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The Eel *Anguilla anguilla* an Endangered Species in Europe

The European eel *Anguilla anguilla* Linné, 1758 has for a long time been of interest to naturalists (Aristotle, 350 BC) on account of its peculiar life cycle. It often appeared mysteriously and a large number of fanciful explanations have been expressed. It still intrigues biologists on account of its behavioural characteristics: its life span, its transatlantic migration, its nocturnal activity, its metamorphosis, as shown by the large number of papers published on the subject. Even Sigmund Freud (1877) looked into the problem of the sex differentiation in eels!

Not only is its biological study of particular interest at a fundamental level, but the eel also represents a high economic value. The eel is exploited in fresh, brackish and coastal waters almost throughout Europe. The total production amounts to 30 000 t per year (Moriarty & Dekker, 1997). The target of the fisheries varies from glass eels to silver eels on their way back to the breeding area. No international coordination of eel management exists.

Considered as a common species for a long time, it has become rarer over the last two decades. National reports have confirmed that there have been marked declines in eel catches throughout Europe: decrease of abundance of upstream and downstream runs of glass eels and silver eels associated with a

sharp reduction of densities and colonisation areas in continental waters. Scientists have begun to ring the alarm bell. Its sensitivity and vulnerability to a number of factors (pollution barriers in estuaries, loss of utilisable habitats, chronic effects of pollutants, infection by the Nematoda *Anguillicola crassus*, physical barriers affecting silver eel migration, overfishing of glass eels and silver eels) contribute to the alarming reduction of the European stock. Moreover, it is not yet possible to reproduce eel artificially, due to reproductive strategies in the Sargasso sea and the oceanic nature and duration of the planktonic leptocephalus stage. Further there is a lack of knowledge of the spawning and the larval transatlantic migration (Lecomte Finiger, 1994).

The eel has been listed in the "Red Book" of threatened species, edited by the French Environmental Ministry, since 1987. Today, the stock is considered to be "outside safe biological limits"(ICES, 1998).

For how many more decades will we have to battle before the general indifference can be broken? Biologic and economic stakes are too important for the eel problem to be ignored any longer. We hope that many investigators will now set their sights towards solving the eel problem.

Measures are to be taken quickly to protect this

international patrimony, so that one never hears:
"one called it the European eel".

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