

Hydraena excisa Ganglbauer (Coleoptera, Hydraenidae) new to Finland

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Hydraena excisa is reported from four localities in northern Finland: the first records north of the nearest hitherto known find in northern Poland. Notes on the identification are given and the distribution of the species is revised.

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1. Introduction

A total of 13 specimens of *Hydraena excisa* Ganglbauer were collected from four different brook sites in northern Finland. These are the first records from Eastern Fennoscandia, and far north from the hitherto known distributional range of the species, as discussed below. A short description with illustrations is given, since the species was not included in Hansen's (1987) recent treatise of the Hydrophiloidea of Fennoscandia and Denmark.

2. Identification

Hydraena excisa closely resembles *H. gracilis* Germar, and is likely to be confused with that species. Both belong to the subgenus *Haenydra*, which is mainly characterized by the absence of the parameres. In regard to external characters, they are distinguished from the other East Fennoscandian *Hydraena*-species by their size (2.1–2.5 mm) in combination with 10 (rather than 12 or 15) elytral striae.

In Hansen's (1987) key to the North European *Hydraena* species *H. excisa* will run to

couplet 12 (males) or 13 (females) which separate *H. gracilis* and *H. belgica*; but the latter species is not likely to occur in Eastern Fennoscandia.

Hydraena excisa is on the average slightly larger (2.1–2.5 mm) than *H. gracilis* (2.1–2.3 mm), more robust, with slightly less elongate elytra, and with the elytral margins more broadly explanate (explanate margins in the middle about as wide as tibiae in *H. excisa*, distinctly narrower in *H. gracilis*).

The male of *Hydraena excisa* is somewhat intermediate between *H. gracilis* and *H. belgica* in regard to the crenatulation on the inner face of the middle tibiae (cf. Hansen 1987: figs. 81–82), but the genitalia, notably the shape of the terminal lobe (Fig. 1), will easily separate it from the other two (when extracting the genitalia one should be careful not to rip off the terminal lobe). Worth noting is the strong asymmetry of both the main part and the terminal lobe of the genitalia.

The female of *Hydraena excisa* has the elytral apex markedly angulate as in *Hydraena gracilis* (not rounded as in *H. belgica*), but the apical elytral excision is somewhat deeper in *H. excisa* than in *H. gracilis*, and the elytral margins very broadly explanate apically (Fig. 2a, b).

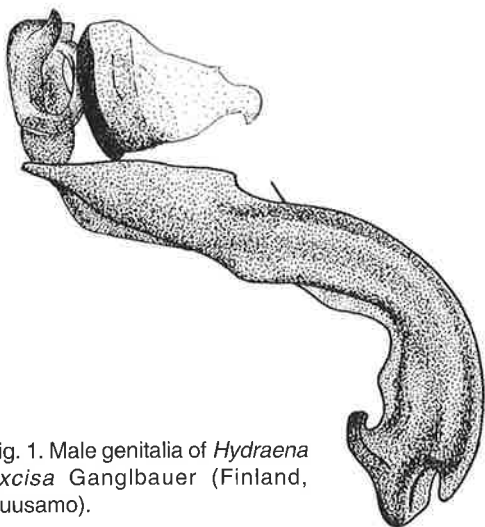


Fig. 1. Male genitalia of *Hydraena excisa* Ganglbauer (Finland, Kuusamo).

3. Records from Finland

The species was collected from the following localities: *Ks*, Kuusamo (grid 27°E 729:62) brook Peipinpuro, 26.IX.1991, 5 exx.; *Li*, Inari (760:54) nameless brook, 29.V.1991, 4 exx., 24.IX.1991, 2 exx.; (764:55) nameless brook, 23.IX.1991, 1 ex.; (764:67) nameless brook, 23.IX.1991, 1 ex.

The collecting sites are small (width 1–1.5 m) brooks at altitudes of 137 to 262 m a.s.l. Three of them are lake outlets, one a second order rivulet. All four are relatively intact, clearwater, and circumneutral brooks with moderate to fast current velocity and predominantly stony bottom. Aquatic mosses, patches of gravel and finer sediments exist to a varying extent. The samples were taken by a kick-net in order to investigate the macroinvertebrate assemblages, combining different habitats within the sampled brook sections. The microhabitat preference of the species remained therefore unrevealed. According to Koch (1989) *Hydraena excisa* is a rheophilic species, confined to brooks, and the present findings are in accordance with this. In northern Finland *H. excisa* seems to be a spring and autumn species, missing in summer samples from the same localities.

