## Advice to anglers

To prevent the spread of parasites, diseases, and alien species we recommend the following:

- Please rent or borrow boats, canoes, engines, and other equipment from local companies and individuals.
- Don't transfer fish or crayfish between lakes or streams.
- Captured signal crayfish should be boiled and eaten.
  Enjoy the meal. Signal crayfish must not be released into new lakes or streams.
- Only use bait fish that have been captured in the waters in which you are angling. Alternatively they should be deep frozen for at least 24 hours before use.
- Empty all water from boats, canoes and engines if you intend to move them to another lake or stream.
- Clean off equipment thoroughly before disinfecting.
- Please disinfect fishing equipment, boats, canoes, waders, and other equipment you intend to move to other lakes and streams.

Disinfecting methods to prevent the dispersal of crayfish plague and other diseases:

- Dry out equipment completely (e.g. in a sauna, or outside for a long period of time).
- Clean or soak equipment in ethanol for at least 20 minutes (three parts ethanol to one part water).
- Deep freeze equipment to below -10 °C for at least 24 hours.

Disinfection demands much time and effort but is necessary to prevent the spread of certain alien species.



## Marketplace 7-Härad

Creates employment opportunities for sustainable tourism in Sjuhärad.

At Marketplace 7-Härad we work with the development of eco-tourism, angling tourism, and other types of sustainable development. This allows tourism to develop on nature's terms and at the same creates new employment opportunities for a modern visitor industry.

This broschure is part of Marketplace 7-Härads information series about sustainable development.

Marketplace 7-Härad

Kärnåsenvägen 9 S-517 96 Hultafors Tel: +46-702-16 72 18

E-mail: turism@sjuharad.info

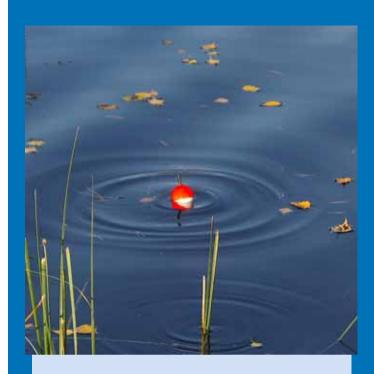
Homepage www.sjuharad.info

Edition, text, layout: Marketplace 7-Härad in cooperation with Melica and the University College of Borås. Stefan Bydén, Kester Gibson, Einar Hansson, Jan-Erik Svensson, Sassi Wemmer.

Tryck: Dahlins Tryckeri AB, Borås 2006.

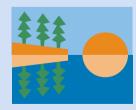






Invasive alien species a threat to freshwater bio-diversity

How do you avoid their spread?



Marknadsplats 7–H ä r a d

The signal crayfish is an American species which carries crayfish plague, a disease that can eradicate local populations of the native noble crayfish. The signal crayfish is common in the Sjuhärad district and resistant to crayfish plague. Photo: Inge Lennmark.



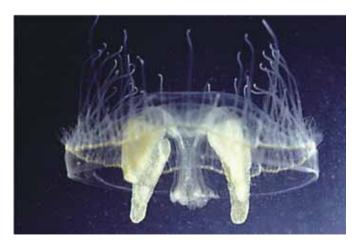
Gyrodactylus is a fish parasite. A species which has been dispersed by stocked fish with severe consequences for Norwegian salmon populations. It is also found in the Viskan and Ätran catchments. This picture shows Gyrodactylus on a stickleback. Photo: Anders Alfjorden/ SVA.

# Invasive alien species – a threat to freshwater bio-diversity

Alien species (also known as non-native species) are spread across continents by international trade and tourism. Some of these species are harmless; others are invasive and cause considerable harm to lakes and watercourses. Native fish populations are threatened by alien parasites and food chains are thrown out of balance by non-native intruders. The spread of alien species is one of the most significant threats to the natural biodiversity of our region's freshwater lakes and rivers.

## The Angler – knowledge and responsibility

One of the main objectives of sustainable sport fishing is to prevent the spread of alien species. Through their engagement with, and knowledge of, water eco-systems, anglers can play a key role. For many years anglers in the west of Sweden have helped to heighten awareness of the effects of acidification. Similar efforts are now being directed towards the spread of alien species. We hope that angling tourists and other visitors will support Marketplace 7-Härad in its work to ensure a long and sustainable future for our fishery.



*Craspedacusta sowerbyi*, often named "the freshwater jellyfish", has its origins in China. It is not yet found in the Sjuhärad district, but occurs in other parts of Sweden. Photo: Staffan Waerndt.



Kellicottia bostoniensis, a rotifer from North America. This planktonic animal lives in the lakes of the Sjuhärad district. It's negative effects are unknown. Photo: Jan-Erik Svensson.

### Sport fishing on nature's terms

Fishing tourism is on the increase in Sjuhärad. The area's high quality environment is made up of hundreds of lakes and streams which support many fish. Sport fishing can be developed even further if this natural asset is protected, but nature must be respected and not eroded. Conservation of bio-diversity is a prime concern for sustainable sport fishing in the Sjuhärad district.



The Zebra mussel, a mussel species, originates from areas of the Caspian and Black Seas. It is not found in the Sjuhärad district but is common in the Lake Mälaren valley in central Sweden. Foto: Inge Lennmark.