

**[p.53] Cynomorum Coccineum Linn.,**

**A Maltese Historical Plant**

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*SECTION ONE*

**Introduction**

Among the historical monuments of Malta we can surely include the *Cynomorium coccineum*, Linn, a plant which created a great deal of commotion in the past, but which now lies forgotten, with only hazy memories of its former glory. It lies, like some ancient ship or gun that has run out of fashion, its services no longer needed, and replaced by discoveries of modern progress. A relic of history is always awe-inspiring, especially when it still lies in its original place and position. *Cynomorium* not only occupies its historic site, but annually enacts its former life-span, growing and dying as of old.

The scene of its victories was the Fungus Rock, at Dwejra, in Gozo. Go there sometime, and you will find yourself in a little paradise. I know no better spot in Gozo, where one could combine beauty, history, nature and peace simultaneously, and a colourful sunset may take you into a dream of the past.

You might even imagine some movement of the life that used to exist there in the past. Some persons scattered about, some riding, others wearily walking towards Fungus Rock. They walk up the few steps hewn out of the rock leading to the tip of the little peninsula close to it, and in their turn await the basket that travels on two ropes over the little stretch of sea separating them from their objective. The steps still exist, even those on the steep sides of Fungus Rock itself are visible; but the ropes have gone, and only the holes that formerly contained the staves that held the ropes remain. The picturesque surroundings add to the mysterious atmosphere pervading Fungus Rock, and though appearing of unimposing dimensions, the rock looms high above you when you approach it on a boat, and its whole shadowy shape appears different; even its texture appears to be crumbling, but is so hard, that a length of pointed iron, hammered in for a foothold, returned its point hooked right backwards. If not equipped with long ropes, Fungus Rock is unattainable, and only half its height can be scaled with comparative safety; but at the same time, its inaccessibility adds to its mystery.

If you walk to the edge of the high cliffs to the left of Dwejra inlet, you will find yourself looking at Fungus Rock from an unusual angle. You will see its surface, on which still exists a length of rubble wall which prevents the little amount of soil from being washed down the steep side, into the sea. There is also visible the small, square entrance to an artificial cave, where the guardian used to shelter himself or his specimens.



CYNOMORIUM COCCINEUM, LINN.

[p.55] Although *Cynomorium coccineum* was first dubbed “*Fungus melitensis*,” a name which persisted for a long time, and still persists in some cases, it is not justifiable in any way, for the plant is neither a “Fungus” nor “melitensis”; the only reasonable excuse for the latter name, may be, that it was first seriously noted in our islands. Before reading on, it must be kept in mind, that *Cynomorium* is NOT a fungus; it is NOT special to Gozo or to Malta; neither is it different from the others to be found in the Mediterranean region, and that the alleged properties, once so praised, are practically non-existent. I do not here propose to repeat the detailed botanical studies made by other writers but I merely wish to present this remarkable plant as a prominent individual in Maltese history.

