytiscidae)

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Abstract

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The identity of *Hydroporus levanderi* J. Sahlb. is discussed and a lectotype selected. There is no doubt that *H. levanderi* is a distinct species. The characteristics by which it may be separated from *H. glabriusculus* Aubé are given.

About four years ago T.-B. Engelmark found in the vicinity of Jokkmokk (Lule Lappmark) a rather small dark and shiny *Hydroporus*, which could not be properly determined. According to current handbooks the species ran to *H. glabriusculus* Aubé, but it seemed to differ from that species in some features, especially the male genitalia seemed to be quite different (G. Falkenström, Ent. Tidskr. 49: 155—161, 1928), so Engelmark came to the conclusion that it could be *H. levanderi* J. Sahlb. He sent some specimens to S. Persson, Landskrona, who came to the same result.

In 1929 W. Hellén (Notulae ent. 9: 36) came to the conclusion that *levanderi* most probably is only an immature and somewhat aberrant form of *glabriusculus*. On the type specimens, which I have been able to study, due to the kindness of Kand. H. Silfverberg, Helsinki, there are also labels with "glabriusculus Aubé, Hellén det." A. Zaitzev (Fauna USSR 4: 156, 1953) was of the same opinion as Hellén, but A. Zimmermann regarded *levanderi* as a distinct species (Bestimmungs-Tabellen der europäischen Coleopteren, Heft 101: 9, 1931).

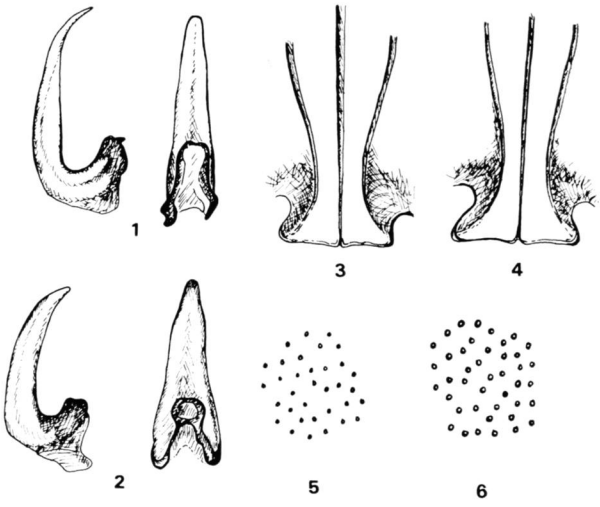
A solution of the problem was rendered more difficult by the fact that the type specimens are all females, so it was not possible to compare the male genitalia of the two forms. In the Swedish material, however, there are some males. They have the genitalia quite distinct from those of *glabriusculus*, and I have now also seen male specimens from coll. Lindberg, Helsinki, which agree with the Swedish ones, although they have become lighter in course of time.

Thanks to Dr. T. Nyholm, Stockholm, I have been able to compare my material of *levanderi* with a collection of *glabriusculus* from Norway, Sweden and Finland. Without any hesitation I regard my material as identical with the types of *levanderi*, which is a good species and may be separated from *glabriusculus* by the differences given below.

Hydroporus levanderi J. Sahlb.

Hydroporus Levanderi J. Sahlberg, 1888, Meddn Soc. Fauna Flora fenn. 15: 221.

In general build very similar to *H. glabriusculus*, but fresh specimens are always deep black with a faint metallic gloss and



Figs. 1—6. *Hydroporus glabriusculus* Aubé. Male genitalia (1); post-coxal sutures (3); puncturation on elytra (5). — *Hydroporus levanderi* J. Sahlb. Male genitalia (2); post-coxal sutures (4); puncturation on elytra (6).

more shiny; legs and antennae as in *glabriusculus*; body gives a more arched and broader impression with the hairs on pronotum and elytra slightly shorter and not so conspicuous; sides of pronotum slightly less arched and microsculpture very similar but not quite as deeply engraved as in *glabriusculus,* especially on pronotum, which is rather dull in the latter; density of micropuncturation on elytra about equal in the two species, but *levanderi* has much larger and deeper punctures (figs. 5—6); post-coxal sutures rather variable, somewhat narrower and not diverging as much as in *glabriusculus* (figs. 3—4), but this feature is far from being as important as supposed by Zimmerman. Male genitalia constantly different in the two species (figs. 1—2).

