



Discovery of the rare burrowing shrimp *Calliapagurops charcoti* de Saint Laurent, 1973 (Decapoda: Axiidea: Callianassidae) in shallow water: first record of the infraorder for Madeira Island

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The genus *Calliapagurops* was established by de Saint Laurent (1973) for the new species *C. charcoti* based on a damaged specimen lacking the abdomen and both third and fourth pereopods. The specimen was collected south of the Azorean island of Flores from shelly sand in 190–230 m depth. The original description by de Saint Laurent (1973) was rather short; a redescription and figures were later provided by Sakai (1999) and Ngoc-Ho (2003). Ngoc-Ho (2002) described a second species in this genus, *C. foresti*, based on four specimens (three of them complete) collected between 186 and 198 m depth east of Luzon, The Philippines.

During a night dive on 6 August 2010 with Scuba off Caniço, Madeira Island, two specimens of a burrowing shrimp were observed by one of us (PW) at their burrow opening on a shelly sand bottom in 19 m depth. The shrimp were subsequently baited with a dead fish and photographed (Fig. 1). Attempts to collect the shrimps by cutting off the retreat into the burrow with a knife yielded one specimen, unfortunately only its anterior body part. During a second dive on 27 August 2010, two further specimens (one complete) could be collected from shelly sediment at 20 m depth ca 300 m away from the first site. All specimens grabbed the fish bait with their chelipeds and attempted to pull it into their burrow.

The specimens were fixed in 96% ethanol and are deposited in the collection of the Museu Municipal do Funchal (História Natural), Madeira (MMF), and the Naturhistorisches Museum in Wien, Austria (NHMW). Size is expressed as total length (tl in mm) from the tip of the rostrum to the end of the telson and as carapace length (cl in mm) from the tip of the rostrum to the posterior median edge of the carapace.

Calliapagurops charcoti de Saint Laurent, 1973

Figs 1–2.

Calliapagurops charcoti de Saint Laurent, 1973: 515; Manning & Felder, 1991: 771; Sakai, 1999: 8, fig. 1; Tudge *et al.*, 2000: 141; Ngoc-Ho, 2002: 540; 2003: 487, fig. 16.

Material. 1 male (cl 18.3, left fourth pereopod and abdomen missing), Madeira, off Hotel Roca Mar, Caniço de Baixo, 19 m depth, P. Wirtz coll. 6 August 2010, MMF 41170; – 1 female (cl ca 15, posterior carapace damaged, both fifth pereopods and abdomen missing), NHMW 25025; 1 female (tl ca 77, cl ca 17, broken in the middle of cephalothorax, third abdominal somite damaged), NHMW 25026, Madeira, Caniço de Baixo, off Hotel Galomar, 20 m depth, P. Wirtz coll. 27 August 2010.

Additional description. Carapace ca 0.2 times total length. Adult individuals with distinct dorsal oval (Fig. 2B). Antennal flagella exceeding in length twice carapace length; flagella with long setae ventrolaterally on both sides of each segment (spacing 210 µm), setae between 3 (distally) and 6 mm (proximally) long, with short (50 µm) setulae. Third maxilliped (Fig. 2C) merus with 4 to 6 spines on distal border. First pereopods' coxa with strong, anteriorly curved spine mesially. Chelipeds sexually dimorphic, male major cheliped (Fig. 2D) more massive than that of female (Fig. 2H), propodus ca 1.4 times length (including fixed finger) and ca 1.5 times height that of female, which is similar in shape but slightly smaller than male minor cheliped. Male minor cheliped with propodus 1.2 times as long and ca 1.5 times as high as that of female. Abdomen (Fig. 2N) long, dorsal length ratio (along midline) of first to sixth abdominal somites 1.0: