



Scientific Advisory Committee (SAC)

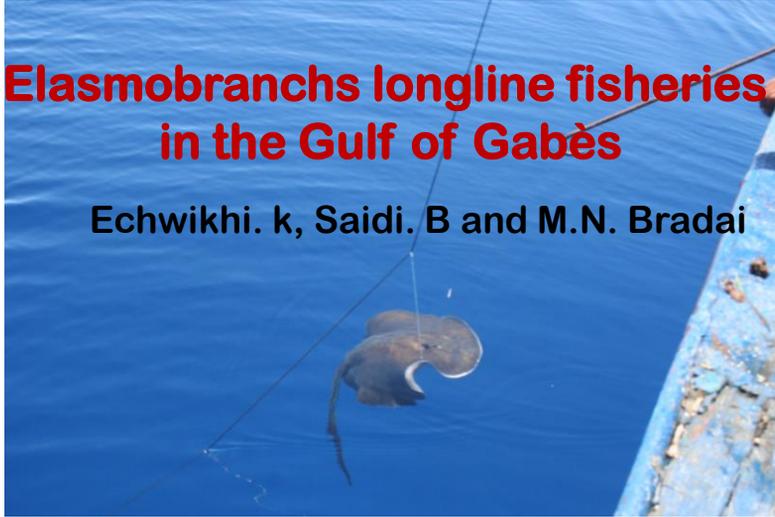
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Elasmobranchs longline fisheries in the Gulf of Gabès

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INTRODUCTION

In the Mediterranean Sea, few elasmobranchs are targeted; fisheries land elasmobranchs generally as by-catch.

In the south of Tunisia, a little artisanal fleet target sharks, mainly, in response to the loss of targeted species such as swordfish.

In this communication, we give some information on catch composition, catch rates, discards and size composition for the landed species.



MATERIALS AND METHODS

In the Gulf of Gabes, two types of longline are used: pelagic and bottom longlines initially targeting respectively swordfish and groupers.



Bottom longline consists of a 10–12 km mainline comprising 1200 to 1800 hooks (size 4 'J' hook).

Baits used: *Sardinella aurita* / *Sepia officinalis*.



The mainline of pelagic longline vary from 20 to 50 km and comprising 500–2500 hooks (size 0 'J' hook).

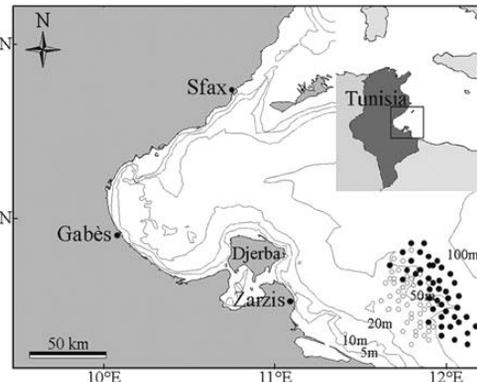
The baits used: mackerel / pieces of rays (*Dasyatis sp.*).



MATERIALS AND METHODS

The study was based on 41 fishing trip on-board commercial traditional longline boats (from July to September 2007 / 2008):

- 21 (48 sets) with pelagic longline (●).
- 20 (38 sets) with bottom longline (○).



elasmobranchs were identified and their total length (TL) or disc width (DW) (In mm) were recorded. The discarded individuals were registered.

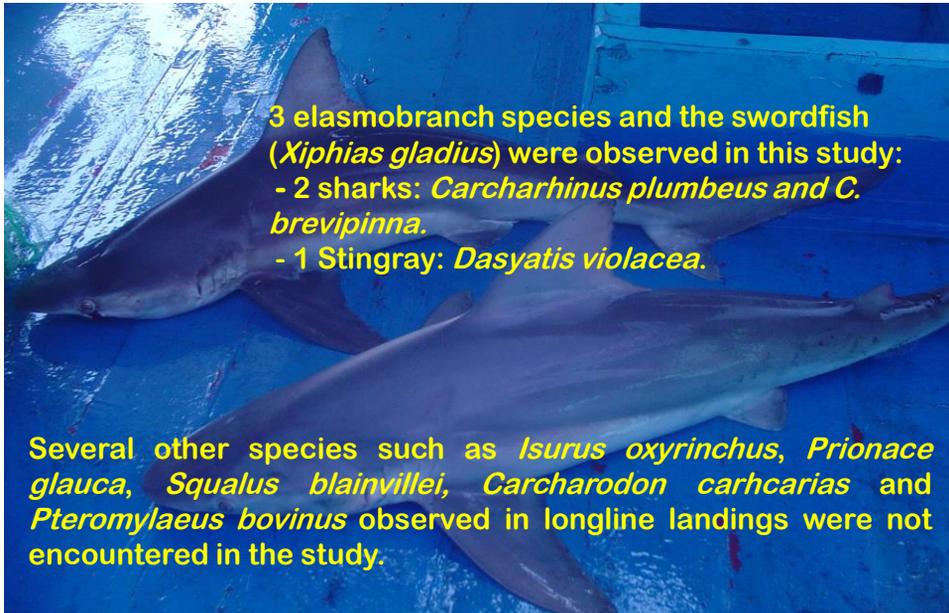
The catch rate was calculated as :

