

# Collections

## ► The biological reference collections:

- Voucher samples of each species
- Otoliths
- Muscle samples
- DNA samples

## ► Reference collections network:

The specimens sampled in eight areas (from the Skagerrak & Baltic sea to Canary Islands and Mediterranean sea) have been deposited in collections at:

- Swedish Museum of Natural History, Stockholm (Sweden)
- French National Museum of Natural History, Paris (France)
- Tenerife Museum of Natural History, Tenerife (Spain)
- Funchal Museum of Natural History, Madeira (Portugal)



# The Consortium

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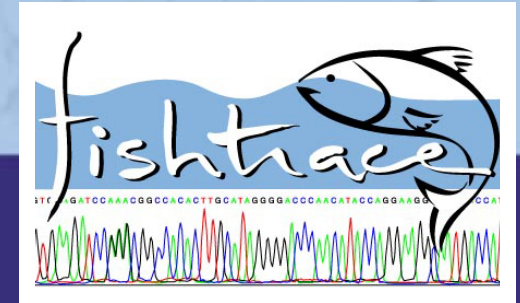


FishTrace is funded under the Quality of Life and Management of Living Resources Programme of the EU's 5th Framework Programme in Support for European Research Infrastructures

(QLRI-CT-2002-02755)



A tool for identification of  
**fish species**  
and traceability of  
**fish products**



FishTrace is a genetic catalogue associated to biological reference collections from more than 200 commercial marine fish. Genetic and taxonomic information is compiled in an online database.

[www.fishtrace.org](http://www.fishtrace.org)

# Presentation

FishTrace is a strategic tool to control the authenticity of fishery products.

It provides useful biological and genetic information which guarantees the identification and the traceability of more than 200 marine fish species of interest to European markets.



➤ FishTrace provides information and material for a wide variety of end-users, including research, academia, biotechnology, national and transnational regulatory bodies, fisheries industry, food and transforming industry, consumers associations, control laboratories, among others

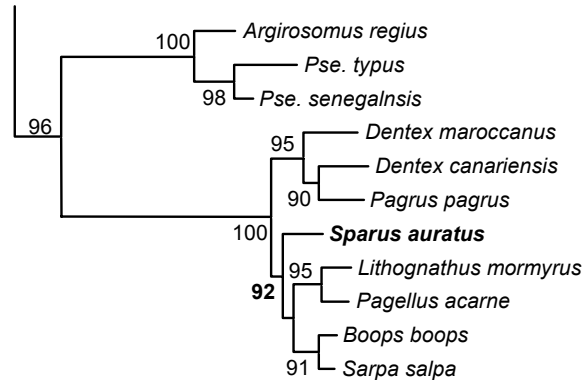
➤ FishTrace makes available, through a public Web site, reliable biological information and multidisciplinary methodologies for authenticity analysis

➤ FishTrace fulfils the consumers' demands in terms of origin and identification of fishery products

# The Project

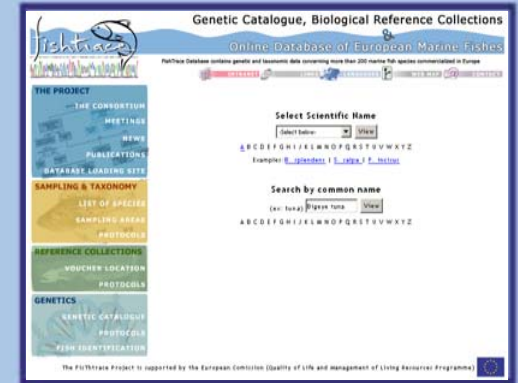
For each fish species, fresh specimens have been obtained from well-known origins. Each specimen has been identified, measured and photographed, and tissue samples have been obtained for molecular genetic analysis and for storage in reference collections.

The nucleotide sequence of two genes, cytochrome b and rhodopsin, have been determined. Intra-species variability (genetic variation in populations) has been also investigated. Molecular data is provided to identify each fish species through robust phylogenetic analysis.



Biological reference collections have been created to guarantee long-term sample preservation. Material exchange allows their use for standardization analysis and fishery products traceability.

[www.fishtrace.org](http://www.fishtrace.org)



The online database offers three levels of information:

➤ **Taxonomic and biological information on the fish species:** description, diagnosis, similar species, biology, distribution, interest to fisheries and high quality scientific pictures

➤ **Molecular genetic information on the fish species:** reference DNA sequence of cytochrome b and rhodopsin genes, and DNA polymorphisms from each species. Genetic data also include standardized methodologies for DNA extraction, PCR amplification and sequence analysis

➤ **Information about the biological collections:** access to the specimen samples stored in collections (entire fish, otoliths, extracted tissues, DNA). Sampling and collection data include sampling GIS localisation, ontogenic stage (juvenile, adult), length, weight, etc...