## *Identification*

I feel it necessary to identify the plant in question by setting out a preliminary botanical diagnosis. Without going into the complex morphological details of its descent, we may plan the family tree as follows: Kingdom: Plants; Group: Phanerogamia; Class, Angiosperms; Sub-class, Dicotyledones; Series, Chorypetalae; Order, Laranthiflorae; Family, Balanophoraceae; Genus, Cynomorium; Species, coccineum. The Order Laranthiflorae embraces parasitic or semi parasitic plants, usually both male and female (monoecious), with tetramerous perigonous. This includes two families, Santalaceae and Balanophoraceae. To the latter family belongs our plant. The Balanophoraceae is a small family of fleshy plants, parasitic on the roots of others, the subterranean rhizome being constantly attached to the host. Stem devoid of leaves, naked or scaly. Flowers are rarely polygamous, usually dioecious or monoecious, nearly sessile, arranged in dense, oblong, globose or cylindrical heads. Perianth 3-6 lobes, male flowers with calyx divided into 3 stamens, rarely more, sometimes with one stamen. Female flowers with solitary ovule; stigma terminal; style filiform, sometimes sessile, ovary single celled, rarely divided. Fruit coriaceous, embryo globous, minute, placed in a slight dimple, in fleshy albumen. This little family includes 14 genera, among which are Helosis, Langsdorffia, Cynomorium, Lophophytum, Balanophora, Sacrophyte, Scybalium, Mystropetalon, etc. These genera, together only embrace about 35 species. The Genus Cynomorium, Mich., sustains polygamous flowers, inflorescence dense, oblong, spadixshaped; perianth 1-8 lobed, usually 4-6; lobes linear. Stamen single; ovary inferior, with one ovule and one cell. Stigma truncated or obtuse, on a long style. Perianth and style persist in the fruit. This genus includes only one species in the Mediterranean, the Cynomorium coccineum, Linn. This species has been described under the following synonyms: Fucus spicatus coccineus mellitensis, Bonamicus; Fungus Typhoides coccineus Melitensis, Bocc., Icon., & Descr.; Fungus Typhoides coccineus tuberosus melitensis, Bocc. Mus. di Fis; Fungus Typhoides Liburnensis, Tilli; Cynomorion, coccineum officinarum, Mich; Fungus melitensis, Ins. Sc. Bon. Comm. The rhizome forms roundish tubercles on the root tips of the host plants, of dark colour, whitish or rosy inside, branched, lies obliquely or horizontally underground; dark, long, with ovate-acuminate or ovate scales; diameter usually 2-8 em. and about 6 ins. long. Thick, fleshy stems rise erect from the rhizome, up to 20cm above the ground. The flowering portion of this is usually 5 ins. long, more swollen than [p.56] the stem, and densely covered with short cymes, bracts and bracteoles., spatulate or linear and unequal. The stem is rosy containing irregular scales; flowering portion, scarlet, deep red, brownish, purplish or purplish black, all of a velvety nature. Male flowers with 4-6 petals resembling the bracteoles, varying in size. Stamen, solitary, and twice the calyx; filament fusiform or cylindrical, straight, glabrous, red above and whiter below, swollen at the middle. Another prominent, broad, nearly bilobed below. Pollen yellow, cylindrical. Female flowers develop slower than the male, and are smaller in size, nearly hidden among the bracteoles. Calyx with 2-5 small, linear sepals connected with the ovary at the base. Ovary ovoid, inferior, containing one, sub-globular ovule; style long, nearly twice the calyx. The fleshy interior of the whole plant is whitish or pinkish.

## *Host Plants*

In Malta, the majority of authors agree on Inula, (Senecio, Limbardia) crithmoides, L., and Atriplex (Obione, Halimus) portulacoides, (as 25, 38, 42, 44, 45, 47, 48, 53, etc). Other species, as Medicago, Lentiscus, Cistus, Melilotus, Myrtus, Lepturus, Tamarix, Salsola, Statice, etc., have been mentioned as hosts in other countries, by various authors.

### *Flowering Time*

From the beginning of June to the end of September it disappears and the rhizome remains underground. Starts showing signs of life again by December and January. It reaches perfection by April and May (5, 9, 16). It used to be gathered in June, so that its medicinal powers may not be diminished (2, 6). Houel mixes things up by saying that in September it grows again thus appearing twice a year. (14) It has been said to flower only in April (20, 34, 44). Most authors agree that it flowers in April and May, (33, 38, 40, 48) but some extend the period over three months, as April-June (25) and March-May. (53).

### *Distribution*

In the Maltese Islands: Haġret il-Ġeneral, (1, 2, 3, 5, 6, 9, 12, 16, 24, 25, 26, 38, 35, 38, 39, 41, 43, 44, 48, 49, 50, 53) also called Ras, Rhas, Haġiret il-Ġeneral; Fungus Mushroom or General's Rock, or Shelf, and Skoll tad-Dwejra, Skoll tal-Għerq Ġeneral. (6) Another place at Dwejra (Ġebbla tal-Altar) (2, 9, 25, 39, 44, 48, 50, 53, Melich tal-carrucci (5). Malta: Dingli (17, 20, 25, 39, 44, 53), Kaus, Għallis (48, 50). Torri tal-Għallis (55) should be Għallis only, because Torri tal-Għallis is on the N.E. coast, and not on the South.

*Cynomorium coccineum* was not recorded outside Malta before 1697, when Boccone listed the localities for the first time. Where ever it is found it is close to the sea, only its congeners preferring inland habitats, and always parasitic. Ballou did not mention any hosts, but said that it grew out of the crevices of rocks (41). The following is a list of the localities that have been mentioned for *Cynomorium coccineum*, L.: Africa (16); Algiers (33, 39); Arabia (48, 58); Aranjuez (38, 39); Basilicata (40); Baza (33); Cadiz (33); Canaries (48,53); Carthage (33, 39); Flavignana (5, 16, 38, 39); Hamman el-Lif (42, 50); Isle of [p.57] Lancerotta (33, 39); Jamaica (10,16; 32 & 39 say that it is recorded on Brown's authority who had mistaken it for an Helosis); Kandia (52); Lampedusa (5, 10, 16, 33, 35, 39); Livorno (16, 18; 33 could not find it); Longhorn (41); Lungo Sardo, Miravera, Orano, (33); Palestine (48, 53); Persia, Pisa (48); Ronciglio (5, 9, 16, 33, 35); Sardegna (33, 35; 39, 48, 53); S. Antioco (33); Sicily (16, 18, 33, 35, 48, 53); Scaffa di Cagliari (33, 35); South Italy (33, 39, 48); St. Lorens del Munt, St. Miguel (33); Spain (33, 48); Toscana (16); Trapani (5, 16, 35, and 33 could not locate it); Tunis (5, 16, 33, 39, 41).

