

Biological information's

Species name in Icelandic, English and Latin:

EN: *Greater amberjack*, LAT: *Seriola dumerili*

Life cycle, natural habitat, growth conditions, distribution, etc.

Seriola dumerili is a pelagic, cosmopolitan and highly migratory species, from the Carangidae family, which forms large shoals and displays a strong association with thermal patterns. Following temperature changes, its distribution presents stationary fluctuations among tropical and temperate waters. Namely, it possess a circumglobal distribution as described hereafter: Indo-West Pacific (South Africa, Persian Gulf, Southern Japan and the Hawaiian Islands, south to New Caledonia, Mariana and Caroline islands in Micronesia), Western Atlantic (Bermuda, Nova Scotia, Canada to Brazil; also from the Gulf of Mexico and the Caribbean Sea), Eastern Atlantic (British coast to Morocco and the Mediterranean). Subtropical; 45°N - 28°S, 180°W - 180°E (www.fishbase.se).

Regarding feeding, it behaves as an opportunistic species having as preys a wide variety of organisms. Youngest individuals feed mainly on zooplankton, gradually introducing the species they prey to larger benthic and nektonic organisms as they grow until they end up exhibiting a piscivorous diet. Adult individuals feed on the pelagic fish and cephalopods (FAO).

This species shows a rapid growth, reaching a maximum length and weight of almost 200cm and 80kg, respectively. Its growth rate is highly dependent on water temperature (Abbink *et al.*, 2011; Fernandez-Montero *et al.*, 2017). It is a gonocoric species with no sexual dimorphism reaching sexual maturity at around 4-5 years of age being the spawning period different depending on its distribution (FAO).

At aquaculture level, the main producer is Japan, although there are several examples of *seriola* farming in the Mediterranean Sea.

Can the species get invasive?

- Is the species considered to be invasive somewhere inside or outside it's natural habitat?

Currently, *Seriola dumerili* species is not considered to be invasive inside or outside its natural habitat.

- Can the species live or breed in Icelandic conditions?

No, *Seriola dumerili* distribution is highly dependent on water temperature and Icelandic temperatures are far from being adequate for its living, survival or breeding. Icelandic waters nearby the proposed culture area are around 6-9°C, which is around 10°C less of the minimum temperature that such species can withstand.

- Is there a possibility that the species will interbreed with local species?

No, the closest species in the area are cod, herring, saith, salmon and trout and they are very distant evolutionary, so there is no risk of interbreeding.

- Is it likely that the species will get invasive if released into Icelandic nature?

No. As mentioned above, due to survival and breeding/interbreeding issues, the probability of this species of getting invasive if released, it is very unlikely.

Risk assessment

- Is it possible that the species will transmit disease?

No. Common affection diseases in *Seriola dumerili* are not the same affecting cod herring, and wild local species, and farm fish as salmon, trout, char, which are the main species present in the surrounding area.

- Is it possible that the species will transmit disease to livestock, wild flora or have any negative affect on animal welfare?

No, it is a marine species, so it is very unlikely that any of its pathogens can have affection on livestock.

- Is it possible that the species will transmit disease to humans?

Seriola dumerili aquaculture has been developed for a long period of time in other countries and no diseases transmitted to human have been reported.

- Is it possible that the species will escape captivity and what are the possible consequences?

According to the culture system proposed, it is very improbable that the species can scape captivity. Even though, if that happens, its survival in the media is implausible due to environmental conditions, as mentioned above.

- Could it have negative affect on natural biodiversity?

No. As it doesn't present any feature that can characterize it as a potential invasive species and it has a very improbable chance of survival in the media.

Signed

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