



ON THE PRESENCE OF THE SLIPPER LOBSTER *SCYLLARUS SUBARCTUS*  
(DECAPODA, ACHELATA, SCYLLARIDAE) IN WATERS OF THE CAPE  
VERDE ISLANDS

BY

KEIDER NEVES<sup>1)</sup> and JOSÉ A. GONZÁLEZ<sup>2,3)</sup>

<sup>1)</sup> Instituto do Mar, Cova de Inglesa, CP 132, Mindelo, São Vicente, Cape Verde Islands

<sup>2)</sup> EMAP – Applied Marine Ecology and Fisheries, i-UNAT, University of Las Palmas de Gran Canaria, Campus Universitario de Tafira, E-35017 Las Palmas de Gran Canaria, Spain

A checklist of decapod crustaceans from the Cape Verde archipelago was recently published, including a biogeographic assessment and a comparison with the decapodal biota of the Canary Islands (González, 2018).

In addition, eight other decapod species have recently been reported from the region: *Lysmata seticaudata* (Risso, 1816) (Lysmatidae), *Brachycarpus biunguiculatus* (Lucas, 1846) (Palaemonidae) and *Thor amboinensis* (De Man, 1888) (Thoridae) (Wirtz, 2019), *Gnathophyllum americanum* Guérin-Méneville, 1855 (Palaemonidae) (Neves, 2020a), and *Typton anaramosae* Neves, 2020 (Palaemonidae) (Neves, 2020b), within the carideans; *Stenopus spinosus* Risso, 1827 (Stenopodidae) (Wirtz, 2019), within the stenopodideans; and *Parribacus antarcticus* (Lund, 1793) (Scyllaridae) (Freitas & Wirtz, 2019), within the achelates. Also, larval stages (phyllosoma phase) of *Scyllarus subarctus* Crosnier, 1970 (Scyllaridae) have been reported from the area (Genis-Armero et al., 2017).

Here we record for the first time, in waters of the Cape Verde Islands, an adult specimen of the slipper lobster *Scyllarus subarctus* Crosnier, 1970 (fig. 1).

The specimen examined was obtained in the framework of the research project “Mariscomac”. A sample of the red scorpionfish (*Scorpaena scrofa* Linnaeus, 1758), as bycatch of commercial fishing operations on 20 July 2017 with traps for the Cape Verde spiny lobster *Palinurus charlestoni* Forest & Postel, 1964 (González et al., 2020), was provided by the F/V “Noroeste”. The specimen was found in the laboratory in the digestive content of a red scorpionfish, which was photographed, labelled and then fixed in 80% ethanol for later morphological analysis and identification. The specimen was deposited in the collections of the

