



**“Ethnoecology and Ecology of
Epinephelus marginatus, Dusky Grouper
Paraty - RJ”**

**“Community-Based Coastal Resource Management”
Unicamp/ IDRC
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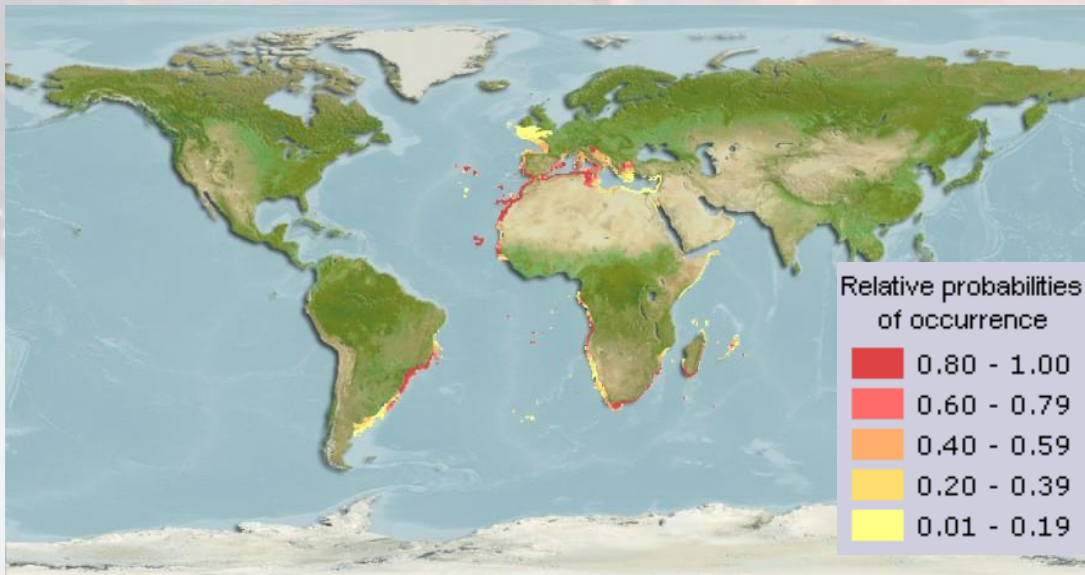
Ethnoecology

-Interaction between humans and the environment.

-This study is useful for analyzing the community's local knowledge about the biology/ ecology of the species.

Epinephelus marginatus

- Actinopterygii Class, Perciforme Order
and Serranidae Family



Eastern and Western Atlantic and Indian Oceans: throughout the Mediterranean Sea and from the surroundings of the British isles to the Southern tip of Africa, Mozambique and Madagascar. Southwest Atlantic: Southeastern Brazil, Uruguay, and Argentina.

<http://www.aquamaps.org/receive.php>



-Coastal zones

-Depths from 8 to 300 meters

-They feed mainly on other fish, followed by crustaceans and octopuses

-Protogynous hermaphrodite

A photograph of two groupers in a white container. The fish are reddish-brown with yellowish-orange bellies. One fish is in the foreground, and another is behind it. The background is a plain white surface.

-Sexual maturity in female is achieved around the age of 5 and in males around 12.

-Sex reversal from female to male takes place between 9 and 16 years of age.

-Approx. 50% of female grouper reach sexual maturity at 47cm, that corresponds to a weight of about 2kg.

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- The background of the slide shows two large groupers, likely Atlantic groupers, in a white container. The fish are reddish-brown with yellowish-orange accents on their heads and bodies. They are positioned diagonally, with one in the foreground and another slightly behind it.
- Grouper are a fish of high commercial value**
 - Considered endangered - IUCN Red List**
 - Population reduction of more than 50% over the last three generations**
 - Slow growth, large body size, long lifespan, late maturity and a lack of data and resources for sustainable management**

Objectives

The background of the slide features two groupers (Epinephelus marginatus) in a white container. The fish are shown from a top-down perspective, with their heads and upper bodies visible. They have a brownish-orange color with lighter, yellowish-orange spots and stripes. The water in the container is clear, and the background is a plain, light-colored surface.

Conduct research on fishermen's knowledge on *Epinephelus marginatus* in Paraty-RJ.

This research will help in the conservation, growth and, consequently, development of fisheries .

Analyzing: weight, length, stomach contents, gonads.

In order to obtain information that will improve our understanding of the biology and ecology of the grouper and the current status of fishing them.

Methodology

Ethnoecology:

Interview

Diet

Fishing site

Migratory habits

Reproductive habits



Methodology

Biology of grouper:

-Length and weight;

-Check stomach contents. If present, analyze and identify the species.

-Check gonads. If present, check maturity, color and volume.

-Collect a sample of the fin for genetic studies.



