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The IEO achieves for the first time worldwide the reproduction of bluefin tuna in land-based facilities

The milestone has been achieved in the ICRA facilities, the infrastructure for the control of the reproduction of this emblematic species

Murcia, Wednesday, July 19, 2023. Researchers from the Murcia Oceanographic Center of the Spanish Institute of Oceanography (IEO, CSIC) have achieved, for the first time, worldwide, the reproduction of bluefin tuna (*Thunnus thynnus*) kept in captivity in a land-based facility.

The Oceanographic Center of Murcia, of the Spanish Institute of Oceanography (IEO, CSIC) own a facility for the control of bluefin tuna reproduction (ICRA) since 2015, located in the municipality of Cartagena (Murcia). Together with the Mazarrón Aquaculture Plant (less than a mile away) it was declared in December 2018 as a "Singular Scientific-Technical Infrastructure for Bluefin Tuna Aquaculture" (www.icar.ieo.es) of the Spanish Ministry of Science and Innovation.

The ICRA has four large tanks (two of 22 and 20 m in diameter and 10 meters deep, and two smaller ones of 14 and 8 m in diameter and 6 and 3 m deep respectively) with a total capacity of 7 million liters of seawater. It houses two bluefin tuna breeding stocks, one made up of 25 specimens born in 2017, and another with 8 specimens born in 2018.

As Aurelio Ortega and Fernando de la Gándara, the researchers responsible for the facility, have stated, this last stock was implanted on Thursday July 13 with hormones that induce final maturation and spawning, when these are blocked by the stress of captivity. 48 hours later, a few hundred thousand fertilized eggs were obtained, and after 72 hours, close to 3 million, continuing spawning on the following days.

This is the first time, worldwide, that bluefin tuna (*Thunnus thynnus*) have been reproduced in captivity in a land-based facility.

The IEO already achieved the closure of the biological cycle of this species in 2016, but it was in floating cages in the sea.

The Spanish Institute of Oceanography (IEO, CSIC) is a National Center of the Spanish National Research Council (CSIC), under the Ministry of Science and Innovation, dedicated to research in marine sciences, especially in relation to scientific knowledge of the oceans, the sustainability of fisheries resources and the marine environment. The IEO represents

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Spain in most of the international scientific and technological forums related to the sea and its resources. It has nine coastal oceanographic centers, five marine culture experimentation plants, 12 tide stations, a satellite image receiving station and a fleet made up of four oceanographic vessels, among which the Ramón Margalef and Ángeles Alvariño stand out.



















