



## The American Eel... a *Species at Risk* in Ontario

COSEWIC Status – SPECIAL CONCERN April 2006

SARA Status – UNDER CONSIDERATION



*Anguilla rostrata*  
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This species has been identified as Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). It is currently being considered for listing under the federal *Species at Risk Act* (SARA).

Protection is afforded through the federal *Fisheries Act* and *Environmental Protection Act*. If listed under the SARA, it will be afforded additional protection. Under the SARA, a management plan must be developed for this species.

### General Description

The American Eel (*Anguilla rostrata*) is a freshwater eel belonging to the family Anguillidae. It is also known as the Atlantic Eel, Common Eel, Silver Eel, Yellow Eel, Bronze Eel and Easgann, among other names. In Mi'kmaq, it is known as *kat*. It has the following characteristics:

- Long, serpentine body
- Deeply embedded scales
- Single dorsal, caudal and anal fin extends around the tail to the ventral side
- Terminal mouth with thick lips
- Lower jaw slightly longer than the upper jaw
- Several rows of small teeth on the jaws and roof of the mouth
- Well developed lateral line
- Transparent, laterally compressed larvae (leptocephali) resemble a willow leaf in shape
- Juvenile (yellow eels) colouration varies from yellow to green or olive-brown on the belly and dark on the back
- Adults (silver eels) are grey with a white or cream-coloured belly
- Adult females may reach up to 1 m in length; males are smaller at less than 0.4 m

## Distribution

The American Eel has a wide distribution on the western side of the Atlantic Ocean from Venezuela to Greenland and Iceland, including the Sargasso Sea (southern North Atlantic). Its native Canadian range includes all fresh water, estuaries and coastal marine waters that are accessible to the Atlantic Ocean, from Niagara Falls in the Great Lakes up to the mid-Labrador coast.

## Habitat and Life History

The American Eel uses a broad range of habitats encompassing all salinities during its life stages. It spawns in the Sargasso Sea and eggs hatch within roughly one week. The larvae (leptocephali) are passively, but widely, dispersed by surface currents of the Gulf Stream system to western shores of the Atlantic Ocean. When larvae reach 55 to 65 mm long, they metamorphose into 'glass eels', a post-larval stage characterized by a lack of pigment. As they approach coastal estuaries, they become pigmented or 'elvers'. This stage lasts 3 to 12 months during which they may migrate up rivers or remain in brackish or salt waters eventually becoming 'yellow eels'. The yellow stage marks the growth phase where the skin thickens and sexual differentiation occurs. Between 8 and 23 years are required to become 'silver eels', at which time they are physically and physiologically adapted to migrate the thousands of km back to their spawning grounds where all individuals mate randomly as one population (panmixia). Spawning occurs only once.

## Diet

American Eel larvae are believed to feed primarily on detritus, while glass eels and elvers consume insect larvae. Yellow eels are night feeders and prey on a variety of organisms including small fishes, molluscs, insects and crustaceans. Feeding stops for the spawning migration.

## Threats

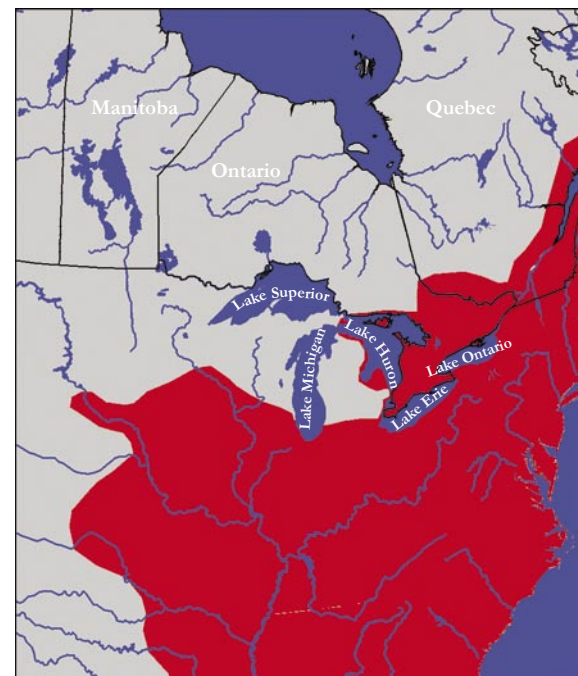
The American Eel is faced with a number of threats. Climate change may be causing a deviation of the Gulf Stream system to the north, which could interfere with larval transport to coastal areas. Dams and other barriers result in habitat loss and fragmentation and contribute to reduced or delayed recruitment. Turbines may also contribute to increased mortality or injury of downstream migrants depending on turbine design and eel size. Biological (exotic species, parasites) and chemical contaminants, and commercial fishing are threats in some regions.

## Similar Species

A close relative of the American Eel is the European Eel (*Anguilla anguilla*). This eel inhabits continental waters of the eastern North Atlantic Ocean but also frequents the Sargasso Sea and Iceland.

Text Sources: COSEWIC Status Report 2006.

## AMERICAN EEL DISTRIBUTION



For more information, visit the SARA Registry Website at [www.SARAreistry.gc.ca](http://www.SARAreistry.gc.ca) and the Fisheries and Oceans Canada (DFO) Website noted below.

*Cette publication est également disponible en français.*

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[www.aquaticspeciesatrisk.gc.ca](http://www.aquaticspeciesatrisk.gc.ca)

Section 32 (1) of the *Species at Risk Act* (SARA) states that “no person shall kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.”