

# Maltese Medical Folklore

## Man and the Herpetofauna in Malta: A Review

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Man throughout his evolutionary history has attempted to treat and control disease processes which have affected him, often turning to chemical substances extracted from animals and plants for medicinal purposes. Although experimenting unscientifically, a useful therapeutic measure was occasionally discovered. The ancient Egyptians are known to have been acquainted with a considerable number of drugs and had numerous formulae for their preparation, and it is possible that the Arabs, to whom the invention of pharmacology has been ascribed, only borrowed the cultivated pharmacy of the Egyptians. It is only in relatively recent years that pharmacology as a science has made major progress. Until fifty years ago, medical treatment was mainly conservative and relied mostly on good nursing care. Many of the medicaments in common use then were ineffective, and the useful drugs were dangerous in inexperienced hands (1). Because of man's poor ability to control the progress of disease coupled with the concept that the disease process was a punishment from the gods, it is not surprising that man regularly included an element of magico-religious practices in the treatment of disease. Man on the Maltese Islands until relatively recent times set great value on natural chemical substances for use in medicine, very often in association with religious beliefs and folklore. In spite of the limitations of species number, reptiles and amphibians have been regarded as having powers of healing or alternatively as bringing on disease.

Since the dawn of man's recorded history, snakes have figured both in folklore and religion with anomalous opposing attitudes of abhorrence and veneration. The medico-religious associations of snakes on the Maltese Islands dates to Neolithic man (2) as evidenced by the presence of a snake image sculptured on an altar slab at Ggantija in Gozo, and the intertwined coils of clay in the form of serpents from Mnajdra in Malta (c.3600-3150 BC). Under the subsequent influence of the Romans, snakes must have received further attention through the cult of Aesculapius or Asklepios. Asklepios was the Greek god of medicine through whom the snake cult reached Rome where in 203 BC he started to be worshipped under his latinized name Aesculapius. It is to this cult that we owe the universal medical badge of a single snake twined around a shaft. The first reference to this badge being used by a Maltese medical association - Pia Societa Medico- Chirurgico-farmaceutica - appears to date to the first half of the nineteenth century (3). The association was founded on the 10 October 1635 and named after the protective saints of the profession Saints Cosmas and Damian. The confraternity held its religious functions at the church of St. Francis of the Minor Conventuals in Valletta where it had an altar dedicated to the two saints. In the first half of the nineteenth century the altar was rebuilt in the form of a sepulchral urn flanked by two large trunks or rods of Aesculapius entwined by serpents and serving as columns to support the altar slab. These symbols were considered to

be pagan by the ecclesiastical authorities and this altar became the subject of a medico-ecclesiastical controversy resulting in the removal of the emblems while two shields with the symbols of Aesculapius were fixed to the pilasters on each side of the altar (3).

An important event in Ancient Maltese history which amplified the folklore beliefs towards snakes on the Islands was the arrival of the apostles Paul and Luke in c.60 AD. The event is recorded in the Acts of the Apostles which describes in detail a sea-voyage and a shipwreck on the island called Melita (4). Great controversies have ensued over the question whether the Melita of the Acts was the Mediterranean Malta or the north Adriatic island of Melida off the Dalmatian coast. The evidence however suggests that Melita referred to Malta. After their shipwreck, Luke continues '*...After we had escaped, we then learnt that the island was called Melita. And the natives showed us unusual kindness, for they kindled a fire and welcomed us all, because it had begun to rain and it was cold. Paul gathered a bundle of sticks and put them on the fire, when a viper came out because of the heat and fastened onto his hand. When the natives saw the creature hanging from his hand, they said to one another; No doubt*

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*this man is a murderer. Though he has escaped from the sea, justice has not allowed him to live. He, however shook off the creature into the fire and suffered no harm. They waited, expecting him to swell up or suddenly fall down dead; but when they had waited a long time and saw no misfortune come to him, they changed their minds and said that he was a god....'* This extract shows primarily the abhorrence with which the Maltese considered snakes and their attribution of medical disease to supernatural causes. The attitudes of the natives towards snakes as described by Luke is surprising when one considers that there are no poisonous snakes on the Islands. All the snakes currently found on the Maltese Islands belong to the family Colubridae, all members of which are non-poisonous to man. Snakes are still looked upon with abhorrence and fear, so that even in recent times specimens are killed out of fear of poison or on one occasion because the animal allegedly attempted to enter a baby through the mouth to get at the milk (5,6).

The interpretations of the Acts event in the light of the present resident snake species have been various. Folklore has it that from that moment, as a result of the Apostle's intervention, poison ceased to exist in the mouth of Maltese snakes. A further assertion which has been handed down through generations is that the apostle banished all poisonous animals from the Islands to an extent that vipers brought from abroad died on arrival (7,8). More thoughtful authors have suggested that Paul's viper was an accidental imported visitor or that the poisonous species became extinct on the Island with the advance of civilisation (9). There is as yet no evidence of snake species in the fossil record (10). Others have maintained that the viper which bit the Apostle was none other than the harmless Leopard Snake (*Coluber leopardinus*) which has very close superficial affinities to the viper (11). The extract from the Acts of the Apostles gave rise to a number of folklore medicaments used for the treatment of venomous bites. Ground Maltese limestone from St. Paul's cave at Rabat (Malta) where tradition holds that the Apostle Paul resided during his three-month stay was considered efficacious in the

treatment of snake-bite. Chippings or powdered limestone from this site were referred to as Gratia S. Paul's earth, or Terra melitensis, and throughout the 16-18th centuries there was a great demand for St. Paul's earth which was controlled by the Grandmaster of the Order of St. John and/or the ecclesiastical authorities. The rock chippings were finely powdered in a mortar and subsequently placed in a marble or earthenware receptacle and soaked in water. The suspension after stirring was decanted and filtered through a greased paper. The bolus thus formed was then used as required. From this earth were made images, medals, cups, vases and other objects all attributed with many therapeutic properties. These properties included not only the use as a remedy against the bites of poisonous animals such as snakes and scorpions, but also as a remedy against ingested poison and other illnesses. St. Paul's Earth was used in severe illness when other medicaments had failed, and was considered to have a cardiotoxic effect. The earth was taken either mixed with wine, water or spirits, or else by drinking water or wine poured into jugs made from stone (12). A number of contraveleno cups made from St. Paul's Earth have been described (12,13).

