

INVENTORY of crustaceans, molluscs and echinoderms in SAINT-MARTIN French West Indies



Réserve Naturelle Nationale
de Saint-Martin

an EXCEPTIONAL Underestimated BIODIVERSITY

Created in 1998
by the French government,
Réserve naturelle protects
3054 ha of coral reefs, sea grass beds,
mangroves, ponds and dry forest.
Réserve naturelle is listed under
SPAW and RAMSAR protocols
for its unique biodiversity
and management commitment.



Objectives

Better knowledge for better management :

- Assess the diversity and distribution of molluscs, crustaceans, and echinoderms within the marine Park.
- Identify component species, and provide information (common names, distribution, ecology, status, photographs, etc).

In the 2010-2015 management plan :
marine life census is top priority.
By 2010 only 481 species - fauna
and flora - were clearly identified.

Field survey and Lab methods

A total of 10 scientists, naturalists and protected areas managers and staff have worked in the field for over a month. Numerous sampling techniques have been implemented to prospect each ecological niche, day and night : underwater vacuum filtering and brushing baskets, dredging, baited traps, yabby pumps, soil sifting, light traps and mass sampling techniques (rubble brushing, sediment extraction, suction sampling).

In addition to the field surveys, staff of Réserve naturelle, dive tour operators, inhabitants with local knowledge of the area have been interviewed.

For each species, a triple voucher includes a voucher specimen, a tissue sample for genetic barcoding and a photograph of the specimen.

Species that are protected or difficult to collect, will be recorded through *in situ* photography or by expert observation.

Discussion

This census enables identification of key biodiversity areas within Réserve naturelle boundaries that will need specific consideration. This inventory will be used to build environmental awareness based on those poorly known taxon : development of a public education display. Those results do confirm the lack of knowledge on marine biodiversity in the overseas Antilles and the need for complimentary inventories of marine biodiversity including other poorly studied compartments (deep sea) but also other groups (sponges, bryozoans and ascidians).

Réserve naturelle will share this knowledge, know-how and results (databases) within the sub region and between MPA managers in the Caribbean

Results :

- 440 mollusc species
- 225 decapod crustacean species
- 67 echinoderm species
- 10 species new to science

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