

## A NOTE ON NON-MARINE LEECHES (ANNELIDA: HIRUDINEA) FROM THE MALTESE ISLANDS

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### ABSTRACT

A population of the predatory leech *Haemopsis sanguisuga* (Linnaeus, 1758) has been discovered at Xlendi Valley, Gozo. This is the first record of leeches living in the wild in the Maltese Islands. Brief notes on the distribution, habitat and behaviour of the Gozo leeches are given. The only previous reports of leeches from the Maltese Islands are those of haematophagous species imported for medical use or accidentally. The possible identity of these species is discussed.

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### INTRODUCTION

In September 1983, while studying the fauna of permanent freshwater streams, I came across a population of a large arhynchobdellid leech living along one such stream in Gozo. In attempting to identify the species I surveyed the literature for records of leeches from the Maltese islands and was very surprised to find that there were no specific records of these animals from the region. The occurrence of leeches in the Maltese Islands was mentioned by GULIA (1913) in his survey of the Maltese fauna, however, this author simply stated that "parecchi Irudinei" occur without naming any species or even saying whether he was referring to marine, freshwater or terrestrial leeches. More recently CASSAR (1964) collected all the information available on the medical use of leeches locally in his treatise on Maltese medical history. In view of this lack of information, specimens of the Gozo leech were sent to the British Museum (Natural History), London for identification and this record therefore constitutes the first definite report of a member of this group from the Maltese islands.

### SPECIES RECORDED

*Haemopsis sanguisuga* (Linnaeus, 1758) (family: Haemopidae)

MATERIAL EXAMINED: 6 specimens; Gozo, NE end of Xlendi Valley 21.9.83, from small permanent stream; leg. P.J. Schembri and M. Gauci; det. E.G. Easton British Museum (Nat. Hist.). (Two specimens have been deposited in the collections of the BMNH, the remaining four are in the author's collection.)

HABITAT: The leeches were found under small stones in the permanent stream which runs through Xlendi Valley. At the time of collection this stream was some 50cm wide and about 5cm deep but the dimensions vary widely depending on the season, the stream almost drying completely in summer and becoming a torrent after heavy rain.

DISTRIBUTION: In spite of searches in other localities in the Maltese Islands with permanent streams, no leeches have been found. This species therefore appears to be limited to a single valley in Gozo. Farmers in the area, when questioned, reported leeches living also in cisterns in their fields on the sides of Xlendi Valley. *H. sanguisuga* is a western palearctic species widely distributed in Europe including Italy and Sicily (MINELLI, 1979).

OBSERVATIONS: At Xlendi Valley the species was found adhering to the underside of stones in daytime. If the stones were turned over, the leeches inched their way to the undersurface again, apparently to escape from bright sunlight. If detached from the stones, the leeches swam against the current by undulating their body until they regained a solid substratum. Specimens from Xlendi have been kept in freshwater aquaria and fed on ostracods, small isopods and amphipods, small gastropods and insect larvae. The leeches spend most of their time on the bottom of the aquaria hiding underneath debris but occasionally wander up and down the sides or climb out of the water.

#### DISCUSSION

*H. sanguisuga* is a macrophagic, predatory leech, is amphibious and is common in most of Europe (MINELLI, 1979). It is not surprising therefore that it occurs also in the Maltese Islands. Its amphibious habits, particularly its habit of ovipositing out of the water in damp soil (MINELLI, 1979), make it particularly suited for life in Maltese streams which are very variable depending on season. What is surprising however, is that this species has not been recorded before. This could either be due to lack of collecting in Gozo, or else *H. sanguisuga* may be a recent introduction to the islands. In spite of this, the Maltese are familiar with leeches, even having a name for these animals ("*sangisug*") in their language (see for example BUGEJA, 1982 p. 353). This is very probably due to the extensive use of leeches for medical purposes, a practice which was still widespread up till the 1930's (CASSAR, 1964) and, in isolated instances, even later (G. ZAMMIT MAEMPEL, personal communication, 1983, who reports seeing a case of blood-letting by means of a leech at Birkirkara, Malta in the late 1960's. The leech was imported from Catania, Sicily, specially for the purpose.). CASSAR (1964) does not report which species of leech was used in therapy but does say that they were imported from "Tunis and Bône". This species is presumably *Hirudo medicinalis* (L.), the traditional medicinal leech of Europe.

ZAMMIT MAEMPEL (personal communication, 1983) reports that leeches used to be found in public animal drinking troughs at Birkirkara, Malta in the 1930's. These leeches originated from the inside of the mouth and nasal passages of cattle imported from North Africa which used these drinking troughs as they were being driven in the streets. The species in question may be *Limnatis nilotica* (Savigny), a circum-mediterranean species which lives on mammalian blood but which is unable to pierce mammalian skin and therefore attaches to the soft buccal and nasal mucosa (MINELLI, 1979).

In view of the recurrent introduction of these exotic leech species into the Maltese Islands, it is somewhat surprising that populations have not become established. Such an avenue of introduction for the Xlendi Valley *H. sanguisuga* is excluded since this species is entirely macrophagous.

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