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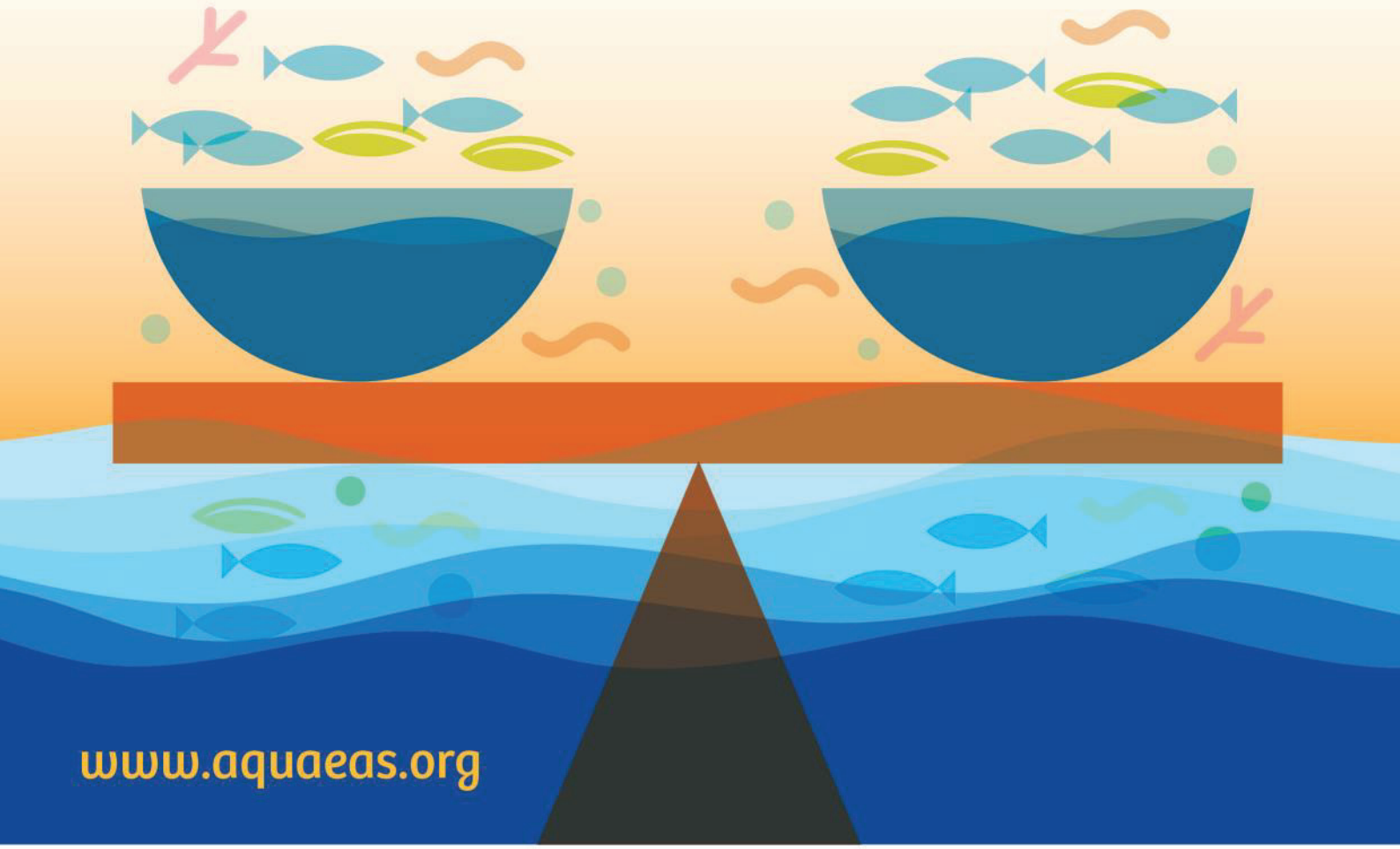

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# ABSTRACTS

# MONITORING *Neobenedenia girellae* INCIDENCE IN THE GREATER AMBERJACK (*Seriola dumerili*) IN CANARY ISLANDS

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## Introduction

Parasitic infestations are a significant bottleneck for the further expansion of the culture of different aquaculture species as the greater amberjack (*Seriola dumerili*), producing mass mortalities and instability of the offer and production costs. *Neobenedenia girellae* is one of the main parasites which cause skin infection in carangids, feeding on their mucus and epithelial cells and causing haemorrhage, hyperproduction of mucus, inflammation, and epidermis thickening (Hirazawa *et al*., 2013; Fernández-Montero *et al*., 2019). Thus, an efficient approach for controlling these parasitic infestations is of great importance to developing the culture of *Seriola* sp., among them freshwater or formaldehyde baths and oral treatments with antiparasitic drugs (Hirazawa *et al*., 2004; Hirazawa *et al*., 2013). However, an integrated approach considering the local specificities is necessary to maximize the protocols' effectiveness. For those reasons, the present study aimed to assess the local specificities of *Neobenedenia girellae* life cycle in the context of the last challenges for climate change resilience in the Canary Islands, Spain.

## Materials and methods

From April to July 2023, juveniles of greater amberjack placed in open seawater system were monitored every two weeks to determine the presence of *Neobenedenia girellae*.

For that the animals were anesthesized with clove oil:ethanol 1:1, and subjected to a freshwater bath for 4 minutes (Hirazawa et al., 2013). After the bath, the water was filtered thought a 125 $\mu$m net, and the net was examined under a stereoscope to determine the presence of adults or eggs of *N. girellae*.

In table I are resumed the conditions during this period.

Once the presence of parasites was determined, alive specimens were carefully collected from the skin surface with a scalpel and placed in plastic dishes (10 cm diameter) filled with natural seawater. Additionally, white segments of polyester threads (around 50 cm length), were placed in the tanks and monitored every 24 h to check the presence of *N. girellae* eggs. Polyester threads when then placed in 300 ml buckets filled with natural seawater. Water from both plates and buckets was removed and replaced daily with clean seawater and temperature was monitored. The time to hatching was monitored though daily visualization of the eggs under a stereoscope. Additionally, measurements of adults and eggs (n=30) were made under the stereoscope with the program Leica Application Suite (Leica Microsystems Ltd., Heerbrugg, Switzerland).

Table I. Experimental conditions.

| | April-May | June-July |
|---|---|---|
| Juveniles mean weight (g) | 173.29±23.81 | 249.59±49.71 |
| Juveniles mean lenght (g) | 22.41±1.03 | 26.01±1.97 |
| Tanks temperature (°C) | 20.5-21.5 | 21.5-23.8 |
| Tanks volume (L) | 300 | 1000 |

*(Continued on next page)*