- Areas of study

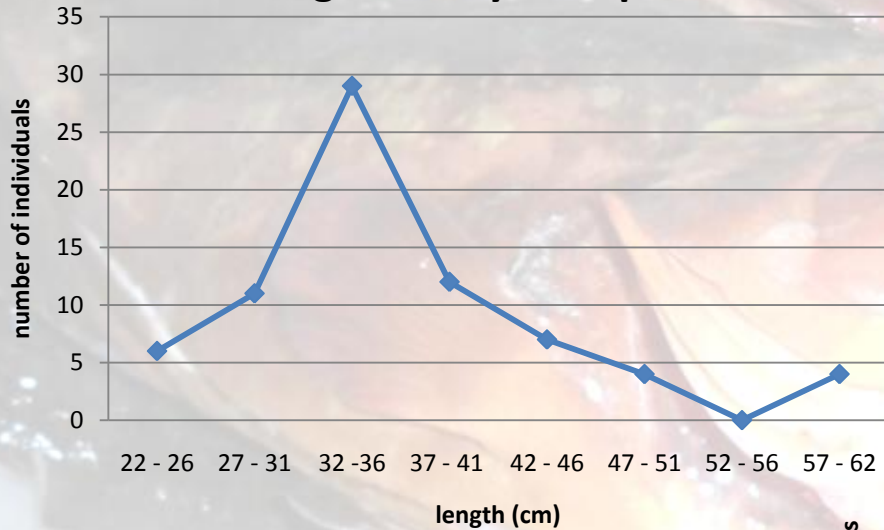




Parcial Results

- Length

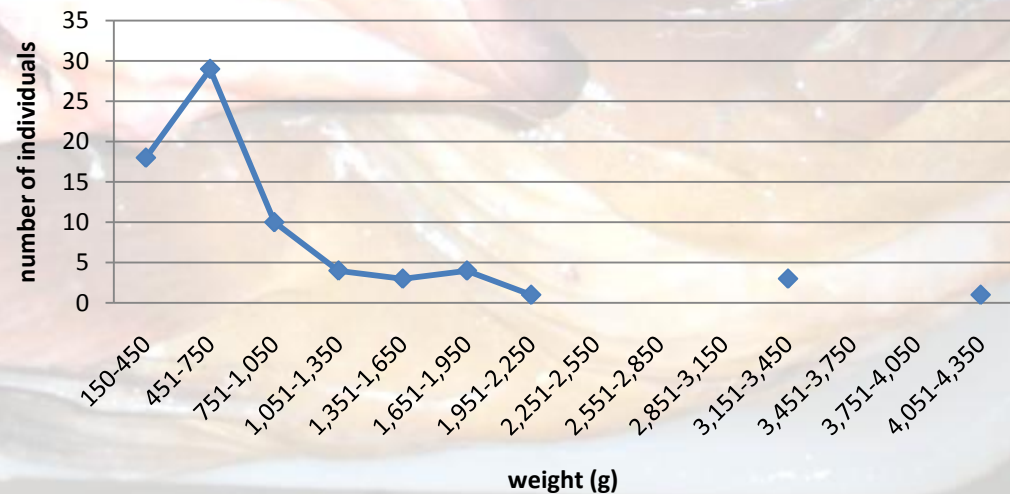
Length Dusky Grouper



Average length: 37cm

- Weight

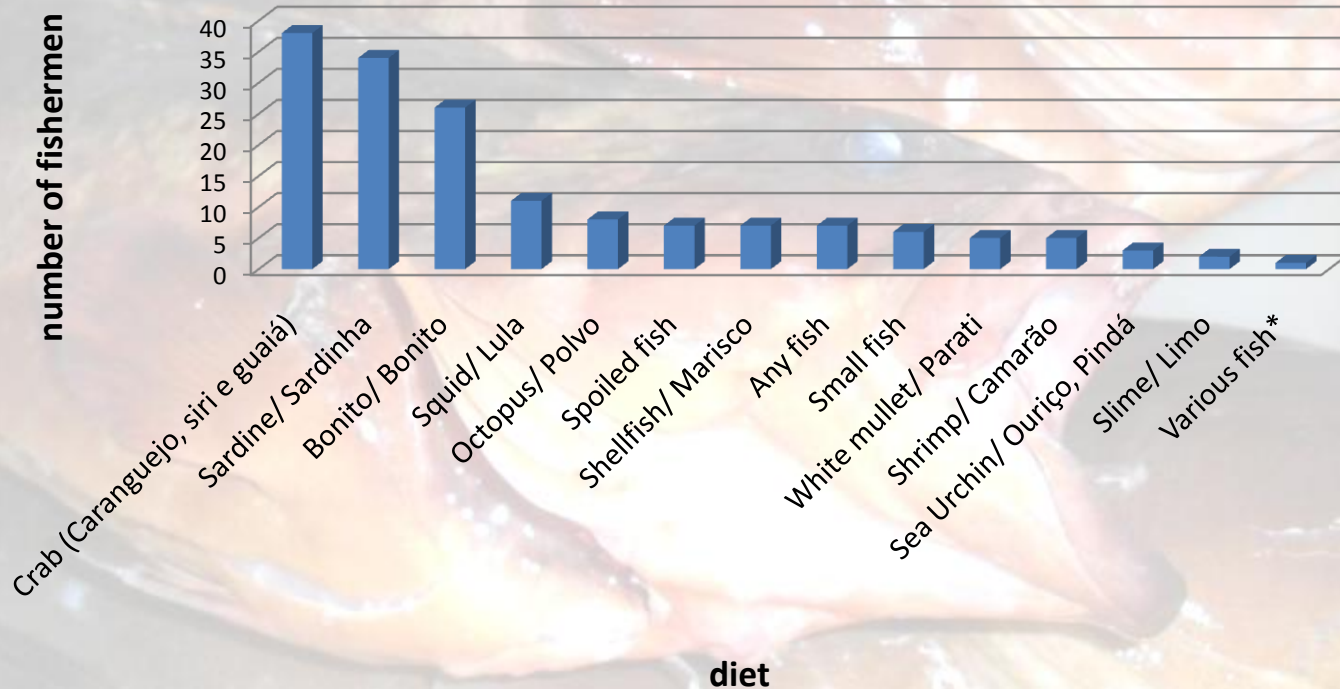
Weight Dusky Grouper



Average weight: 900g

- Diet

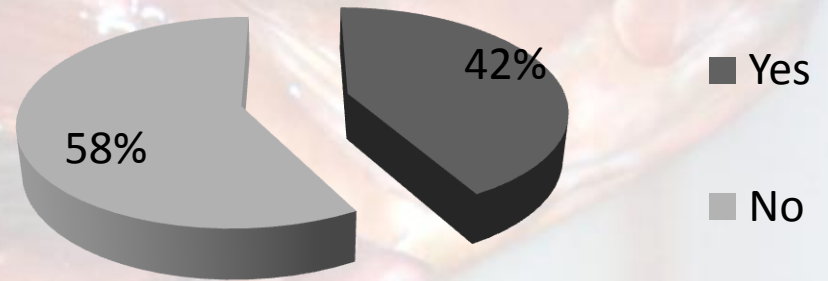
Diet of Dusky Grouper



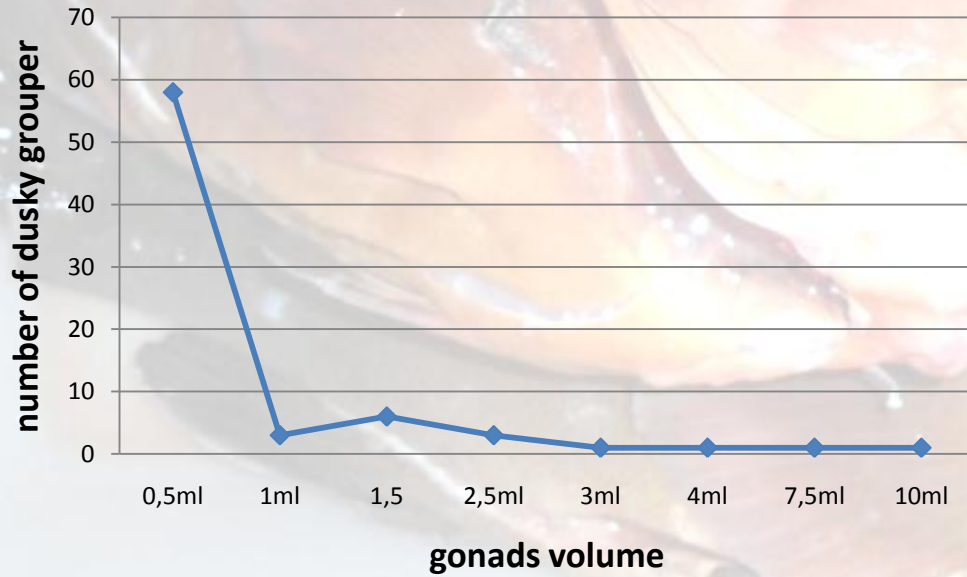
*Various fish: Anchovy/ Manjuba, Dolphinfish/ Dourado, Shells/ Conchas, Frillfin goby/ Emboré, Snapper/ Pargo and Oyster/ Ostra.

- Gonads

How many fishermen have seen mature gonads:



Gonads volume



-The largest gonad observed so far, had a volume of 10ml and the fish was 48cm long and weighed 1.940kg.

-This data is new and hadn't been found in any other grouper, with the same or different weight in this project.



The image shows two cooked grouper fish on a white plate. The fish are browned and appear to be pan-fried. They are positioned one above the other, with the top fish's head facing right and the bottom fish's head facing left. The background is a plain, light-colored surface.

-Visible eggs or sperm weren't observed in any grouper.

-The fishermen believe that grouper can spawn in deep water and this is the reason why it's difficult to see their eggs.



OBRIGADA!