

The fish fauna of the Scheldt basin in Wallonia

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In 1978-1982, a survey of the fish fauna was carried out in the fresh waters of Wallonia, including a study of a part of the Scheldt Basin (stretches of the R. Scheldt and Lys + upper reach of the tributaries Ghete, Dyle, Senne, Dendre, Haine, Hogneau, Verne) (Phillipart and Vranken, 1983; Phillipart, 1994). This study allowed the assessment of various aspects of fish and river ecology : assessment of the faunal resource (biodiversity), zoogeography (comparison between the Scheldt and the Meuse basins), population dynamics (species extinction, demographic decrease), relationship between the characteristics of the fish fauna and the water and habitat quality parameters, measures for conservation and management (species protection, reintroduction of species, stocking).

As regards the Walloon part of the R. Scheldt Basin, 88 stations (length : 50-200 m; width : 1.2-8.5 m except for the Scheldt and Lys : 40-70 m; slope : 0.5-8.5‰; barbel and bream zones according to Huct's classification) were fished with electricity (direct current; single intensive catch-effort). Further qualitative informations on the fish fauna in canalized navigable rivers and canals were obtained from questionnaires sent to anglers. Some stations in the R. Dendre sub-basin were electrofished more recently (late 1980's).

The total number of indigenous species recorded in the Walloon part of the R. Scheldt Basin amounted to 23, out of 44 species belonging to the Belgian freshwater fish fauna. Maps of geographical distribution were produced for each species. The number of species per station ranged 0 (29 stations with extremely low habitat conditions) to a maximum of 12 in the few well preserved habitats (cut sections of the R. Scheldt; R. Dendre orientale; R. Trouille). The corresponding biomasses (catch per single fishing effort) were 0-266 kg/ha. Four species (*R. rutilus*, *G. aculeatus*, *N. barbatulus* and *G. gobio*) exhibited a high percentage occurrence (> 25%) and formed the most abundant populations in numbers.

Three species (*C. taenia*, *R. sericeus*, *L. delineatus*) considered as very rare in Wallonia were found in a few places in the Walloon R. Scheldt basin. Bruylants *et al.*, (1989) also report on their presence in the Flemish part of the basin.

Fish species with high ecological requirements (specially the rheophilic and oxyphilic *S. trutta*, *C. gobio*, *P. phoxinus*, *L. leuciscus* and *L. cephalus* and exhibiting a wide distribution range elsewhere in Wallonia (Meuse, Rhine and Seine basins) were absent in most stations of the Walloon R. Scheldt basin and present