- CPUE1= number of fish/1000 hooks
- CPUE 2 = number of fish/trip

The percentage of discards was determined for each species

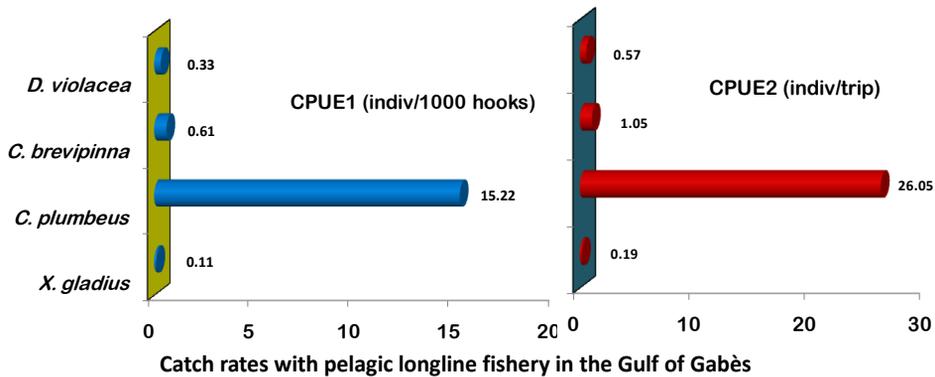
RESULTS: Pelagic longlines

Species composition and catch rates



RESULTS: Pelagic longlines

Species composition and catch rates



Carcharhinus plumbeus was the more landed species. *Carcharhinus brevipinna*, *Dasyatis violacea* and *X. gladius* were poorly represented in the catch.

RESULTS: Pelagic longlines

Discards

Species	Retained (%)	Discards (%)
<i>Carcharhinus plumbeus</i>	100	0
<i>Carcharhinus brevipinna</i>	100	0
<i>Dasyatis violacea</i>	0	100

The main reasons for discard is the commercial value.

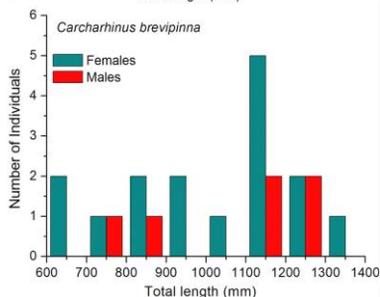
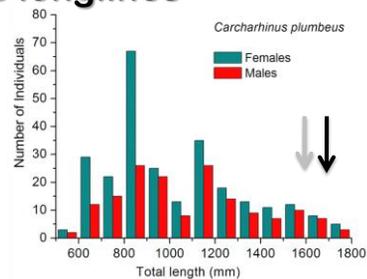


RESULTS: Pelagic longlines

size composition

Females were more common than males.

More than 96% of *C. plumbeus* and all *C. brevipinna* individuals caught were juveniles and sub-mature.

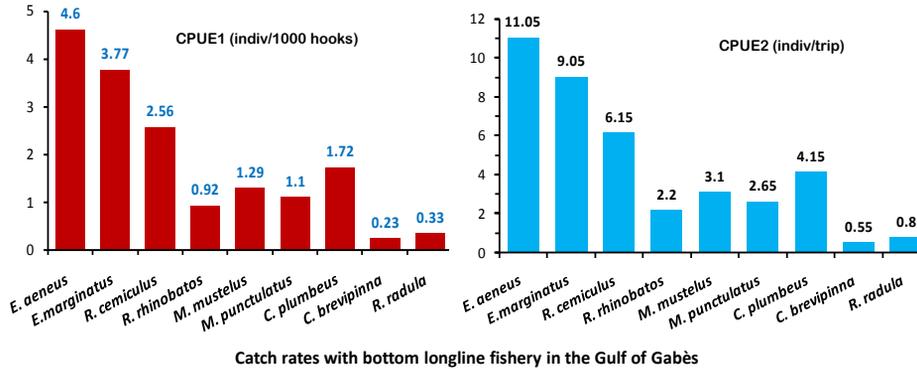


Length-frequencies distribution of retained size at maturity
 species - males (→)
 - females (→)

