

# The secret life of sea trout

## Contact

Name: Jan Grimsrud Davidsen, NTNU Museum,

Department of Natural history

E-mail: [jan.davidsen@ntnu.no](mailto:jan.davidsen@ntnu.no)

Telephone: 92464314

<http://www.ntnu.no/vitenskapsmuseet/sjorretens-liv>

The major approach is to reveal physiological and biological interactions between the sea trout and the coastal marine environment. The status of the fish (e.g. body condition, parasite infections, growth rate and survival) when it returns to the river systems after its annual feeding migration is expected to reflect the ecological status of the local marine ecosystem and sea trout may therefore be used as an indicator species. However, to do this new knowledge about ecological interactions between sea trout and its competitors, prey, predators and parasites is needed. To obtain such information, acoustic telemetry will be used in combination with PIT tagging and advanced diet analyses.

Acoustic telemetry provides detailed information about behavior and habitat use of the sea trout during its marine feeding migration. The combination with PIT tagging links the observed individual behaviour with return rates in several subsequent years. This coupling of information will be used to explain the link between survival rates and individual behavior during the marine feeding migration.

[www.ntnu.edu/oceans](http://www.ntnu.edu/oceans)



Further, this will be linked to the marine diets by using two different time-integrated trophic tracers of former dietary and niche use, the combination of the compositions of trophically transmitted marine parasites and analyses of stable isotopes in the muscle. Each individual's trophic niche (i.e. diet and habitat use) will be linked to growth patterns in the sea, the number of earlier seasons in the sea, the sea lice infection and the maturation status. This will result in new detailed knowledge about the coupling of marine trophic behaviour, growth performance, habitat use and survival.

[contact@oceans.ntnu.no](mailto:contact@oceans.ntnu.no)