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CONCHODERMA VIRGATUM VIRGATUM
IN THE WESTERN MEDITERRANEAN

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ABSTRACT. – The finding of two specimens of the pedunculate barnacle Conchoderma virgatum virgatum (Spengler, 1790) in the western Mediterranean is reported. This is the first report which details the identification of this organism at the subspecies level in the Mediterranean. The barnacles were attached to the trunk of one individual of the copepod Pennella instructa Wilson, 1817, parasite of the swordfish Xiphias gladius Linnaeus, 1758. A description of the specimens found is given and some observations are made on the choice of the site of settlement of this organism.

INTRODUCTION

Conchoderma virgatum (Spengler, 1790), is a pedunculate barnacle (Cirripedia: Lepadidae) widely distributed in temperate and tropical waters all over the world (Beckett 1968, Dawson 1969, Relini 1980, Memmi 1983). This species commonly lives as an epibiont on pelagic marine organisms, such as cetaceans, marine turtles, sea snakes, fishes and crabs, often indirectly attached by means of parasitic or epibiont crustaceans (Jones et al. 1968, Dawson 1969, Hastings 1972, Relini 1980, Yamato et al. 1996, Oliver & Trilles 2000, Garibaldi & Relini 2003). It is also found on sub-surface drifting objects, such as ships’ hulls, buoys, ropes, etc. (Beckett 1968, Roskell 1969, Tsikhon-Lukanina et al. 1977, Parnell 2001).

According to Memmi (1983), in his revision of the genus Conchoderma Olfers, 1814, this genus includes two species: C. auritum (Linnaeus, 1767) and C. virgatum, the last one including the two subspecies C. virgatum virgatum (Spengler, 1790) and C. virgatum chelonophilus (Leach, 1818). In this paper the subspecies C. virgatum virgatum is reported for the first time in the Mediterranean.

MATERIAL AND METHODS

In January 2003 two specimens of C. virgatum were found attached to the trunk of one individual of the parasitic copepod Pennella instructa Wilson, 1817 (Fig. 1). The parasite (190 mm total length, 95 mm exposed length) was located in the insertion of the left pectoral fin of a swordfish Xiphias gladius Linnaeus, 1758 (110 cm lower jaw - fork length, 12 kg total weight) caught off the Port of Alghero (Sardinia, western Mediterranean).

RESULTS

The two barnacles (Fig. 1) measured 46 and 47 mm in total length and 21 and 24 mm in capitular length. The capitulum was flattened and indistinctly separated from the pedunculum. Five reduced shell plates were present: 2 scuta, 2 terga and 1 carina, in latero-ventral, posterior and dorsal position, respectively. The scuta were “Y” shaped and concave in the interior side, the anterior lobe was acuminate, the posterior narrow and rounded and the lateral short and rounded. The terga were
Fig. 1. – Top, *Conchoderma virgatum virgatum* attached to the trunk of *Pennella instructa*. Bottom, Detail of one of the specimens of *Conchoderma virgatum virgatum*. Bar = 30 mm.
thickened. The carina was arcuated and narrowed in the anterior extremity. In the postero-dorsal end of the mantle three umbones were present: 1 medial and 2 lateral, joined with the carina and the terga, respectively. The angles formed by the tergal margin with the scutal and carinal ones were both nearly right angles. The colour of the mantle was yellowish-grey, with 3 dark blue-violet bands for each side of the capitulum, joining partially in the pedunculum. The cirri were dark blue-violet in the distal part, and grey-yellowish in the proximal.

This description agrees widely with that of the subspecies Conchoderma virgatum given by Memmi (1983). According to this author, the tropical subspecies Conchoderma virgatum chelonophilus may be easily differentiated from the present one by the following characters: terga almost straight, capitulum blunted, dark bands of the mantle feebly evident.

DISCUSSION

The presence of Conchoderma virgatum has been sporadically reported by various authors in the Mediterranean: Chevreux & de Guerne (1893), Laurent (1988) and Kitsos et al. (2003) reported this species on marine turtles; Tsikon-Lukanina et al. (1977) on buoys; Goucha & Ktari (1978) and Garibaldi & Relini (2003) on fishes; Aznar et al. (1994) and Oliver & Trilles (2000) on cetaceans. However, none of the above mentioned authors details the identification of the organisms at the subspecies level. In any case, on the basis of the descriptions and/or pictures given in some of these papers (Goucha & Ktari 1978, Oliver & Trilles 2000, Garibaldi & Relini 2003), the Conchoderma virgatum subspecies found appears to be the same as the one described herein, Conchoderma virgatum, and not the tropical one, Conchoderma virgatum chelonophilus, confirming the distribution patterns reported by Memmi (1983).

Regarding the site of settlement, the barnacles were attached at the extreme tips of the P. instructa trunk: one posterior to the end of the neck and the other anterior to the beginning of the abdomen. Both specimens were located in the same side of the trunk: one posterior to the end of the neck and the other anterior to the beginning of the abdomen. This position is considered effective to facilitate feeding in the current directions and/or pictures given in some of these papers.

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