

ON THE OCCURRENCE OF *GNATHOPHYLLEPTUM TELLEI* D'UDEKEM
D'ACOZ, 2001 (DECAPODA, GNATHOPHYLLIDAE) IN ST HELENA,
SOUTH ATLANTIC OCEAN

BY

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St Helena is one of the worlds most isolated tropical islands, situated in the South Atlantic, approximately 1950 km distance from south-west Africa, and 3300 km from South America, with its nearest landmass being Ascension Island (1300 km away). The island is comprised of a deeply eroded summit of a composite volcano, approximately 16 × 10 km in size, with several rocky outcrops. The marine habitats are poorly known, and comprise a mixture of rocky drop-offs and flat areas of sand and cobbles. Manning & Chace (1990) summarized the known decapod fauna of St Helena, which then amounted to 35 species. Given the geological age of the island (14 million years) this is somewhat surprising, as the geologically much younger Ascension Island (1.0-1.5 million years) harbours 74 species, and is probably linked to a paucity of records rather than a true low level of faunal richness. Of the 35 species listed by Manning & Chace (1990), only 6 are carideans shrimps, most of which are widespread in the eastern Atlantic.

During a recent visit to the USNM (Washington, D.C.) a single example of the recently described *Gnathophylleptum tellei* d'Udekem d'Acoz, 2001 (USNM 1094130) was discovered amongst some unstudied material in a collection made by K. Jourdan from both St Helena and Ascension Island, with the Ascension part of this collection having already been reported upon by Manning & Chace (1971). *Gnathophylleptum tellei* was previously only known from Gran Canaria, Canary Islands (d'Udekem d'Acoz, 2001; Wirtz & Debelius, 2003) and the present record constitutes a significant range extension for the species.

The single ovigerous female (post-orbital carapace length 4.9 mm) was collected at Egg Island, on the 6th of October 1977, under rocks at a depth of 12 meters. The specimen is overall in good condition, although it lacks the left second and right fifth pereopods, whilst the left third pereopod is regenerating.

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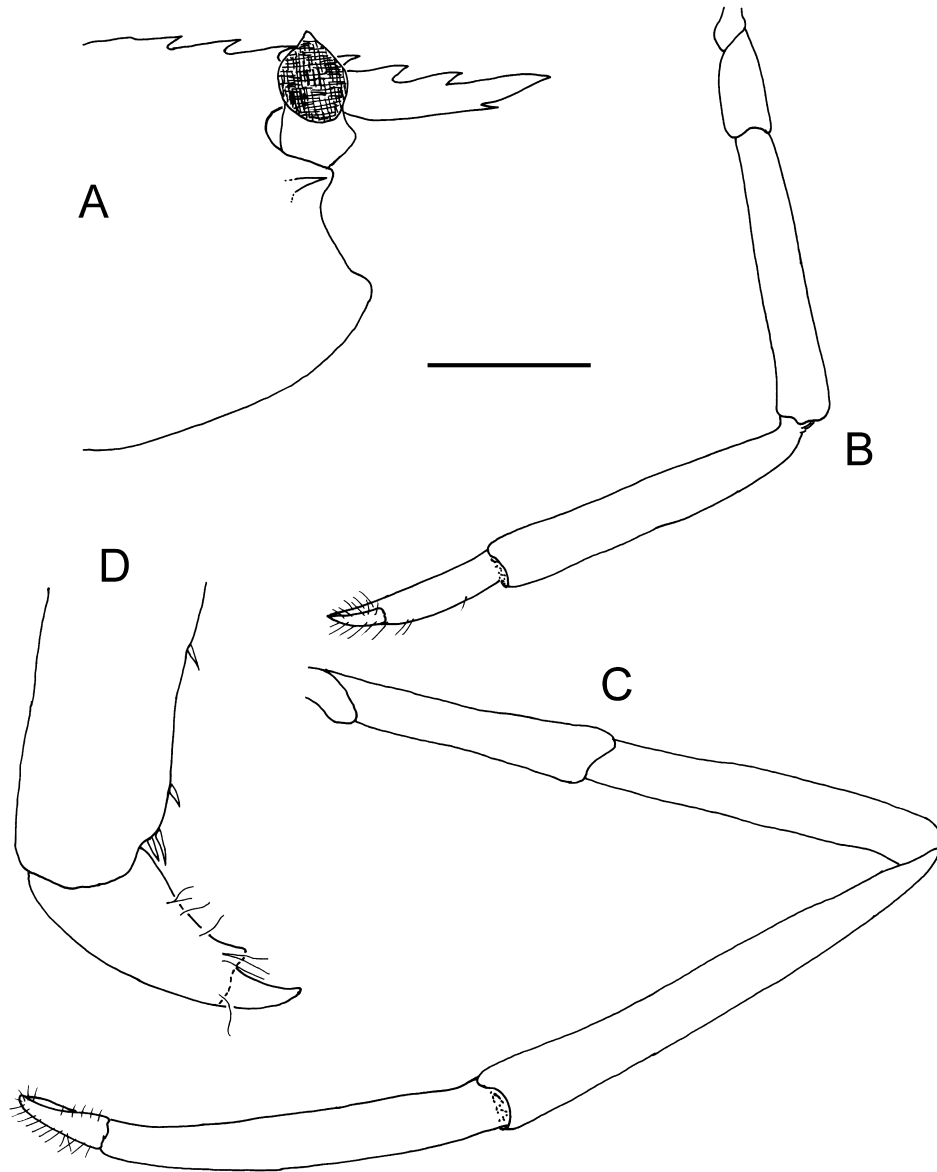


