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First assessment of the fish fauna into the Parque Nacional Natural Corales de Profundidad

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INTRODUCTION

Direct observations of the biota of the Parque Nacional Natural Corales de Profundidad (PNNCP) has taken almost two decades to be accomplished, after some studies have revealed a complex and diverse ecosystem that gave this MPA its name. While the composition of the fish species in the Colombian shallow continental shelf is well known, the outer shelf and upper slope are poorly documented because of previous sampling difficulties.

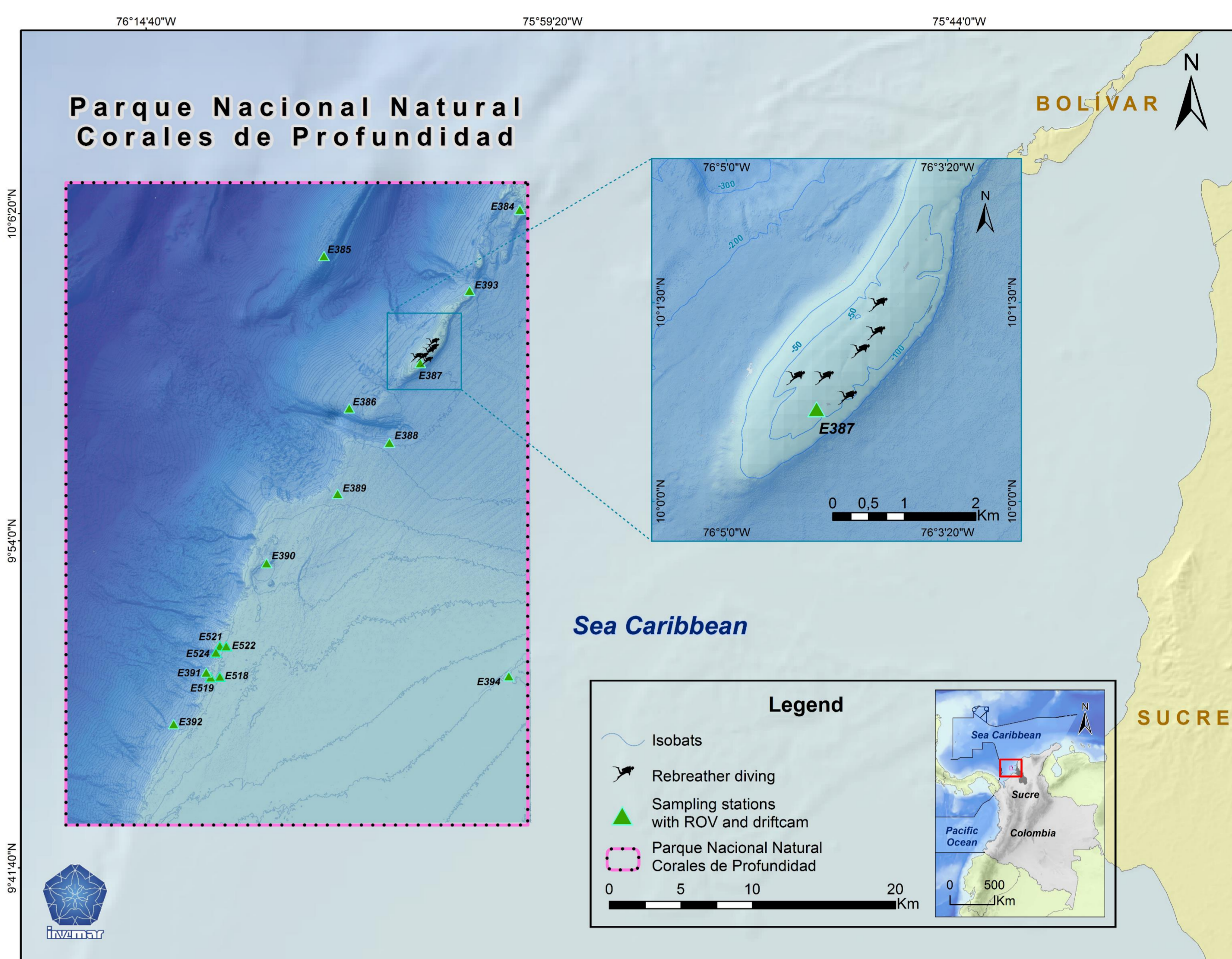
METHODS

A first exploration of the Park's fish fauna was done using two different approaches, video-images captured with ROV and drift camera (CADEM) and visual censuses made by rebreather divers. Here we present the results of both methods to offer a first description of the ichthyofauna living within 35-332 m within the park boundaries.

- **ROV:** 12 days expedition, September 2015 = A total of 11 sites sampled, 48-332 m, 35,9 hrs for video analysis.
- **CADEM:** 5 days expedition - November 2016 = A total of 8 sites sampled, 110-220 m, 15hrs for video analysis.
- **Rebreather divers:** 3 expeditions on 2017, resulted in 11 rebreather dives, 35-50 m, six sampled sites in Frijol or Barú bank.



Seriola rivoliana, *Pristigynys alta*, *Epinephelus striatus*, from up to down left row; *Prognathodes aya*, *Pareques iwamotoi*, *Bembrops* sp., from up to down right row



