Contribution to the knowledge of the decapod fauna from Cabo Verde Islands

Keider Neves[1], Susana S. de Matos-Pita[2, 3], Fran Ramil[2] and Ana Ramos[3]

[1] Departamento de Engenharias e Ciências do Mar, Universidade de Cabo Verde, Cabo Verde (keider.neves@student.unicv.edu.cv)
[2] Departamento de Ecología y Biología Animal, Universidad de Vigo, Spain; Instituto Español de Oceanografía, Vigo Spain

INTRODUCTION

Crustacean decapods constitute one of the dominant groups in megabenthic communities of the Atlantic continental shelf and slopes and, due to its commercial importance, have historically been one of most studied benthic taxa in Northwest African coasts. Nevertheless, despite the biodiversity and composition of decapods from the continental region have been quite well studied, the fauna from Cabo Verde Islands is currently unknown (Muñoz et al., 2012; García-Isarch and Muñoz, 2015).

OBJECTIVES

- Identify and catalog the decapod crustaceans collected by the *R/V Dr. Fridtjof Nansen* in Cabo Verde waters in June 2011 during a Multidisciplinary CCLME-FAO Ecosystem Survey.
- Analise the spatial distribution of the decapods assemblages in this region.

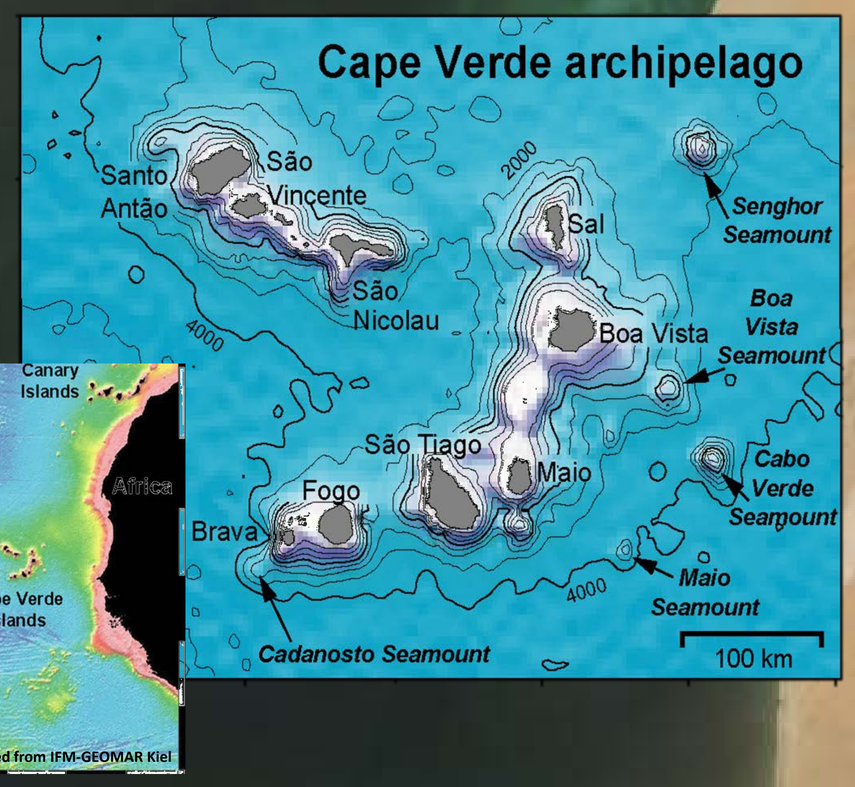
MATERIAL AND METHODS

Sampling onboard: D/R Fridjoft Nansen

- 25 trawling stations
- Depth: 30 to 900 m
- Date: June 2011
- Gear: Bottom trawl
  - Horizontal opening = 18 m
  - Vertical opening = 6 m
  - Mesh in the cod-end = 20 mm
- Decapods sorted to morphospecies level
- Abundance and biomass registered by morphospecies and station
- A representative colection preserved in 70% ethanol for further studies

Statistical analisis

Quantitative data standardized to 0.1 km2 and their respective matrices were generated by using PRIMER software package v.6.