### *Vernacular Nomenclature*

*Maltese:* Heritz (Heeritz, Heerch) tal-Ġernal (2, 5);  
Għerq il-Ġeneral (6, 20, 25, 30, 35, 39, 44, 45, 48, 49, 52, 53);  
Għerq Sinjur (6, 15, 25, 26, 30, 39, 44, 45, 47, 48, 49);  
Fungu Għawdxi (9); Fungu ta' Malta (9, 47, 50);

Spellings have appeared distorted in many ways, but all confer the right meaning.

*English:* Scarlet Mushroom (18); Maltese Fungus (30); Malta Fungus (35, 41, 53, 48, 59); General's Root (39); Scarlet Mushroom of Malta (47).

*French:* Champignon de Malte (14, 30); Cynomoir escarlatte, Champignon Rouge Eclarant (18).

*Italian:* Fungo di Malta (18, 26, 30, 33, 40, 44, 48, 53); Fungo Gozitano (detto maltese), (9); Sanguinana (5).

### *What was it thought to be?*

It has been called by several names. Its first mention as “un’ herba” (1) was contradicted, as being incorrect (2) and should have been considered as a “fruit.” But because of its appearance it was mostly accepted as a “fungus” for a long time (3, 5, 11, 12, 14, 16), even though Micheli had already proved its true nature. (8) Although nowadays it is still called Fungus, this name is, of course, purely traditional, and not of botanical value. As if to break the monotony it was also called a Lichen (36); from De Soldanis, the name was, wrongly translated as “Shrub” (52). In our tongue we call it “Gherq” which stands for ‘root.’ Such a variety of names demonstrates how this peculiar plant baffled early observers, and its nature remained for long undecided.

### *Comparing its shape*

The curious shape of the Cynomorium has been likened to several plants. Abela, and De Soldanis after him, compare it with “finocchi marini” (presumably *Crithmum maritimum*) but I cannot really see where this resemblance lies, unless the parasite was thought to be part of *Crithmum maritimum*. Boccone has better ideas, because he gives the Bulrush (*Typha*), and the growing tip of the Horsetail (*Equisetum*) as standards for comparison. DeBorch compares it with “Morille” (a fungus called *Morchella esculenta*) whilst it reminds Henslow of another fungus (*Coptinus*). Parlatore found some resemblance between Cynomorium and the spathe of an Arum. The Generic name shows us that Micheli found it “a similitudine canis genitalis” as was also pointed out by Weddell. The Arab name conveys a similar likeness.

### **[p.58]** *Its Ancient Uses*

It ought to be kept in mind, that in ancient times most plants, especially aromatic species, or those that in one way or other struck man as having some peculiar shape or property, were made use of for medicinal or culinary purposes. Most of these plants, however, contain no real property able to combat ailments; only a very few, being by nature astringent, aromatic etc., could be made use of to a certain extent. Apart from some definitely poisonous species, the rest could be taken at least as ordinary nourishment, but with as much medicinal properties as one hopes to get out of his daily food. It is only by chemical analysis and botanical study that one could ascertain the extent to which some plants could have any real value, and most of the past herbs, if they ever served really as medicines, might have done wonders only by influencing a psychological attitude on the patient, or because they were taken at a time when the ailment would have healed itself out anyway. If we come to this reasoning, we can also presume that people who died or became worse in condition, after taking herbs might have been killed by the herbs themselves, or because they had to die anyway. As I do not propose to write an essay on medicinal plants with all the controversial points I will only concentrate on our Cynomorium. As you might see from the historical section to follow, most of the writers on this subject repeated what those before them had written, so that from the entire material available, we are able to glean less information, than would have been expected.

When the Cynomorium was reported from another place other than the General’s Rock, it was not attributed with the same size (2) and efficiency (6) as the original one; probably it lacked the thrill and adventure of going over ropes, and possibly there also existed some prejudice. Its strong properties could be determined if it were collected before June, when fully mature (2). In the historical account it will be easy to notice that a great deal of fuss was made over it, and was reserved by the Knights for conducted distribution in their own way.

