WRECKFISH WORKSHOP
19TH JULY
INSTITUTO ESPAÑOL DE OCEANOGRAFÍA
Centro oceanográfico de Vigo

The WRECKFISH as a potential new species for the aquaculture in the Eastern Atlantic

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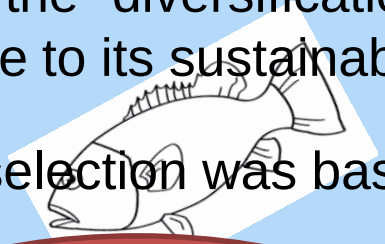
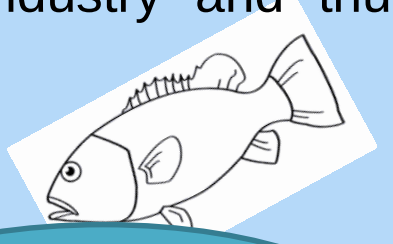
DIVERSIFY

Finding new/emerging finfish species

The project DIVERSIFY has identified new/emerging finfish species in order to support the diversification of the European aquaculture industry and thus contribute to its sustainable expansion.

This selection was based on:





ECONOMIC CRITERIA

Economical potential.

Cover an European geographic area.

Large finfishes market high market price.

High demanding from consumers.

New value-added products.

BIOLOGIC CRITERIA

- Biologic potential
- Fast growing reaching up to 100 kg.
- Long size.
- Late reproductive maturation.
- Easy manipulation in captivity.
- Extended pelagic juvenile phase.

SUSTAINABLE CRITTERIA

Nutritional value.

Limited fisheries landing

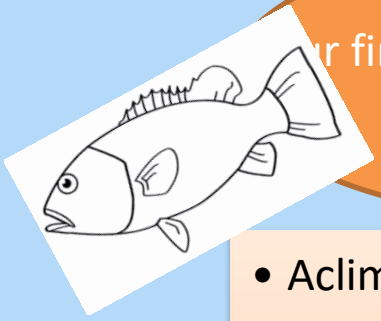
Possibility repoblation.

Stimulate different aquaculture systems (cage/pond/extensive/ reciculation)

Aclimatize easily to captivity.

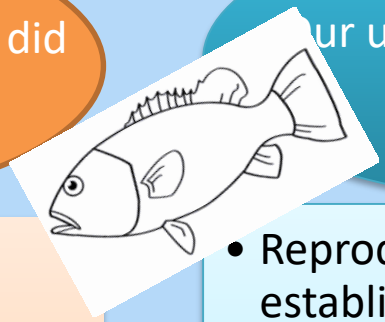
LET'S BET ON THE

WRECKFISH (Polyprion americanus)



ur first Kowledges: what we did know?

- Aclimatize easily to captivity.
- Low mortalities.
- Accepts inert food easily.
- High growth rate (grew from 1 Kg to 5 Kg in a period of 10 months)
- Late maturation.
- Some of reproduction cycle.
- Existence of wild especimens in captivity