Sample stations: divers of INVEMAR using CCR equipment in Frijol or Barú bank and ROV and driftcam stations in the Park.



Fish community associated with Frijol or Barú bank; divers of INVEMAR using CCR equipment with trimix gases in Frijol or Barú bank

RESULTS

19 sites sampled
48-332 m
49 taxa
The taxa identified are associated with the type of substrata

Reef and hard substrata: Balistidae, Pomacentridae, Pomacanthidae, Chaetodontidae, Monacanthidae, Acanthuridae y Holocentridae.

Soft bottoms, spread sessile fauna: Synodontidae, Holocentridae, Chaetodontidae, Pomacanthidae, Priacanthidae, Polymixiidae, Caproidae, Percophidae.

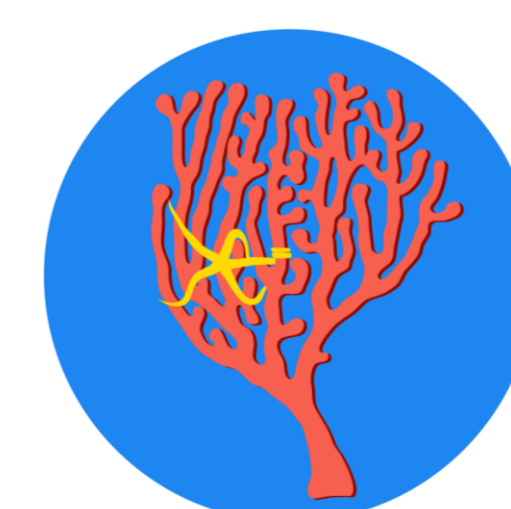
6 sites sampled
35-50 m
76 fish species
Richest families: Labridae, Serranidae and Balistidae Most common species: *Clepticus parrae*, *Centropige argi*, *Canthigaster rostrata*, *Halichoeres cyanocephalus*, *Balistes vetula*, *Cephalopholis cruentata*, *C. fulva*, *Serranus baldwini*, *S. tabacarius*, *S. tigrinus*, *S. tortugarum* and *Pterois volitans*.

See: Chasqui – Velasco & González – Corredor (2019).

In total 99 different species were registered for the area based on both methods within 35 – 332 m. Several commercially important fishes inhabits the MPA (e.g. Nassau grouper, Black grouper, Mutton snapper, Dog teeth snapper), now also recognized as a common habitat for invasive lionfish *P. volitans*, a threat to the native biodiversity. This study highlights the relevance of the park to preserve these populations and the sustainability of this region of the Colombian Caribbean.

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