Material examined

In Zool. Mus. Helsinki, Finland.

Lectotype, ♀. In rather good condition, glued to a card and labelled "Varsuga", "Levander", "Spec. typ.", "Mus. Zool. H:fors, spec. typ. No 79, Hydroporus levanderi J. Sahlb.", "glabriusculus Aubé, Hellén det." and bearing my lectotype label. — One ♀ glued to a card, in poor condition, part of abdomen lost, and labelled "Varsuga", "Levander", "spec. typ.", "Mus. Zool. H:fors, Spec. typ. No 80, Hydroporus levanderi J. Sahlb.", "glabriusculus Aubé, Hellén det.", and with my determination label. — One ♀ glued, with abdomen lost, and labelled "Kusomen", "Levander", "Mus. Zool. H:fors, Spec. typ. No 367, levanderi J. Sahlb., J. Sahlberg det.", and with my determination label. — One ♂ glued, in good condition with genitalia mounted on a microslide, which is on the pin, labelled "Kuopio", "Levander", "levanderi J. Sahlb., J. Sahlberg det.", and with my determination label. — One ♂ glued, in good condition with genitalia on a microslide on the pin, labelled "Fennia Lps, Lutto, Platonoff", "Coll. Lindberg", and with my determination label. — One ♂ glued, in good condition and labelled as the previous one. — One ♂ remounted by me on a card, with antennae broken, labelled "Lapp.", "F. Sahlberg", and with my determination label.

In Coll. Huggert, Umeå, Sweden.

V ä s t e r b o t t e n: Umeå 27.v.1967 ♀; 26.v.1970 2 ♂♂, 4 ♀♀; 30.v.1971 ♂, 2 ♀♀ (L. Huggert). N o r r b o t t e n: Haparanda sandskär 24.vi.1972 9 ♂♂, 4 ♀♀ (L. Huggert).

Ecology

The specimens from near Jokkmokk were found in a small tarn (dead-ice kettle) on a pine moor. The tarn was very shallow with the bottom covered with *Polytrichum*, because it usually dried up in midsummer, and the edges were bordered by a thin belt of *Carex*. Dominating species were: *Hydroporus acutangulus* Th., *H. rufifrons* Dft., *Agabus nigroaeneus* Er. and *Helophorus celatus* Sharp (*lapponicus* Th.).

Near Umeå, in the delta of the River Umeälven, the species lived in old peat-hags with almost no vegetation and with dark water. The pools were shaded, surrounded by a rather swampy mixed alder-spruce forest. Water beetles typical of the locality were: *Hydroporus palustris* L., *H. striola* Gyll., *H. neglectus* Schaum, *Agabus nigroaeneus* Er., *A. affinis* Payk., *Hydrobius fuscipes* L., *H. fuscipes subrotundus* Steph. and *Helophorus flavipes* F.

On 24th June, 1972, I payed a short visit to the island of Haparanda sandskär in company with S. Lundberg and K. Persson. At that locality we found *levanderi* in a rather large, very shallow temporary pool with clear water. The pool was more or less covered with *Carex* and situated in a rather open park-like wood of aspen, alder, birch, willow, rowan and wild cherry. The dominating species were the same as at Umeå, but there were also some others, e.g., *Berosus luridus* L., *Hydroporus rufifrons* Dft. and *Helophorus pallidus* Gebl. There were also some specimens of *Agabus biguttulus* Th., a species I had been looking for for years.

Finally, Engelmark met with *levanderi* again in Finland, Enare Lappmark, some twenty kilometers south of Ivalo, 3.VII.1973. Here it lived in a tundra biotope in a temporary pool with no free water. The animals were found in the *Polytrichum* knolls and were not seen until the moss was pressed down under water. This habit of living in thick moss-mats with no open water to be seen is in fact very typical of most of the northern dytiscids.