

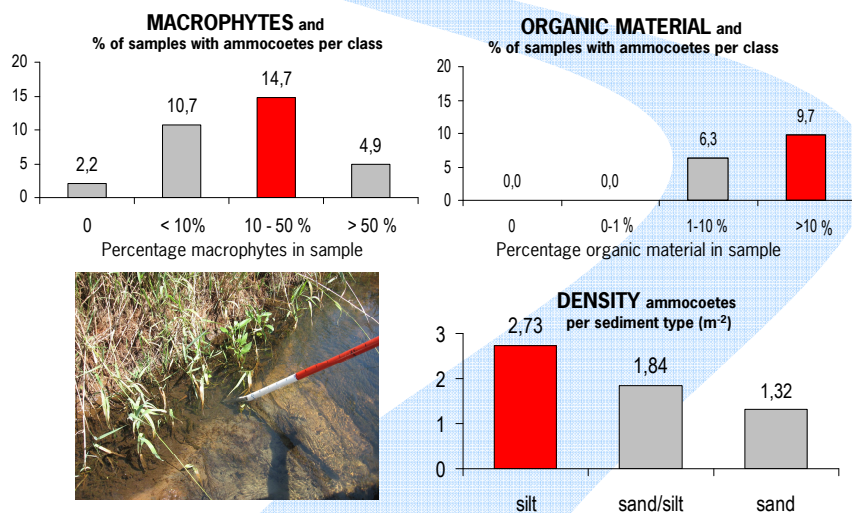
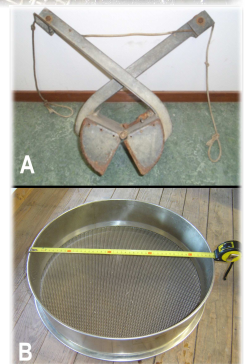
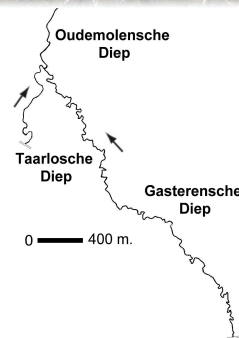
Dispersion of juvenile river lamprey in relation to habitat characteristics in the Drentsche Aa.

Griffioen, A.B.¹, Winter, H.V.², Patberg, W.², Vroome de, A.I.³ Schollema, P.P.⁴

The Drentsche Aa and river lamprey

The Gasterense Diep (part of the Drentse Aa catchment) is one of the few sites where river lamprey (*Lampetra fluviatilis*) is known to spawn in the Netherlands. This diadromous species migrates upstream rivers and streams to spawn in coarse sediments. The larval river lampreys drift to habitats with finer sediments and live there burried as filter feeders for 4 years before migrating to sea.

To assess the distribution of juvenile river lamprey (ammocoetes) in relation to habitat characteristics, 628 locations in Gasterense, Oudemolensche and Taarlosche Diep were sampled with a Van Veen Happer (0.04 m² per sample). For each location sediment type, organic matter and macrophyte coverage were classified.



Habitat preference

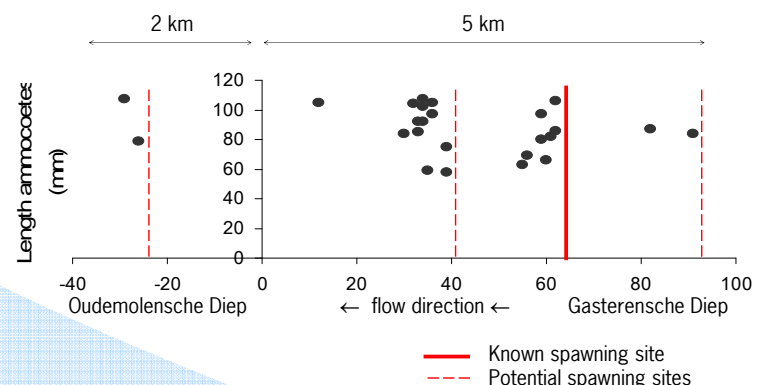
Ammocoetes (juvenile river lamprey) *prefer* the occurrence of high percentages of organic material (>10%) and coverage with water plants (10-50%).

Highest densities of nearly 3 ammocoetes per m² were found for silt. In sand/silt and sand, densities were lower. No ammocoetes were found in fine silt or sediments more coarse than sand. Notably, the smallest individuals preferred sandy substrate.

Dispersion along the stream course

Locations in the Drentsche Aa with larger stones or gavel suitable for spawning are rare. The dispersion of ammocoetes along the course of Gasterense and Oudemolensche Diep showed a remarkable pattern.

Several 'clusters' of ammocoetes were found, all directly downstream the known spawning site or the few available potential spawning sites, whereas suitable habitats for growing ammocoetes were present along the entire stream course. This suggests that dispersal during their 4 year ammocoete period is very limited.



CONCLUSIONS

Juvenile river lamprey prefer to settle in fine sediments ranging from silt (optimal) to sand with >10% organic matter and covered by water plants (10-50% optimum). The scale of dispersal from the spawning sites to the growing habitats during their 4-year ammocoete stage appears to be very limited.