<sup>3)</sup> Corresponding author; e-mail: pepe.solea@ulpgc.es

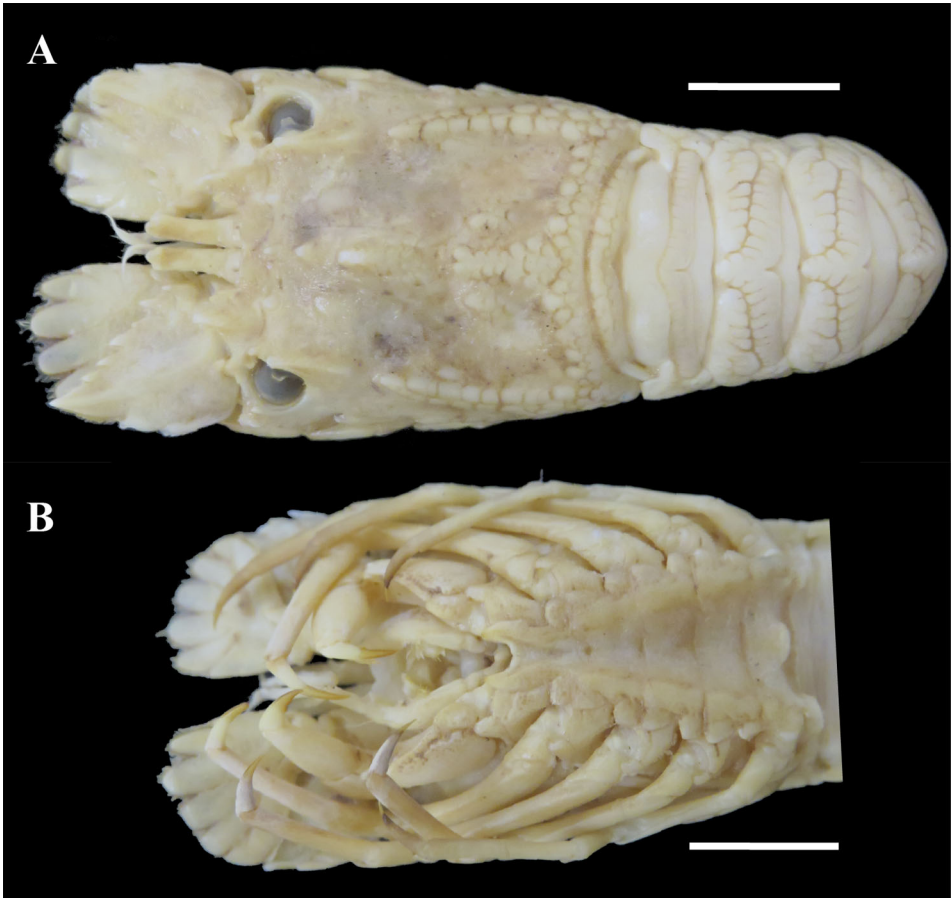


Fig. 1. *Scyllarus subarctus* Crosnier, 1970 from the Cape Verde Islands (UCV00344, male, TL 74.4 mm): A, dorsal view of carapace and anterior part of abdomen; B, ventral view, with details of the thoracic sternum. Scale bar: 1 cm.

‘Instituto de Engenharias e Ciências do Mar’ of the ‘Universidade Técnica do Atlântico’ (ISECMAR – UTA), São Vicente, Cape Verde.

The single specimen examined was well in agreement with the description and figures provided by Crosnier (1970). Total length (TL, in mm), measured from the anterior margin of the antennae to the posterior margin of the telson, carapace length (CL, in mm), from the anterior margin to the posterior margins of the carapace, and carapace width (CW, in mm) measured in the widest part of the carapace, are given.

The systematic classification for the achelate scyllarid follows the global database <http://www.marinespecies.org/> (WoRMS, 2020).

Suborder PLEOCYEMATA Burkenroad, 1963  
Infraorder ACHELATA Scholtz & Richter, 1995  
Family SCYLLARIDAE Latreille, 1825  
Genus *Scyllarus* Fabricius, 1775  
***Scyllarus subarctus* Crosnier, 1970 (fig. 1)**

Material examined.— Voucher code: UCV00344, one male (TL 74.4 mm, CL 24.1 mm, CW 22.4 mm). Collection data: NW of the island of São Nicolau, on a small bank at approximately 16°42'N 24°30'W, 50-250 m depth; found in the digestive content of a 35-cm red scorpionfish (*Scorpaena scrofa*).

Remarks.— Specific diagnostic features used for identifying the scyllarid are based on Holthuis (1991, 2002). *Scyllarus subarctus* closely resembles its eastern Atlantic congener *S. arctus* (Linnaeus, 1758), the differences distinguishing both species were already pointed out in detail by Crosnier (1970). Moreover, *S. subarctus* is very similar to the western Atlantic *Scyllarus depressus* (Smith, 1881), and possibly represents a junior synonym of the latter, based on larval morphology and genetic analysis (Genis-Armero et al., 2017). The features used by Crosnier (1970) to distinguish the adult forms of his new species and *S. depressus* (as *Scyllarus nearctus* Holthuis, 1960) are subtle and difficult to apply without comparative material. These two species may well represent a single, variable taxon of amphi-Atlantic distribution, but before any formal decision is taken, more material from the type localities of both species, including type material, should be examined, preferably with support of more molecular data.

This sublittoral benthic species has been found inhabiting deep-shelf soft bottoms (de Matos-Pita et al., 2018) from 41 (Muñoz et al., 2012) to 50-250 m depth (present study) with a water temperature of 13.82 to 15.48°C (Crosnier, 1970). It was previously known from Angola, Guinea-Bissau, Mauritania and the Canary Islands (Crosnier, 1970; Muñoz et al., 2012; de Matos-Pita et al., 2018; González, 2018). This represents the first record of an adult of the poorly-known *S. subarctus* from the Cape Verde Islands.

Until now, four scyllarid slipper or locust lobsters were known for sure to occur in waters of the Cape Verde archipelago: *Scyllarides latus* (Latreille, 1803) (first record by de Brito Capello, 1864), *Scyllarus pygmaeus* (Spence Bate, 1888) (Bouvier, 1917), *Scyllarus arctus* (Linnaeus, 1758) (Türkay, 1982), and *Parribacus antarcticus* (Lund, 1793) (Freitas & Wirtz, 2019). Doubtful presence in this area has been attributed to *Scyllarides herklotsii* (Herklots, 1851) and *Ibacus brevipes* Spence Bate, 1888 (see González, 2018). In addition, since the Guinean species *Scyllarus caparti* Holthuis, 1952 has reached the coasts of the Canary Islands (González, 2018), it could also occur in the Cape Verde archipelago.

