Biology of the Baltic smelt (Osmerus eperlanus L.) [Abstract]

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Biology of the Baltic smelt (*Osmerus eperlanus* L.)

Biology of the Baltic smelt was studied in 1968-91 in order to find out the position of the smelt in the Baltic food chain. Material was collected from various parts of the Baltic Sea but mainly from the Tvärminne area. The problems focused upon are:

(1) Food habits and consumption: In the Tvärminne area the most important food species are *Mysis mixta* and *Pontoporeia affinis*, but several other crustaceans (including planktonic species), *Harmothoe sarsi* and small fishes (including smelt) are also eaten.

(2) Parasites and diseases: In all, 27 species of parasites have been recorded from Baltic smelts, but only the following eight species have been registered regularly: *Glugea hertwigi*, *Echinorhynchus salmonis*, *E. gadi*, *Corynosoma semerme*, *Hysterothylacium aduncum* and *Cystidicola farionis* (the last-mentioned from the swimbladder of every adult smelt).

(3) Predators: Fishes like *Salmo salar*, *S. trutta*, *Gadus morhua*, *Esox lucius* and *Stizostedion lucioperca* feed on smelts regularly in the Tvärminne area. In the spawning area many smelts are taken by gulls (*Larus* spp.).

(4) Spawning and development of fry and fingerlings: Smelt spawn intensively in river mouths or shallow waters during a short period in early spring. During the
spawning they do not eat at all, but shortly afterwards they turn even to cannibalism. After hatching young smelts grow rapidly. At the beginning they mostly feed on plankton but as they grow larger they prefer greater prey.

Publication: