

Gyrodactylus salaris



| Taxon | Family / Order / Class / Phylum |
|--|--|
| <i>Gyrodactylus salaris</i> Malmberg, 1957 | Gyrodactylidae / Monopisthocotylea / Turbellaria / Platyhelminthes |

COMMON NAMES (English only)

Salmon fluke

SYNONYMS

None.

SHORT DESCRIPTION

This is a very small worm parasite (<1 mm) which attaches to the outer body and gills of fish in the salmon family. It damages the skin and this can lead to infections. Unless heavily infested, it is unlikely that its presence will be noticed. There are many related *Gyrodactylus* species that are difficult to distinguish. This genus contains specialist and generalist parasites.

BIOLOGY/ECOLOGY

Dispersal mechanisms

Associated with fish movements of Atlantic salmon and rainbow trout in fresh and brackish water. May be spread to different catchments by piscivorous birds.

Reproduction

Individuals are small, ~0.5-1.0mm long, and females have up to four viviparous broods of 2-7 individuals, the first may be asexually produced.

Populations rapidly develop at 6.5-13.0°C, but can also grow at 2.5°C (surviving 33 days) to 19°C (4.5 days). It may reproduce on different salmonids.

Known predators/herbivores

Unknown.

Resistant stages (seeds, spores etc.)

None.

HABITAT

Native (EUNIS code)

Ectoparasitic: on the surfaces of Atlantic salmon *Salmo salar*.

Habitat occupied in invaded range (EUNIS code)

Ectoparasite: on the skin, gills and fins, heavy infections normally occur on the body and caudal fin.

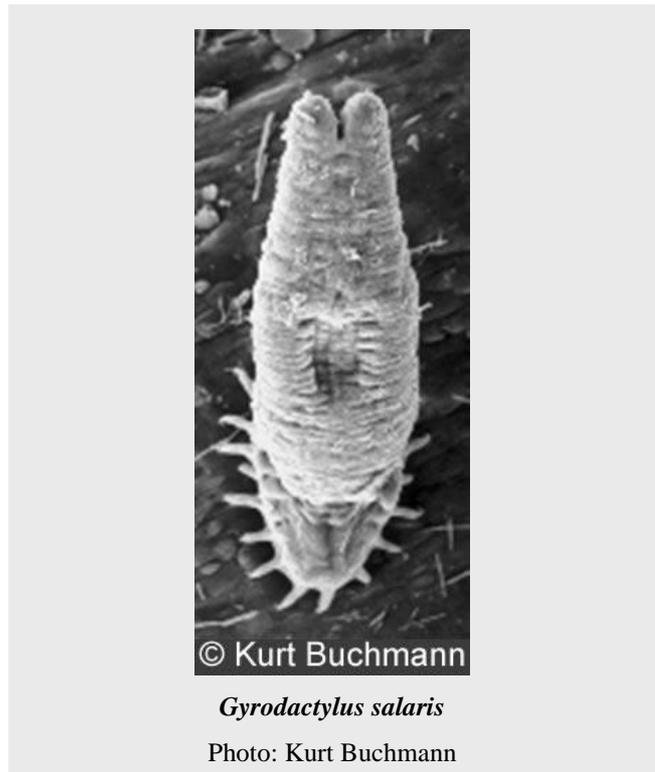
Habitat requirements

It is a cold water species surviving at temperatures 0-20°C and salinities up to 7psu. At higher salinity reproductive capability and longevity declines.

DISTRIBUTION

Native range

Adapted to an isolated evolutionary form of Atlantic salmon in Baltic river catchments in Russia, Sweden, Finland, Latvia and Lithuania.



Known Introduced Range

Norway, Finland and White Sea region of Russia, Denmark (on farmed rainbow trout).

Trend

Restricted range but this may expand.

MAP (European distribution)



Legend

| | | | | | |
|---|-------------------|---|-----------------------|--|----------------------|
|  | Known in country |  | Known in CGRS square |  | Known in sea |
|  | Native in country |  | Native in CGRS square |  | Assumed native range |

INTRODUCTION PATHWAY

Aquaculture and stocking. Movements of infected salmon or rainbow trout fingerlings and perhaps with fish-farm, fishing and water sports equipment. Can survive in air under damp conditions for some days. Movement of hosts to different catchments where there is freshwater to brackish water.

IMPACT

Ecosystem Impact

It results in a significant mortality of young salmon in river catchments outside of the northern Baltic Sea, in Norway, northern Finland and the White Sea area. Reports from Portugal, Spain, France and Germany may be misidentifications. May cause reduced unionid recruitment caused by declines in abundance of salmonids.

Health and Social Impact

High mortalities of salmon outside of its native range, but no human effects.

Economic Impact

In Norway, estimates of annual losses in production in the late 1990's from salmon farms was 250-500 tonnes of production.

MANAGEMENT

Prevention

Stock transfers of fish from risk areas to uninfested areas should not take place.

Mechanical

Restrictions on imports.

Chemical

Eradication using rotenone has been effective in eliminating its presence in 16 Norwegian waterbodies. Aqueous aluminium may be effective for treating fish for stocking. Detached trematodes are able to infect free-swimming salmon although they have no swimming ability themselves. The use of brackish treatments needs to be reviewed. Populations have declined arising from control measures in Norway.

Biological

Unknown.

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