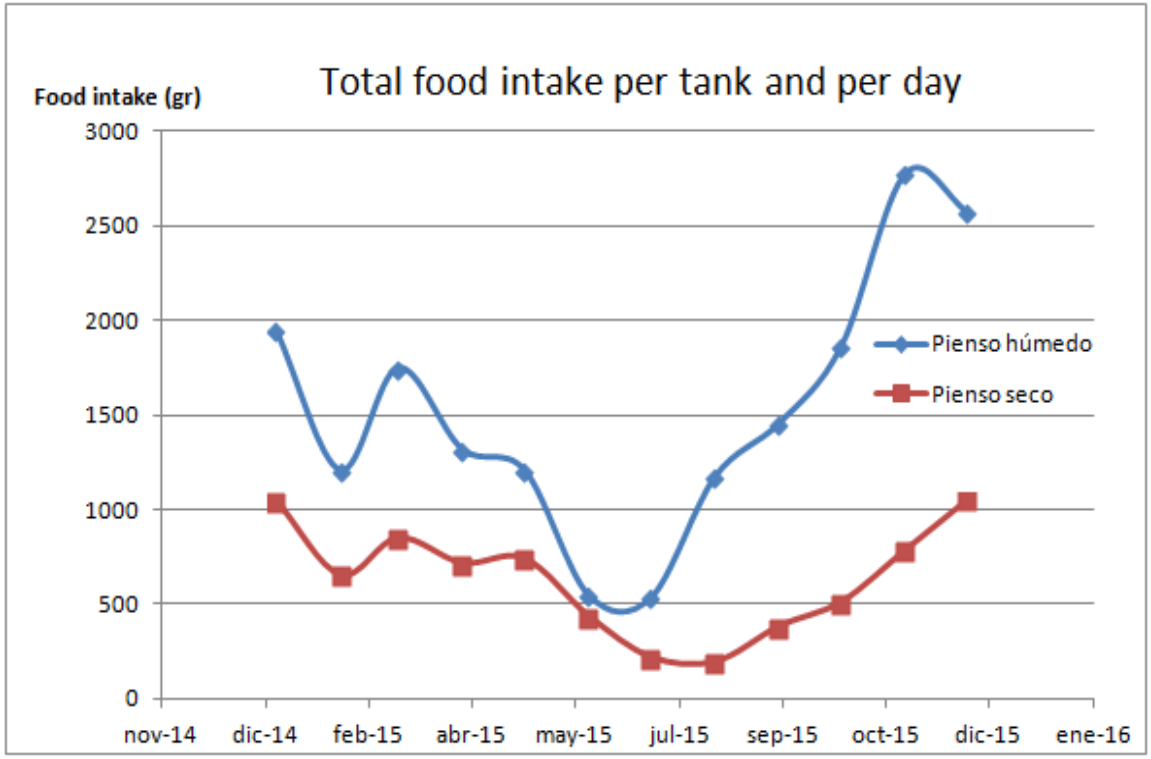


ur unknowledges: what we didn't know?

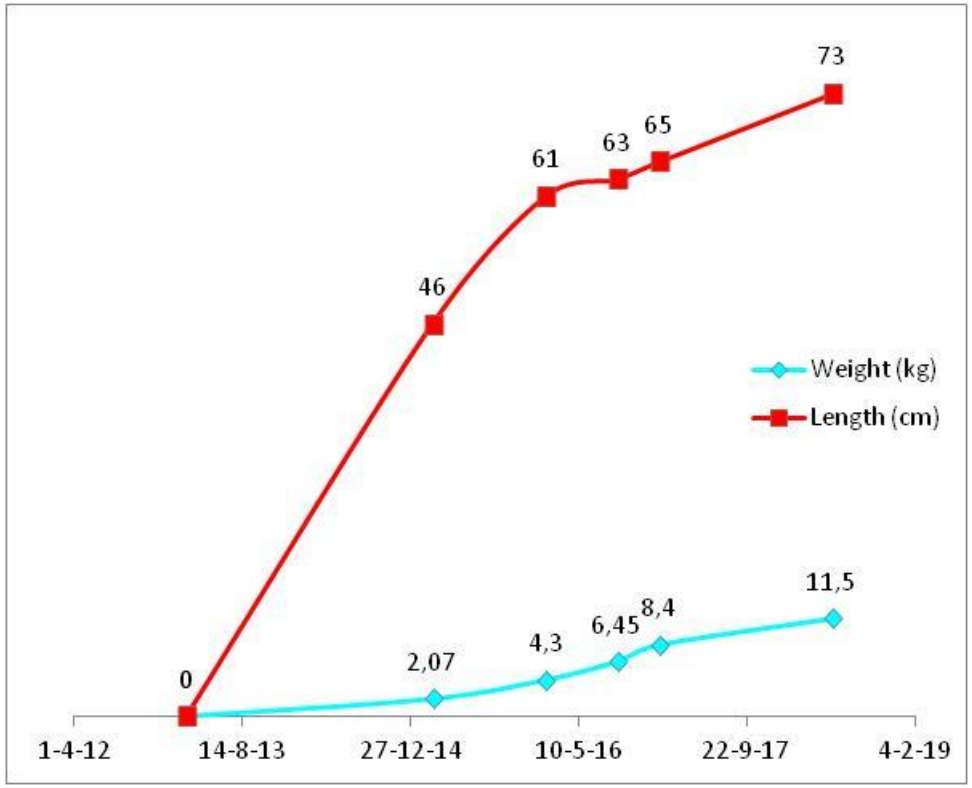
- Reproduction control. The establishment for the control of spawning.
- Spawning preferences.
- Methods of spawning induction.
- Lack of larval rearing protocols.
- Scarcity of wild broodstocks.

It Is quite apparent that this species exhibits

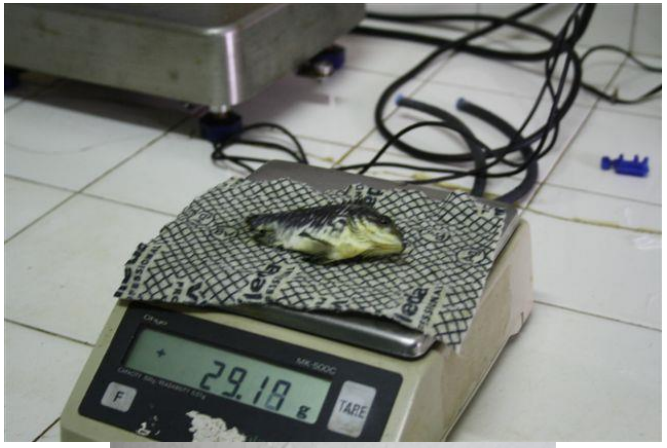
- a fast rate of growth
- asy adaptation to the captive environment and handling procedures.
- Low feeding rates were recorded during the spawning season (from March to July) and high feeding rates occurred during autumn
- Ingestion rate varied between 0.2 and 0.5 % for fish fed with semi-moist diet, and between 1 and 1.8 % those fed dry pellets.