## ACKNOWLEDGEMENTS

This research was co-funded by the EU ERDF in the framework of the Programme INTERREG V-A (Madeira, Açores, Canarias) 2014-2020, project MARISCOMAC (MAC/2.3d/097). Iñaki Gaztañaga is acknowledged for providing the fish samples.

## REFERENCES

- BOUVIER, E. L., 1917. Crustacés décapodes (Macroures marcheurs) provenant des campagnes des yachts « Hironde » et « Princesse Alice » (1885-1915). Rés. Camp. Scient., Monaco, **50**: 1-140.
- CROSNIER, A., 1970. Crustacés Décapodes Brachyours et Macroures recueillis par l' « Undaunted » au sud de l'Angola. Description de *Scyllarus subarcticus* sp. nov. Bull. Mus. Natl. Hist. Nat., (2) **41**(5): 1214-1227. [Imprinted 1969.]
- DE BRITO CAPELLO, F., 1864. Descrição de tres espécies novas de Crustáceos d'África occidental e observações ácerca do *Penaeus Bocagei*, Johnson, espécie nova dos Mares de Portugal. Mem. Acad. Sci. Lisb., (2) **3**: 1-11.
- DE MATOS-PITA, S. S., F. RAMIL & A. RAMOS, 2018. Marine lobsters and lithodids (Crustacea: Decapoda) from Mauritanian deep waters (NW Africa). Reg. Stud. Mar. Sci., **23**: 32-38.
- FREITAS, R. & P. WIRTZ, 2019. First record of the sculptured mitten lobster *Parribacis antarcticus* (Crustacea Decapoda Scyllaridae) from the Cabo Verde Islands (eastern Atlantic). Arquipélago – Life Mar. Sci., **36**: 15-18.
- GENIS-ARMERO, R., G. GUERAO, P. ABELLÓ, J. I. GONZÁLEZ-GORDILLO, J. A. CUESTA, L. CORBARI, P. F. CLARK, R. CAPACCIONI-AZZATI & F. PALERO, 2017. Possible amphiatlantic dispersal of *Scyllarus* lobsters (Crustacea: Scyllaridae): molecular and larval evidence. Zootaxa, **4306**(3): 325-338.
- GONZÁLEZ, J. A., 2018. Checklists of Crustacea Decapoda from the Canary and Cape Verde Islands, with an assessment of Macaronesian and Cape Verde biogeographic marine ecoregions. Zootaxa, **4413**(3): 401-448.
- GONZÁLEZ, J. A., C. A. MONTEIRO, S. CORREIA, E. LOPES, N. ALMEIDA, A. MARTINS, I. GAZTAÑAGA, G. GONZÁLEZ-LORENZO, R. ARENAS-RUIZ, G. TEJERA & J. M. LORENZO, 2020. Current and emerging small-scale fisheries and target species in Cabo Verde, with recommendations of pilot actions favouring sustainable development. Cybium, **44**(4): 355-371.
- HOLTHUIS, L. B., 1991. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. FAO Fish. Synop., **125**(13): 1-292.
- HOLTHUIS, L. B., 2002. The Indo-Pacific scyllarine lobsters (Crustacea, Decapoda, Scyllaridae). Zoosystema, **24**(3): 499-683.
- MUÑOZ, I., E. GARCÍA-ISARCH, I. SOBRINO, C. BURGOS, R. FUNNY & M. GONZÁLEZ-PORTO, 2012. Distribution, abundance and assemblages of decapod crustaceans in waters off Guinea-Bissau (north-west Africa). J. Mar. Biol. Assoc. U.K., **92**(3): 475-494.
- NEVES, K., 2020a. First record of the striped bumblebee shrimp *Gnathophyllum americanum* (Crustacea, Decapoda, Palaemonidae) in the Cabo Verde Islands. Zool. Caboverdiana, **8**(1): 11-13.
- NEVES, K., 2020b. A new species of the shrimp genus *Typton* Costa, 1844 (Malacostraca, Decapoda, Palaemonidae) from the Cabo Verde Archipelago. Zootaxa, **4768**(2): 264-270.
- TÜRKAY, M., 1982. Marine Crustacea Decapoda von den Kapverdischen Inseln mit Bemerkungen zur Zoogeographie des Gebietes. Cour. Forsch. Institut. Senckenberg, **52**: 91-129.

- WIRTZ, P., 2019. New records of shrimp species (Arthropoda Crustacea) from the Cape Verde Islands. *Rev. Acad. Canar. Cienc.*, **31**: 9-14.
- WORMS EDITORIAL BOARD, 2020. *Scyllarus subarctus* Crosnier, 1970. World Register of Marine Species. Available from <http://www.marinespecies.org> at VLIZ. [Accessed 2021-01-06.]