

13 Molluscs

Margaritifera margaritifera freshwater pearl mussel

Current status WCA 5 (for killing and injuring only) – currently being considered for increased protection; vulnerable RDB (IUCN); EC II, IV; Bern II.

Widespread, but declining, throughout Ireland, restricted in England to the north and west of a line from Scarborough to Beer Head, Devon. Confined in this region to one or two stations along the river Esk. Prefers fast flowing rivers with little or no lime content. Long lived (80-100 years), reproduces profusely but the larvae live in the gills of salmonid fish and many die after leaving the host fish, possibly due to intolerance of changes in water chemistry.

Threats Poor water quality, nutrient enrichment and increased acidification due to conifer plantation. Loss of habitat due to removal or alteration through development, drainage schemes, flow regulations

in the Welsh Marches of England and Wales, in West Sussex and north-east Yorkshire. It was last recorded in the North York Moors in 1981. A species of lowland rivers, the adults are associated with sandy river banks, especially where sand shoals have built up at flood level. Shading alders *Alnus glutinosa* or other trees and bushes are generally present, but bare sand in open sunny conditions is usually part of the habitat mosaic. Larvae are terrestrial soil predators.

Threats Removal of sandy sediment from rivers and river banks for aggregate; the deepening and canalisation of water courses and reductions in river flow resulting from water abstraction.

Lipsothrix errans a crane fly

Current status Nationally notable.

Has a wide distribution across temperate Europe, but generally scarce. In Britain it is essentially a northern species, known from Scotland, northern England and Wales. Only 18 sites have records since 1960 and in this region the only known site is Forge Valley Woods, in an area of calcareous streams with moss cushions and tufa. Lives in wooded streambanks in upland districts. Wet rotten wood in streams is generally required for the development of larvae of this genus.

Threats Removal of coarse woody debris from water courses; clearance of broadleaved woodland; ditching of streams; excessive trampling of banks and pollution such as agricultural run-off.

Odontomyia hydroleon a soldier fly

Current status Endangered, provisional RDB (GB).

Found in 1988 and during the 1990s on the North York Moors, one of two British sites, the other being in Wales. Found on valley mire with a spring-fed, poor fen. Its habitat requirements are not known. However, open, shallow calcareous seepages may be necessary for larval development.

Threats Overgrowth of larval habitat by dense vegetation, such as rushes *Juncus* species might pose a threat in the North York Moors; water quality and pollution and a fall in the water table.

Spiriverpa (= *Thereva*) *lunulata* a stiletto fly

Current status Rare RDB (GB).

Northern and western species. Found on exposed river shingle deposits, either bare or sparsely vegetated, next to moderate to fast flowing, wide rivers.

Threats Increased water abstraction leading to reduced water levels; gravel extraction from shingle bars; drought; pollution; eutrophication; river engineering and scrub encroachment.