RESULTS AND DISCUSSION

837 individuals
23 kg biomass
22 families
39 species

Anomura
Brachyura
Caridea
Dendrobranchiata
Polychelida

A total of 39 species were identified; nine of them, *Acanthephyra kingsleyi* Bate, 1888, *Glyphus marsupialis* Filhol 1884, *Pasiphaea tarda* Krøyer, 1845, *Pagurus mbizi* (Forest 1955), *Plesionika antigai* Zariquiey Álvarez, 1955, *Sakaila africana* Manning & Holthuis 1981, *Stereomastis talismani* (Bouvier, 1917), *Benthonectes filipes* Smith, 1885 and *Pilumnus hirsutus* De Haan, 1935 are reported for the first time for the Cabo Verde Islands. The last two species also increase their geographic distribution.


Benthonectes filipes


Glyphus marsupialis

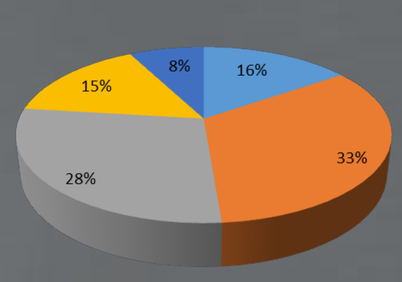

Pasiphaea tarda


Plesionika antigai

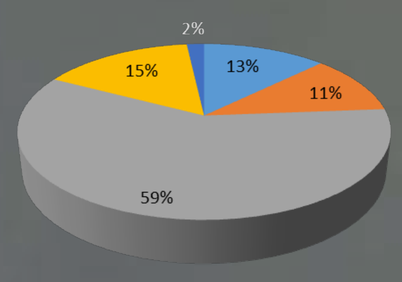

Sakaila africana (conserved)


Stereomastis talismani

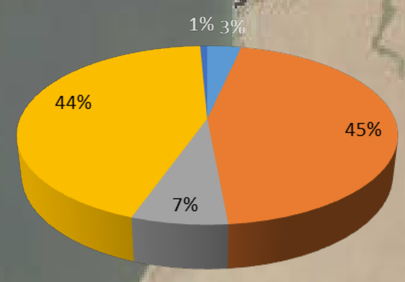
Specific composition by group



Richness



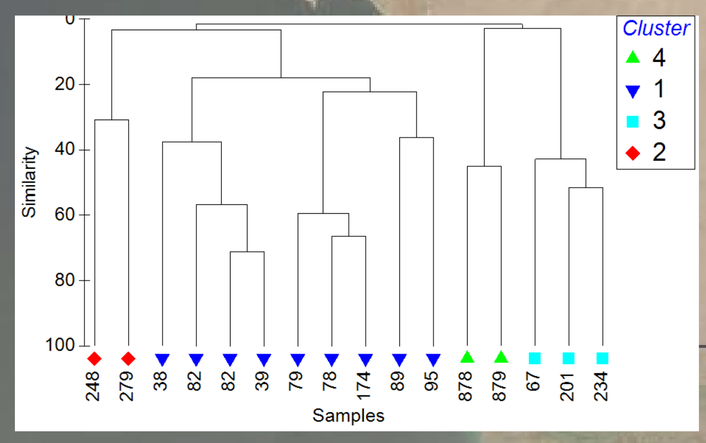
Abundance



Biomass

Decapods' assemblages

Despite the limited number of stations sampled due to difficulties for trawling on the islands seabed, the multivariate analysis separates the stations in 4 groups related to depth.
The shallowest stations, located on the continental shelf (Group 1) and the deepest stations (Group 4) showa total dissimilarity. The upper-slope stations were included in Groups 2 and 3.



The maximum similarity value correspond to the Group 4 (45.07) mainly due to the abundance of *Aristaeopsis edwarsiana* but also *Heterocarpus grimaldi*.
The ANOSIM test (Global R = 0.724, $\rho < 0.01$) prove the existence of significant differences in the structure and composition of shallowest and deepest assemblages.

Group 1: Shallow
Average similarity = 28.04


Cryptossoma cristatum


Dardanus arrosor

Group 2
Average similarity = 30.78


Paromola cuvieri


Stenorhynchus lanceolatus

Group 3
Average similarity = 45.76


Calappa granulata


Calappa granulata

Group 4
Average similarity = 45.07


Aristaeopsis edwardsiana


Heterocarpus grimaldi

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