

Brief report

Interesting collection of Corixidae (Heteroptera) from a fish pond

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Altogether 13 species of Corixidae were collected from a drained fish pond in southern Finland in the fall of 1999. Ten of the species had been breeding in the pond, and were thus permanent residents of the habitat. Two species, *Sigara limitata* and *Sigara longipalis*, were new to the province of Ta. In taxonomy of the family Corixidae, *Glaenocorisa cavifrons* (Thomson) is considered as a distinct species because it is sympatric with *G. propinqua* (Fieber) in Scotland and in northern Finland.

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A fish pond in southern Finland is stocked every year with newly emerged pikeperch (*Stizostedion lucioperca*), which are obtained from a nearby hatchery. In late September the pond is drained to collect the annual catch for transfer to natural waters. The pond in which the fish are raised is about 6–7 hectares in area, with a maximum depth of about 140 cm. The water of the pond originates mainly from ponds further up in the small watercourse. A dam in the ditch bringing water to the pond is closed before draining in the fall and kept closed over winter until a couple of days before the young fish are brought in. The pond water is basically clear, with the exception of some artificial clay cloudiness to prevent visually oriented predatory behavior of certain insects.

Approximately 12 000 young fishes are planted every spring, which normally yields about 6 000 fishes for fall transfer. The owner of the pond noticed several years ago that *Notonecta* species were active in catching the young fishes and had taken countermeasures (see above). However,

in 1999 the number of fishes caught for transfer was only about 1000. As the pond was occupied by large numbers of water bugs other than *Notonecta*, the owner of the pond sent a sample of these to me for further investigation and an evaluation of their possible predation. My evaluation was negative: although *Cymatia bonsdorffii* and *Glaenocorisa propinqua* are active predators, their prey is smaller. The reason for the low catch is probably climate-related: a cold May followed by an extremely warm summer in Finland in 1999.

I received altogether 749 specimens of water bugs with the collecting data Finland, Ta, Urjala, 678:30, 16–24.IX. 1999, leg. Pekka Vantanen. Both the commonly occurring *Notonecta glauca* Linnaeus and *N. lutea* Müller were present, but faunistically the most interesting part of the sample consisted of the 742 specimens of Corixidae: *Cymatia bonsdorffii* (C. Sahlberg) 22 ad. + 1/V + 1/IV; *Glaenocorisa propinqua* (Fieber)¹ 2 ad. + 1/IV

¹ *Glaenocorisa propinqua* (Fieber) and *G. cavifrons* (Thomson) are considered as distinct species because they are sympatric in Scotland (Jansson 1986) and in northern Finland (unpublished records). The same attitude was taken by Ossiannilsson when he identified material for Lindroth & Ball (1969) from Alaska. An ecological isolation between the two species seems to exist in their habitats: *G. propinqua* is mainly found in lowland ponds, while *G. cavifrons* is usually caught from upland waters.

Callicorixa praeusta (Fieber) 121 ad. + 2/IV + 2/IV
Corixa dentipes (Thomson) 2 ad. + 2/IV
Hesperocorixa linnaei (Fieber) 1 ad. (capable of flying)
Paracorixa concinna (Fieber) 3 ad. (of which two teneral)
Sigara distincta (Fieber) 253 ad. + 91/IV + 6/IV + 1/III
S. falleni (Fieber) 1 ad. (capable of flying)
S. fossarum (Leach) 140 ad. + 15/IV + 4/IV
S. limitata (Fieber) 38 ad. + 2/IV
S. longipalis (J. Sahlberg) 5 ad. + 1/IV
S. semistriata (Fieber) 14 ad. (of which 4 teneral)
S. striata (Linnaeus) 11 (all capable of flying)

The number of corixid species, altogether 13 in a single sample, is rather amazing. However, of the species listed, at least *H. linnaei* and *S. falleni* were obviously only temporary visitors in the pond: both specimens had fully developed indirect flight muscles (= mesonotum black, while in teneral specimens the mesonotum is yellow and the flight muscles not yet developed, cf. Young 1965). In addition, all specimens of *S. striata* had fully developed flight muscles, and although their number was 11, it is possible that they had all originated elsewhere.

Of the remaining species, eight had both adults and larvae and had thus been breeding in the pond. *P. concinna* and *S. semistriata* were represented by both flying and teneral specimens, and are thus comparable to the species with both adults and larvae. Thus, at least 10 corixid species were permanent residents of the pond. *S. distincta*, *S. fossarum*, *S. limitata* and *C. praeusta* were clearly the dominant species of the pond, and the others were represented by only a few specimens. Because the pond is drained annually for the winter, all the species must be newcomers every year.

Differences in the amounts of the species evidently reflect differences in the spring dispersal of the species

(Young 1965 had similar observations from England). Another explanation for those species occurring in the pond only in small numbers is the possibility that they had drifted in from the upper ponds through the inlet ditch. Faunistically *S. limitata* and *S. longipalis* were new to the province of Ta (cf. Lammes & Rinne 1990, 1993).

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