First data of wreckfish growth



Weight and lenght in 5 months



Individual borned at isidro de la Cal in 2013 and cultured in MC2 facilities (larvae from MC2)

years post hatching	0	2	3	4	4	6
Weight (kg)	0	2,07	4,3	6,45	8,4	11,5
Length (cm)	0	46	61	63	65	73

DIFFERENTIAL MORPHOLOGICAL CHARACTERISTICS

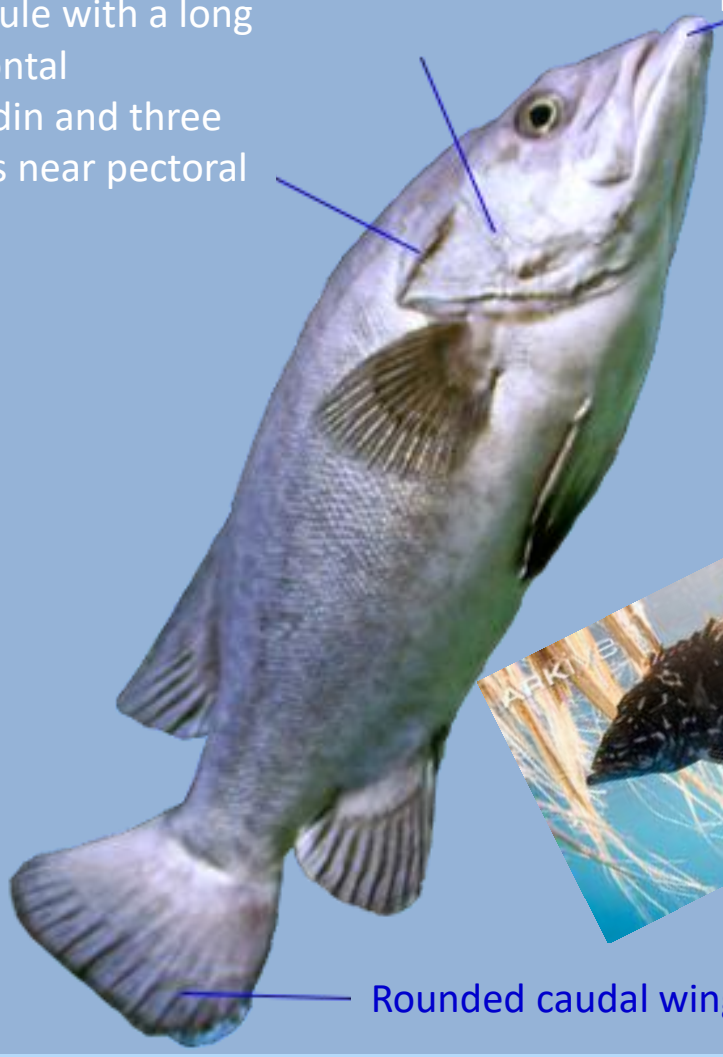
Preopércule with dented side

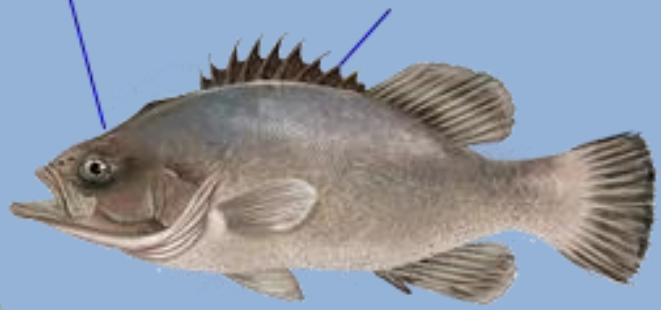
Opércule with a long horizontal protudin and three thorns near pectoral wing.

Inferior jaw longer than superior

Depression above the eyes

Two lobules dorsal wing. Anterior part with thorned radios





Rounded caudal wing

Brown-greyish colour with silvered hues. Juveniles species are blackish with white spots. The adults might reach up to 2 m length and 100 kg weight.

In addition to the wreckfish species typical of the Atlantic Ocean and the Mediterranean Sea (*Epinephelus guaza*), there are other species distributed by warm and tropical seas.
Some of the best known are the following.

