PROTECT THE SALMON

Prevent the Spread of Salmon Parasite *Gyrodactylus salaris*

Evira

Cover photo: Panu Orell/Inner spread: Perttu Koski

KEEP UPPER LAPLAND FREE OF *G. SALARIS*

The water systems in Upper Lapland are free of the salmon parasite *Gyrodactylus salaris*. *G. salaris* causes high mortality in salmon juveniles and has caused a collapse in salmon stocks in Norway. This parasite spreads through water and from fish to fish.

The water systems in Upper Lapland are protected from this parasite by the Act on Animal Diseases. The protected area includes the water catchments of the rivers Tenojoki, Näätämöjoki, Uutuanjoki, Paatsjoki and Tuulomajoki. It is strictly forbidden to transfer live fish or non-disinfected fish eggs from other parts of Finland to Upper Lapland. Based on an EU decision it is also forbidden to transfer fish or non-disinfected eggs from any other area that is not officially proven free of *G. salaris*. Furthermore, live fish may not be transferred between the water catchments in Upper Lapland.

TRAVELLERS

Do not put water from other areas into natural waters, but absorb it into the soil at a sufficient distance from the shore.

FISHERMEN

All boats and canoes as well as fishing gear and equipment, such as reels, rods, lures, nets, boots, wading pants, gutting equipment, etc. brought from other river systems to the Upper Lapland region must be completely dry or disinfected before they are used. *G. salaris* can survive several days without a host fish and can thus spread in water or through wet fishing gear and equipment.

Gutting fish caught in other river systems or discharging fish waste in natural waters is prohibited in the Upper Lapland region.

The use of live or dead bait fish is banned in angling, ice-fishing and lure-fishing in Upper Lapland. Bait fish may not be brought from other river systems to the Upper Lapland watercourses, nor may they be moved between these areas.

Ensure that the bilge water of your boat does not reach other river systems.

PADDLERS

Ensure that your canoe or rubber boat is completely dry or disinfected before you continue paddling in another river system.

DIVERS

Ensure that your diving equipment is completely dry before you dive into another river system. Disinfect or dry the buoyancy control device (BCD) also on the inside.

TRAVEL TRAILERS AND CAMPER VANS

Do not pour household water into natural waters but absorb it into the soil at a sufficient distance from the shore.

PILOTS

Do not pump pontoon water from your aircraft into the river systems draining into the Arctic Ocean. Use canisters and absorb the water into the soil at a sufficient distance from the shore.

INSTRUCTIONS FOR DRYING AND DISINFECTION OF THE GEAR AND EQUIPMENT

Drying

24 hours at + 20°C, a longer time in moist and cold conditions.

One hour in + 60°C sauna.

Deep-freezing

24 h at - 18°C.

Disinfection

When you enter the Upper Lapland watercourse area, all fishing equipment, boats, canoes, etc. must be disinfected if they are not completely dry. All the Finnish sites selling fishing licenses for the river Tenojoki are equipped with disinfection facilities. The Centre for Economic Development, Transport and the Environment in Lapland has a disinfection station for boats and fishing gear in the Inari fishing port (open during summer). Furthermore, disinfection services for fishing gear can be found in the petrol stations Neste in Inari and Seo in Ivalo, motel Rajamotelli Näätämö in Näätämö and bar/inn Sevetin baari in Sevettijärvi.

Disinfect or dry the fishing gear again if you change your location to Norway even if moving to the other parts of the same river.

You should always use disinfection stations unless you are absolutely sure that your gear and equipment are dry!

GYRODACTYLUS SALARIS

is a parasite about 0.5 mm long living on the skin and gills of salmon. This parasite cannot be seen by the naked eye. *G. salaris* is capable of reproducing on the skin of rainbow trout and can survive a short time on the skin of many other fish species as well. *G. salaris* produces live offspring and in favourable conditions the reproduction may be very fast.

This parasite occurs for example in the river Tornionjoki, without causing any observable damage or mortality. However, the spread of this parasite to Norway in the 1970s caused high mortality of salmon juveniles in almost 40 rivers, leading to a drastic decrease of salmon catches. This is considered to be due to the lack of immunity of the Atlantic salmon to excessive reproduction of *G. salaris*. The same has been observed in Russia in the river Kierettijoki.