RESULTS : Bottom longlines

Species composition and catch rates

Two species of groupers, four sharks, one skate and two guitarfish species were recorded in the 38 bottom longline sets.



Groupers dominated while catch rates of different elasmobranch species were nearly similar.

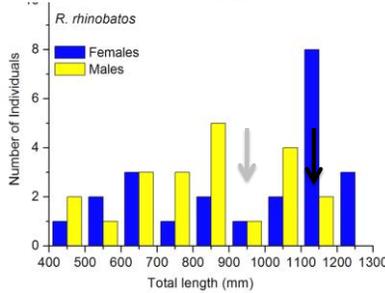
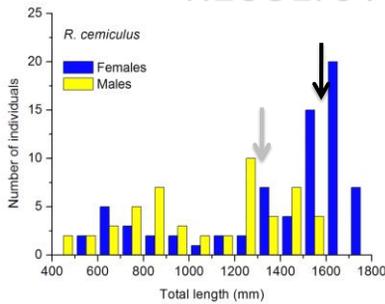
RESULTS : Bottom longlines

Discards

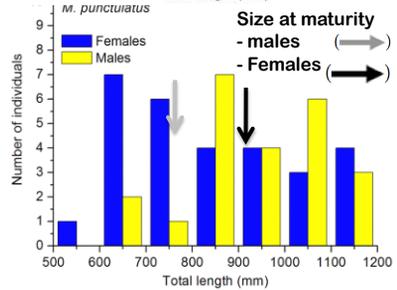
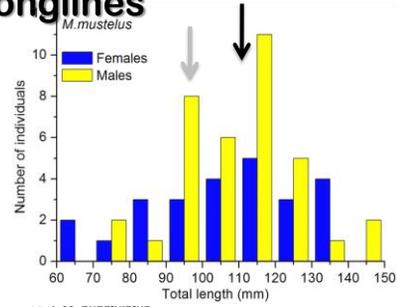
Species	Retained (%)	Discards (%)
<i>Rhinobatos cemiculus</i>	88.6	11.4
<i>Rhinobatos rhinobatos</i>	63.6	36.4
<i>Mustelus mustelus</i>	83.9	16.1
<i>Mustelus punctulatus</i>	88.7	11.3
<i>Carcharhinus plumbeus</i>	100	0
<i>Carcharhinus brevipinna</i>	100	0
<i>Raja radula</i>	0	100

Species with a high commercial value were usually retained, while species with low or no commercial value, such as *Raja radula* were always discarded.

RESULTS : Bottom longlines



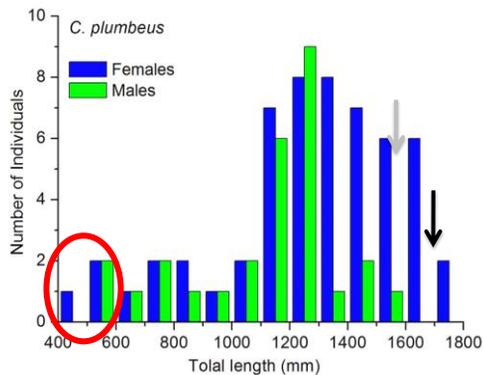
About half of *Rhinobatos cemiculus* males were mature and 69% of females were pregnant carrying near term embryos or post-partum.



The majority of *Mustelus* species were mature. Mature females were pregnant carrying near term embryos or post-partum.

RESULTS : Bottom longlines

size composition



The majority of individuals caught were juveniles. New borns were also captured.

size at maturity
 - males (→)
 - females (→)

Conclusion

The abundance of elasmobranchs in capture suggest that these species find favorable conditions to reproduce in the Gulf of Gabès.

The presence of neonates, pregnant post-partum and ovulating females indicates that the area is a pupping or a primary nursery.



The successful conservation and sustainable use of this fishery resource requires a continuous surveys of landings, delineation of nursery

