The marine life of sea trout (Salmo trutta): Aspects of their migratory behaviour and survival

During my PhD. research project I have studied the marine migratory behaviour and survival of wild sea trout (Salmo trutta L.) juveniles when moving from freshwater to saltwater (i.e. smolts/post-smolts) in two different fjord systems. These studies are focused on the initial marine stage of post-smolts as well as on the fish returning to freshwater after the marine stage. The results of my experiments increase the current knowledge of specific behavioural traits that sea trout displays during their marine life. Additionally, it provides new information on the early and late marine survival which is needed for comprehensive management of sea trout populations in the area. The principal method used was telemetry (acoustic and PIT-telemetry) which enable studying migratory patterns of fish in the fjord (i.e. acoustic telemetry) and detecting the transitions from the marine to the riverine environments and vice versa (PIT-telemetry). On basis of the results, it is suggested that partial migration in sea trout not only occurs in freshwater but also in saltwater. Further, this research project shows that different developmental stages of trout juveniles can display different behaviours and also have differential survival in saltwater and that straying into other streams can be high in sea trout. Overall, this research expands the knowledge of sea trout ecology at sea where information is very limited and underlines the high polymorphic and ecologically variable nature of the species.

**General information**
Publication status: Published
Organisations: National Institute of Aquatic Resources, Section for Freshwater Fisheries Ecology
Contributors: Del Villar, D.
Number of pages: 126
Publication date: 2015

**Publication information**
Place of publication: Charlottenlund
Publisher: Technical University of Denmark. National Institute of Aquatic Resources
Original language: English