Similar properties were also attributed to earth obtained from the crypt of the church of the Immaculate Conception at Qala (Gozo) where a holy man was reputed to have been buried (14), and also to all powdered rocks from Malta. Bosio (15) records that on 31 July 1566 a ship from Venice arrived in Malta and while being unloaded of pine planks, a poisonous serpent fixed its fangs into a seaman's hand. The bite was treated by covering the hand and snake with powdered Malta rock and making the Sign of the Cross over the hand. The serpent died whereas the seaman remained healthy! This experience may be attributed either to the folkloric interpretation of the efficacy of powdered Malta rock in the treatment of snakebite or that poisonous snakes died on arrival to Malta. It could possibly be attributed to the fact that bites from poisonous snakes need not necessarily give rise to snakebite poisoning (16). Shape association coupled with the religious beliefs have further

amplified the folklore therapeutic pharmacopoeias for the treatment of venomous bites. It has even been held that Paul left the impressions of his tongue in the rocks of the Islands. These are nothing more than the fossil shark teeth found in Maltese miocene limestone, but were still being used by medical men up to the beginning of the nineteenth century. In spite of being later discarded by the medical profession these were still being used by laymen in the treatment of various diseases (17). They were, besides for poisonous bites, also hung around children's necks to promote the eruption of teeth (18). Similar therapeutic virtues were attributed to the fossil fish vertebrae popularly known as serpent's eyes because of their shape (19).

Serpent's eyes and St. Paul's tongue were best used by wearing a ring having for a gemstone a serpent's eye that had been mounted in such a way as to touch the skin; or else to suspend the tongues from a bracelet or necklace. Alternatively they could be administered internally by drinking liquids in which serpent's eyes or tongues had been boiled for some time to produce an infusion (12). Ground St. Paul's tongue could be applied directly to wounds (20). The saliva of persons born on the feast of the Conversion of St. Paul was also held to be efficacious in the cure of snakebite and inflammations (21,22).

The use of these folkloric therapies was long considered to be a myth. As early as 1554, Matthiolus had already challenged the pharmacological efficacy of the contraveleno cups, but in spite of this they were still in use a century later (12). The inventory of a sixteenth century pharmacy in Malta included the drug *Enula capans* (*Enula campans*) which was an extract of the roots of the plant *Inula helenium* used against serpent's bites (23).

While the extract from the Acts of the Apostles has been the best known association between Maltese herpetofauna and medical folklore, other amphibian and reptilian species have also had similar though less known associations. A reptilian species which until recently found a place in Maltese pharmacopoeias was the Ocellated Skink (*Chalcides*

ocellatus). The skink was until recently purchased by local pharmacists who extracted its fat for its healing properties (24). Conrad Gesner of Zurich (1516-1565), believed that the skink's ashes in oil and the fat extract had anesthetic properties. The fat was also supposed to turn sterile women fertile. The internal ingredients were used for eye trouble while an ointment based on its excreta was useful to smooth the complexion and remove wrinkles. In Malta its fat was held to be useful to restore hair to bald heads (25). To meet individual tastes and requirements Gesner suggested that the skink could be used fresh or dried, whole or in part, cooked or raw, alone or mixed with other ingredients.

Another indigenous species used in medical folklore was the Painted Frog (*Discoglossus pictus*) which was given in the form of soup to sick children (21). While no definite therapeutic value for this can be identified, an antidiuretic substance named enteramine has been isolated from the skin of this frog species (26). Recent pharmacological investigations on the parotid and skin secretions of a number of amphibian species have yielded an impressive list of chemical substances among which the most important are adrenalin and bufogenin, the latter group of compounds being found to be pharmacologically related to digoxin.

More specific use was made of fresh tortoise blood in the treatment of jaundice and epilepsy. Male sufferers from jaundice were advised to bleed a female tortoise and make the Sign of the Cross with its blood on the joints of the arms and the legs. Females were to use a male tortoise (27)! Drinking tortoise blood was also believed to cure epilepsy particularly if taken immediately after a fit (28). The land tortoise (*Testudo* sp.) is now not a natural inhabitant of the Maltese Islands but specimens are still imported and sold as pets. Carapace remains have been found in association with human remains in neolithic deposits at Ghar Dalam in Malta and another cave in Gozo (20).

Reptiles have also been associated with the aetiology of medical conditions. The two species of gecko

on the Maltese Islands (*Tarentola mauritanica* and *Hemidactylus turcicus*) have been associated with skin disease particularly leprosy (29). This belief may be based on the warty appearance of this animal's skin which would be comparable to lepromatous or psoriatic lesions. This belief was so ingrained that the naturalist G. Despott in 1915 remarked that he found it difficult to get children to collect gecko specimens for his studies (30).

The use of natural substances for medicinal purposes has in recent years died out through the introduction of chemical products produced by pharmaceutical firms, and through a better understanding of disease processes. The old folklore beliefs serve as a reminder of the way of life and way of thought of people in bygone days. The herpetofauna in Maltese medical folklore show the magico-religious beliefs coupled with shape association were ingrained in the minds of medical practitioners and laymen alike.

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