

**PRELIMINARY DATA ON THE EPIBIONTS OF *CARETTA CARETTA* FROM
MALTESE WATERS**

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INTRODUCTION

The recent availability in 2001, of holding and rehabilitation facilities, at Malta Centre for Fisheries Sciences (MCFS) at Torri San Lucjan, M'Xlokk, for stranded turtles or those caught accidentally by fishers in Malta, has permitted a detailed study of individuals being rehabilitated, including data on epibionts.

Some preliminary results on such epibionts collected and identified from a few individuals of *Caretta caretta* are discussed here. The species of such epibionts, were cirripeds including *Chelonibia testudinaria* and the hirudinian *Ozobranchus margo* (Figure 1). *Ozobranchus margo* is a new record for Malta and not so common in the Mediterranean.

Observations on the density and distribution of these epibionts and occurrence preferences on the turtles' surface, as well as notes on their relation to the host's ecology, are given. Epibionts showed preference to different kinds of surfaces such as skin, scutes and epidermal plates as well as preference to anterior or posterior ends.

METHODS

Notes were taken of the position and quantities of any epibionts found. Epibionts were collected and put in formalin, with the exception of the leech which was refrigerated, then put in alcohol, to leave intact the diagnostic features. Pictures of turtles, with the epibionts, were taken from both dorsal and ventral view.

Four living specimens of loggerhead turtles, *Caretta caretta*, all with a smaller CCL than 65 cm, and most of which were immature specimens, were examined for epibionts.

Data could not be gathered for all specimens landed, in fact only 4 specimens were fully examined, since most of the other specimens which are landed actually get cleaned free from epibionts immediately at the centre; some of the data was actually taken from further examination of the photos taken, when the turtle was landed; Abrasions whilst on the boat deck could also have resulted in losses of epibionts.

The data presented are only preliminary and without doubt biased in view of small number of examined turtles.

RESULTS

Chelonibia testudinaria was the biggest barnacle encountered; some of the specimens were so big that they acted as another surface for the attachment of other barnacles of the same species or of *Lepas* sp. These were mostly found growing on the sides of the *Chelonibia* - One specimen was actually more than 4.8 mm long and 3.8 mm wide.

The anterior and middle region of the carapace seemed to be a more common place for settlement of *Chelonibia*, the 2nd and 3rd vertebral scutes, the 1st and 2nd marginal and the 2nd and 3rd costal scutes proved to be quite a common place for settlement of *Chelonibia*; One turtle whose carapace was overgrown with green algae, had quite a big number of *Chelonibia* and some of them even occurred between the 8-10th marginal scutes; This turtle was amongst the biggest turtles examined locally with a CCL of 58 cm and CCW of 60 cm.



Fig. 1. *Ozobranchus margoii* infestation shown in the damaged limb – Photo C. Sammut

A massive infestation of the ectoparasite *Ozobranchus margoii* (Hirudiinea class) was observed on one of the turtles and it probably also induced pathological effects. It was located around the cloacae region and under the folds of skin in the neck, but particularly (with several stages of the development of the leech present) on the left limb, which was severely cut nearly to the bone. It is normally found also on soft tissue between carapace and the plastron (Scaravelli et al. 2003). This leech is not so commonly reported since its occurrence is not so common, particularly in the Mediterranean (Scaravelli et al. 2003).

It was also evident from the specimens examined that the plastron was less frequently colonised with the exception of the anal scutes, on which generally some small (generally one on each side) *Chelonibia testudinaria* occurred - *Chelonibia* found on the plastron were smaller than those found on the carapace; another common place for *Chelonibia* was the soft parts of the neck and near the anal region, however *Chelonibia* found here were even smaller than those found on the plastron.

DISCUSSION AND CONCLUSION

The largest specimens of *Chelonibia testudinaria* occurred mostly on the carapace. The carapace seems to be more commonly colonised than the plastron.

Most of the turtles, which had a large number of barnacles or had quite large barnacles, actually had more than one hook in their bodies. Most such landed turtles, ending up at the rehabilitation centre, are generally a result of accidental captures. It may be tentatively concluded that such impairment may result in a slowing down of swimming, hence increasing the chance for attachment by such commensals.

Chelonibia found, seemed not to settle preferentially between the 3-6th marginal scutes, which may be due to the movements of the forelimbs which may sometimes touch the borders of the carapace (Gramentz 1988). Settlement by *Chelonibia* in the anterior and middle region of the carapace seemed to be more common, probably due to the type of hydrodynamism present on the turtle's surface whilst swimming. The turtle which had a large number of *Chelonibia* was one of the biggest ever found locally and was quite overgrown with green algae. It may be inferred that at an older age the turtle, which then has a decreased rate of growth, will become more susceptible to greater colonisation by such commensals; Also the algae may render the surface even more prone to further colonisation by barnacles.

There is no means of verifying that the *O. margo*i infestation has actually led to the pathological condition the turtle mentioned above was found in. In fact to date this turtle is still recovering at the rehabilitation centre, since it still has not regained full use of this limb.

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