Fig. 1. *Gnathopylleptum tellei* d'Udekem d'Acoz, 2001 (USNM 1094130). A, frontal portion of carapace; B, first pereopod; C, second pereopod; D, dactylus of fifth pereopod. Scale bar indicates 2 mm (A-C) or 1 mm (D).

The specimen agrees closely with the description of d'Udekem d'Acoz (2001), especially in relation to the shape of the eyes, the third maxilliped, the stylocerite, the size and position of the dorsal telson spines, the shape of the accessory spines on the dactyls, and the presence of well developed teeth on the fourth and fifth

pleonite. It differs slightly from the holotype in harbouring only 6 dorsal rostral teeth and a single ventral tooth (versus 7 and 2, respectively), the inner pair of distal telson spines being 2.5× as long as the outer pair (versus 2×), and the fused part of the upper antennular flagellum consisting of 8 segments (versus 6). These differences are, however, well within the variation limits for many other palaemonoid taxa and are not considered of any systematic significance. More puzzling, however, is the position of the antennal spine and the shape of the inferior orbital angle, usually a species-specific character in Gnathophyllidae. In the holotype, the antennal spine is situated above the inferior orbital angle, whilst in the specimen from St Helena the antennal spine is situated just below it (fig. 1A). Equally, the inferior orbital angle in the present specimen is far more pronounced (fig. 1A) than in the holotype (see fig. 1 in d'Udekem d'Acoz, 2001). Although these latter differences may turn out to be of systematic significance, in view of the current paucity of material of this species such a decision is best left until more material becomes available.

Gnathophylleptum tellei is currently only known from four specimens, the holotype from Gran Canaria (d'Udekem d'Acoz, 2001), the two specimens photographed in Wirtz & Debelius (2003), also from Gran Canaria, and the current specimen from St Helena. Given the geographical distance between the Canary Islands and St Helena, the species may well prove to be far more widespread.

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REFERENCES

- UDEKEM D'ACQZ, C. D', 2001. Description of *Gnathophylleptum tellei* gen. nov., sp. nov., a remarkable new gnathophyllid shrimp from Canary Islands (Crustacea, Decapoda, Caridea). Bull. Inst. Roy. Sci. nat. Belgique, **71**: 113-125.
- MANNING, R. B. & F. A. CHACE, JR., 1990. Decapod and stomatopod Crustacea from Ascension Island, South Atlantic Ocean. Smithson. Contr. Zool., **503**: 1-91.
- WIRTZ, P. & H. DEBELIUS, 2003. Mediterranean and Atlantic invertebrate guide: 1-305. (Conchbooks, Hackenheim).

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