

## On the occurrence of the genus *Hyperaspis* (Col. Coccinellidae) in Fenno-Scandian countries.

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The distribution of the species of *Hyperaspis* occurring in northern Europe, *H. pseudopustulata* and *H. inexpectata* is discussed and the confusion concerning *H. reppensis* based on old traditional determinations in our countries is straightened out. *H. reppensis* does not occur in northern Europe. *H. concolor* is reported from Sweden as new for the Fenno-Scandian countries.

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### 1. Introduction

For a long time *Hyperaspis reppensis* (Herbst, 1783) was considered to be the only species of the genus occurring in the northern countries, Denmark, Norway, Sweden and Finland, as well as the north western parts of Russia (Lindroth 1960).

In 1959 Günther published a thorough investigation on the genus in Czechoslovakia and described the new species *H. inexpectata* Günther, 1959 which was announced later also from Finland (Clayhills & Rutanen 1987). He also pointed out the differences between *H. reppensis* and *H. pseudopustulata* Mulsant, 1853, which led to the withdrawal of the former species from Denmark and Norway (Hansen, V, 1969, Hansen, M, 1987, Lundberg 1986). It was replaced in both countries by *H. pseudopustulata* which was also later recorded from Sweden (Lundberg 1995). But up till now *H. reppensis* has been considered the most widespread species in Sweden and Finland with a distribution area from Sk to Lu.lpm in Sweden (Lundberg 1995) and from Ab to Om in

Finland (Lindroth 1960). Lindroth also mentions *H. reppensis* from Kl, Ksv and Kk in the Karelian part of Russia. In both countries, however the species is considered rare.

In the summer of 1996 while collecting beetles from the Isle of Örö, Ab: Dragsfjärd, in the south western part of Finland I came across 14 *Hyperaspis* specimens, 8 of which were males. They were easily determined, for instance by genital characters, as belonging to *H. pseudopustulata*. That led me to check the old material first from Finland including the Karelian parts of the USSR and later also from Sweden.

### 2. Diagnostic characters

Both Günther (1959) and Fürsch (1992) give good descriptions of the species occurring in the northern countries, vs *H. pseudopustulata* and *H. inexpectata*, with good pictures of the male genitals. They also point out the differences between these and the real *H. reppensis*, the distribution area of which lies mainly in the eastern parts of central

and southern Europe with South eastern parts of Germany, Poland, Tschechoslowakia and Austria (Lucht, 1992). *H. reppensis* is mainly a Pusta species with the main distribution area in the Hungarian Pusta and eastward. Due to the confusion of the two species present-day details of the distribution are, however, not totally reliable, a situation already pointed out by Günther. Günther (1959) as well as Fürsch (1992) separate males of *H. pseudopustulata*, in their keys, from the other two species by the presence of the yellow humeral spot or stria which the other two should lack. But that is not true for *H. inexpectata*, males of which every now and then have a vague reddish brown narrow humeral stria but, as far as I have seen, never a conspicuous yellow triangular spot which is typical for *H. pseudopustulata*. It is worth mentioning that these colour characters only concern males of the genus. For male genital differences see Günther (1959) and Fürsch (1992).

In the material from Sweden there is however, one specimen in coll. Mus. Zool. Lund, a ♀, and another in coll. Gothemb. Nat. hist. Mus. a ♂, both taken from Halland Fjärås that clearly belong to the species *H. concolor* Suffrian 1843, a new species for the Fenno-Scandian area. It was long considered a black form of *H. campestris* (Herbst, 1783) and later described as *H. concolor* by Suffrian. Günther (1959) considered it "a forma" but in 1985 Canepari et al. point out clear differences between *H. campestris* and *H. concolor* and give it, quite correctly a status of a valid species. In the northern countries it resembles most *H. inexpectata* by the round form but is quite easy to identify by the completely black elytras of the female and the faint humeral stria of the male while *H. inexpectata* always seems to have at least a faint, mostly clear yellow preapical spot on each elytron. Also the male genitals are different.