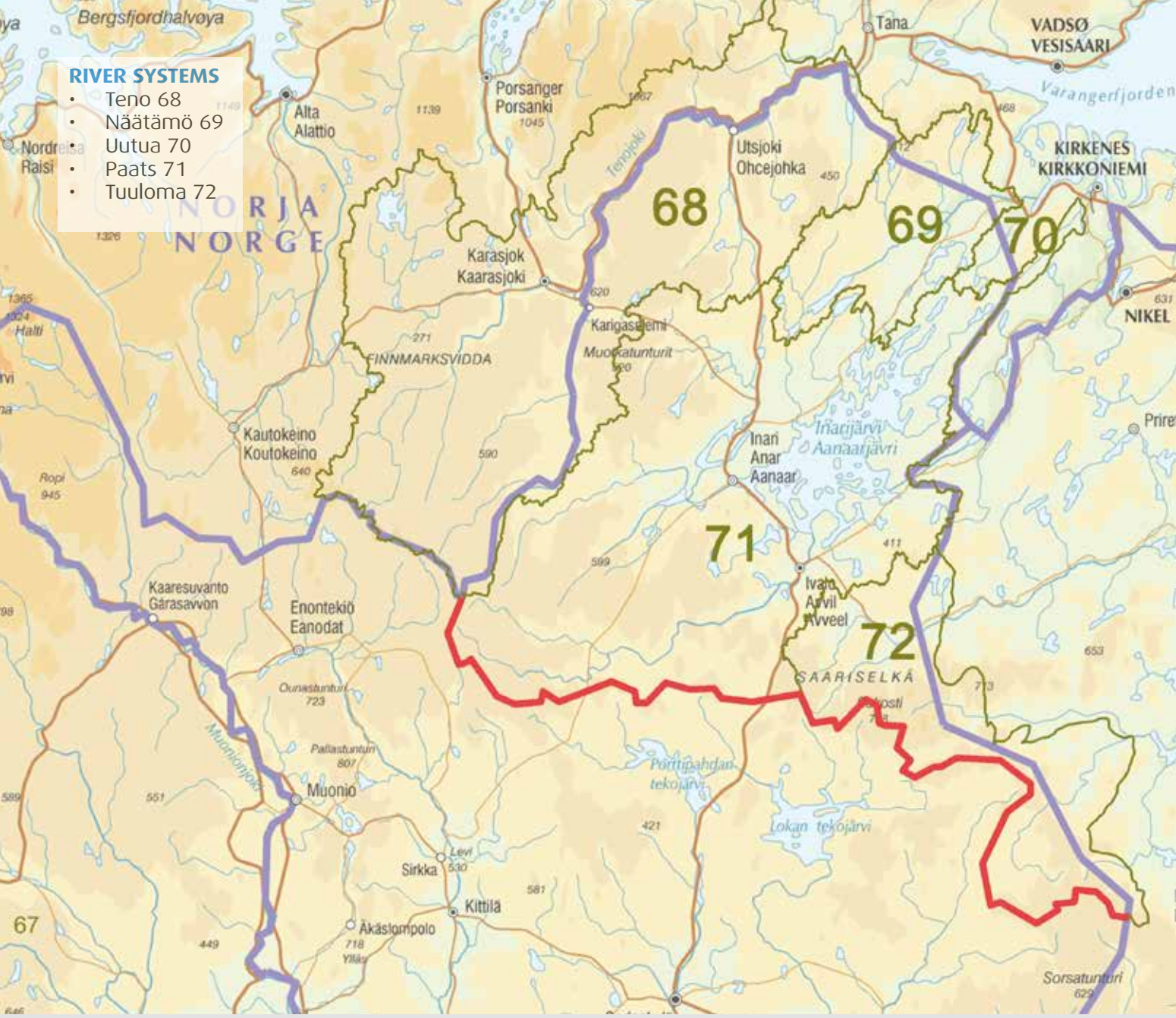
Thus, preventing the spread of *G. salaris* to the Upper Lapland region (i.e. the northernmost parts of Finnish Lapland) is of utmost importance.

G. salaris uses its tiny hooks to attach itself to the surface of fish skin and gills. The parasite feeds on cells and mucus around the attachment site. The parasites are also capable of moving on the fish surface. Both the attachment and feeding disturb the normal function of the skin and gills. A mild infection does not harm the fish very much, but in the case of a more serious infection the mechanical irritation will lead to excessive excretion of mucus and the damaged skin is vulnerable to infection and fungal diseases.

G. salaris does not infect humans or domestic animals.

Photo: Jussi Kuusela

The hooks are at the rear end of the parasite. The hooks inside the parasite belong to the next generation. This already carries the next daughter, whose hooks are quite well developed. The propagation resembles the famous Russian doll.



More information

- Fishing in Tenojoki river, disinfection: www.ely-keskus.fi
- Centre for Economic Development, Transport and the Environment in Lapland, Fisheries Division, tel. +358 (0)29 503 7000
- TenoInfo - the publication is updated each year and is available on the internet
- More information on *G. salaris* www.evira.fi/portal/en

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