The species was found in only 3 out of the 37 localities sampled in the Inari Lapland and additionally in one out of three sites, close to each

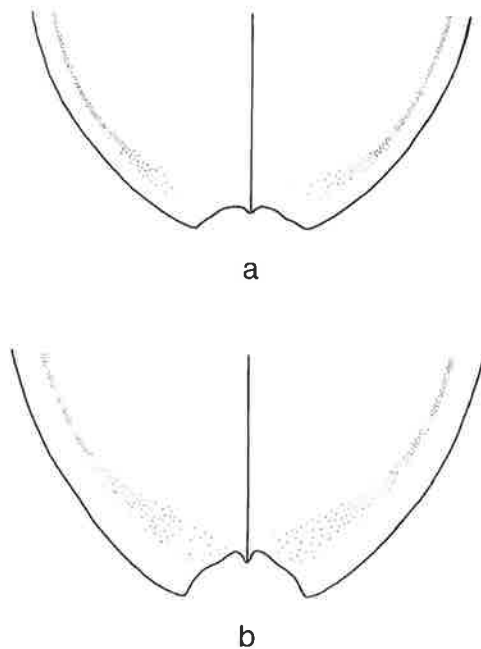


Fig. 2. Elytral apex of females of *H. gracilis* Germar (a) and *Hydraena excisa* Ganglbauer (b).

other, sampled in Kuusamo. The patchy pattern of local distribution, characteristic for some *Hydraena* species (Hansen 1987), appears also to hold for *H. excisa*. It was present in some brooks but seemed to be absent from adjacent ones, even of very similar type.

The other representatives of the Hydraenidae in the brooks studied in Inari were *Hydraena gracilis* and *H. britteni*, both previously unrecorded from the province of *Li* (cf. Hansen 1987). The former species is quite common in the area, as shown by its occurrence in as many as 15 of the sampled brooks (in two of these together with *H. excisa*).

4. General distribution

The occurrence of *Hydraena excisa* in northern Finland is somewhat surprising, considering its hitherto known more southern distribution. According to the literature, *H. excisa* is a Central and East European species (Fig. 3), the westernmost records being from the Netherlands and Germany (Hessen), and the northernmost record so far from Poland (near Gdansk). It is apparently



Fig. 3. Distribution of *Hydraena excisa* Ganglbauer. Black area = literature-based records, shaded area = predicted area of occurrence.

widespread and relatively common in many parts of East and Southeast Europe, and has been recorded from the following countries: Netherlands (near Winterswijk, Cuppen 1992); Germany (mainly in the east, Horion 1949); Poland (sporadic, mainly in the south, Burakowski et al. 1976, Galewski 1990); “Czechoslovakia” (widely distributed, Hrbáček 1951); Austria (eastern part, Orchymont 1930, Horion 1949); Hungary (Endrödy-Younga 1967); “Yugoslavia” (Slovenia, Croatia, Serbia, Macedonia, Pretner 1970, Guéorguiev 1971); Albania (Janssens 1965); Greece (Peloponessos, Janssens 1965); Rumania (widespread, but local, Ienistea 1968); Bulgaria (Orchymont 1930, Guéorguiev 1958). Records from the western Europe are no doubt based on misidentifications (cf. Orchymont 1930).

Unfortunately we do not have any information on the distribution of *excisa* in the European parts of the former Soviet Union. It almost certainly occurs there and may there be distributed further north. Reexamination of the existing material in collections (standing as “*gracilis*”), particularly from Eastern Fennoscandia and the Baltic countries, may well fill the apparent wide gap in the distribution of the species.

The recent findings of many new Fennoscandian hydrophiloid species — eg. (within the

last decade) *Ochthebius kaninensis* Poppius, *O. rugulosus* Wollaston, *O. nilssoni* Hebauer, *Hydrochus megaphallus* Berge Henegouwen, *Sphaeridium marginatum* Fabricius, *S. substriatum* Faldermann, *Cercyon emarginatus* Baranowski, *C. borealis* Baranowski, *Anacaena lutescens* (Stephens) and *Berosus fulvus* Kuwert — clearly demonstrate the still unsatisfactory knowledge of these beetles within the region.

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