The three species occurring in Fenno-Scandian countries can be identified as follows:

1. Elytrons, with the exception of the small humeral stria by the male black, form almost spherical ..... *H. concolor* (Fig. 1)  
—Each elytron with a yellowish preapical spot ..... 2
2. Form spherical, very convex, the humeral striae of the male usually lacking, when present faint, the preapical spots usually smaller .....  
..... *H. inexpectata* (Fig. 2)

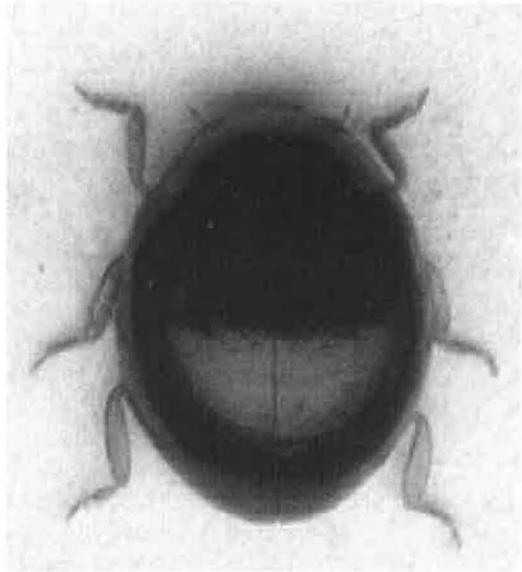


Fig. 1. *Hyperaspis concolor* Suffrian, 1843. ♂

—Form oval, clearly flattened, the humeral spots of the male clear, triangular, preapical spots<sup>1</sup> usually bigger ... *H. pseudopustulata* (Fig. 3)

Among the northern species *H. pseudopustulata* can also be recognized by the robust tibiae, especially seen on the hind ones which are clear-

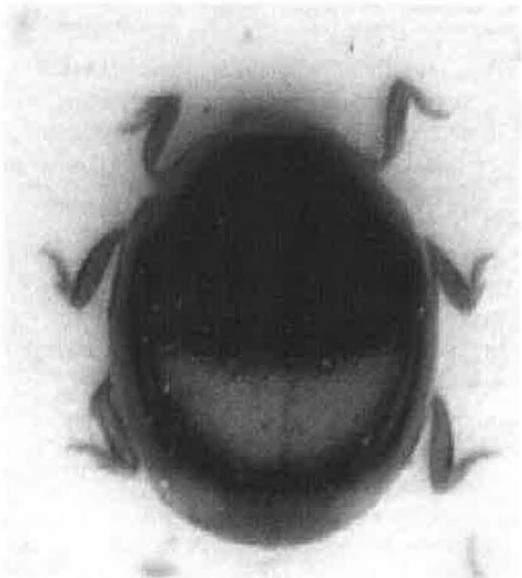


Fig. 2. *Hyperaspis inexpectata* Günther, 1959. ♀

<sup>1</sup>Among about 200 specimens of *H. pseudopustulata* examined, two males lacked the preapical spots but they differ from *H. concolor* by for instance the oval form.



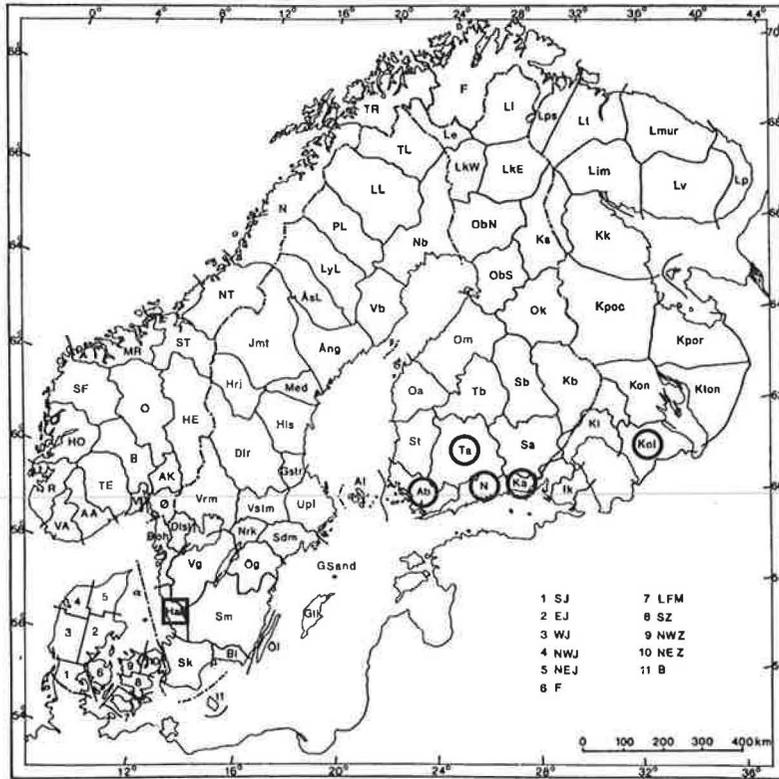


Fig. 5. The distribution of *Hyperaspis inexpectata* (open circles) and *Hyperaspis concolor* (open squares) following the biogeographical provinces of Sweden, Finland and western Russia.

Sweden Hl. Fjärås (Fig. 5) and should also be found in Denmark though probably very rarely.

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