Nassau wreckfish (*Epinephelus striatus*). It inhabits the tropical areas of the Atlantic Ocean. It is one of the most consumed in the United States.

Mero pinto or **American warble**r (*Epine-phelus morio*). It is located on the coasts of Florida and is considered one of the best gastronomic qualities.

Black wreckfish (*Epinephelus nigritus*). It is found in the waters of the Colombian Caribbean.

Giant wreckfish (*Epinephelus itajara*). It is a large fish that can reach 300 kilos of weight.

Spotted wreckfish (Epine-phelus analogus) It is recognized by its coloration, characterized by dark spots and bars on a reddish-brown body.

Distribution of subpopulations

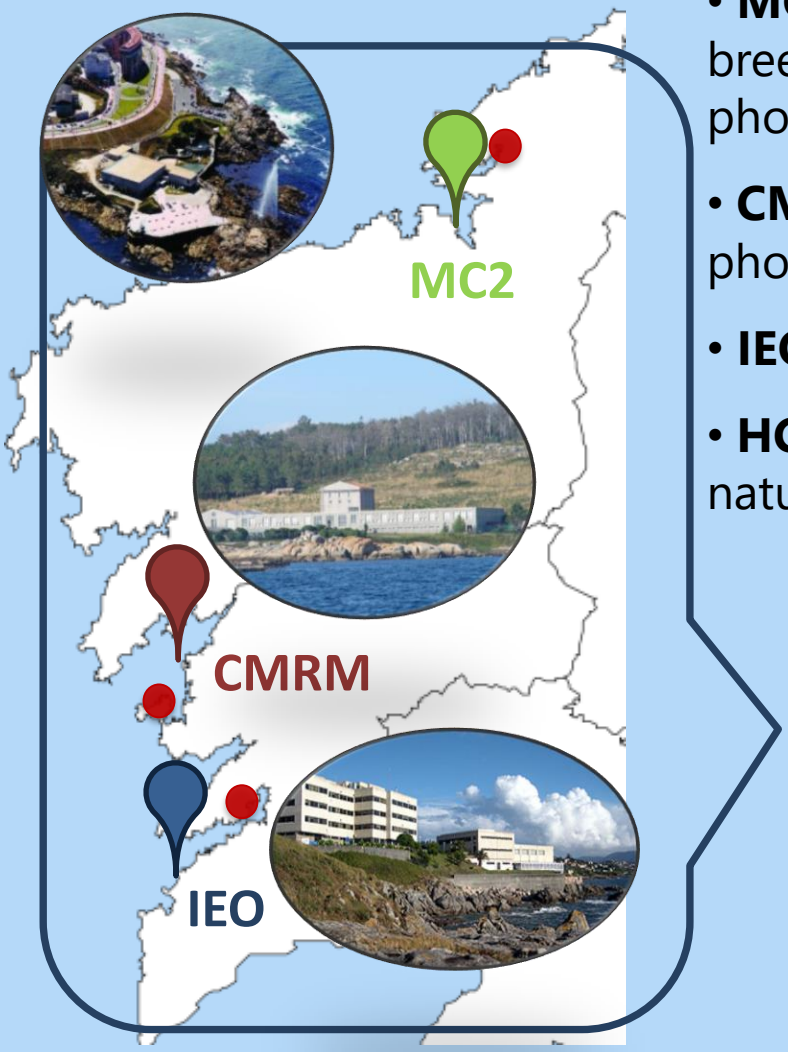
Three genetically different subpopulations (Seldelbery et al. 1999):

- North Atlantic, and Mediterranean Sea,
- Brazil and
- South Pacific.

The area of occupancy would probably be the spawning grounds as this species aggregated to spawn (Peres 2000). However, there seems to be no more information than this available by which to estimate the area of spawning grounds.

Fig. 1 Collection locations of *Polyprion americanus* (*BP* Blake Plateau, *Be* Bermuda, *Az* Azores, *NAz* North Azores, *WMd* West Madeira, *Md* Madeira, *Maj* Majorca, *Br* Brazil, *Aus* Australia, *NZ* New Zealand)

OUR Wreckfish broodstocks



- **MC2.** Exhibition tank (3500m^3) and auxiliary tank for breeders (33m^3). Natural Tª and simulated natural photoperiod
- **CMRM.** Two tanks (40m^3). Natural Tª and photoperiod
- **IEO.** Two tanks (110m^3). Natural Tª and photoperiod
- **HCMR.** One tank (15m^3). Constant Tª and simulated natural photoperiod

NW coast - Galicia

PRIVATE INDUSTRIES WITH WRECKFISH STOCK


Our challenge has been achieved almost entirely and we hope to continue working to consolidate the culture of the wreckfish