The plant was intriguing mostly because of its colour and styptic qualities. It can emit a reddish liquid which can dry quite quickly. The taste also dries up the mouth. This may also have encouraged its use against blood troubles. The uses it has been put to were all on the assumption that it is astringent. Being considered so, it was applied to dry up liquids, especially blood. They could also have dried themselves after a bath, but presumably they rarely washed. All authors agree that Cynomorium was used against dysentery, and some mentioned that it was also used against diarrhoea, (5, 48) to dry up ulcers and internal bleeding (6), against vomiting of blood (5), and to close open wounds as used in St. Giacomo Hospital for Incurables in Rome (5, 16), and also to relieve blood pressure (5). The foreign Ipecacuanha was also used against dysentery, but Cynomorium was considered better because it could also stifle apoplexy. (2) It had been likened to “Baaras” or “Babra” of Palestine (2) but only the root of that plant was utilized. Cynomorium helped also in treatment against venereal disease, as gonorrhoea, whilst some women used it as a contraceptive, or hung it at the breasts to augur happiness (2, 9). At times it was recommended instead of a dentifrice, to strengthen teeth and gums. (5, 9, 16).

[p.59] As it produces a fast red liquid on being squeezed, the colour could be used for textiles (9). Warnings were often given to point out, that if the powder used was not specifically taken from General’s Rock, its efficiency would be much decreased. (6)

Since ancient times the medicine was prepared as a dry powder mixed with drink, (1, 2, 5, 9). It used to be cleaned, placed in a pot, covered well, and put in a kiln. When thoroughly baked, it was well pounded in a marble container until reduced into fine powder. After being passed through a sieve, it was ready for use on the patient. (2) Another early remark was: “illus in pulverem soluti scripulum aut amlius vino vel jusculo dilutum hauriunt, ducta a majoribus hac nunquam fallente medicina” (3). You could also cut it into small pieces, expose it to the air, and in a short time becomes red through chemical reactions. (5, 9) In Savona, a man vomiting blood, became better when he took half a dram of powder in water, three times in one night, at intervals of a few hours each. (5) Also effective if sipped slowly, or at intervals over 24 hours, with 18 grams of powder in half a cup of wine. For quicker results, quince sauce was suitable to mix with the powder (16). To do away with mixing a fresh dose every time, the mixture used to be distilled in standard form, and only had to be taken readily mixed whenever necessary. (6) A Gozitan doctor advised that doses should be taken again and again until the ailment is over (6).

This kind of treatment is always successful, for if the patient remains alive, *at least* there will come a time when his ailment is relieved, even for just a short while, and if he happens to be taking a useless medicine, the relief would usually be credited to it. The mixture used as a dentifrice consisted of mixing together equal parts of powdered Cynomorium, sugar, musk, and resin. (5, 9). A certain Gius. Paolini, in 1748, despairing of doctors, was advised to take powdered Cynomorium in white wine, and strange to say, was well again. (2, 6) Some ancient physicians, as Giov. Libarici of Trapani, and Gius. Ferranto of Siracusa found that even a single ounce of the syrup of powder, could heal dysentery. A Maltese doctor and his followers, used it with good results in Myrtle syrup or other astringent. (5) “Il n’est point de remede plus prompte n’y plus assure pour guerir cet sortes de maladies” (4). Nowadays, of course, its use is absolute. By 1868 it had already fallen into disuse (34); but a very few inhabitants of Cozo, and still fewer of Dingli retain that it is useful. You will find them to be illiterate, or have not bothered to keep abreast of modern developments in medicine, and believe assertions only on the grounds that they were passed down to them by their forefathers.

## SECTION TWO

## Cynomorium Coccineum Through History

### *Abela and Bonamico*

The first person to make a written statement pointing to the existence of *Cynomorium coccineum* in our Islands, was Comm. Fr. Giov. Franc. Abela in [p.60] 1647 (1). He did not give any particular name, but his mention is merely accidental when referring to “Cala ta Dweyra” (Nowadays Qala tad-Dwejra) whence one could see the “Hagira tal Gernal” (Hagret il-Ġeneral) which is an isolated high rock at the mouth of the inlet. His description of “un herba che tira al vermiglio, non dissimile nel di fuori, ed in quanto alla forma à i finocchi marini” immediately picks it out as the one in question. He points out that this plant, dried, powdered and drunk as a medicine, relieves dysentery, and was much valued in these days. He says that it was not to be found anywhere else besides that rock. In a manuscript written about 1670 (2) Joh. Franc. Bonamico gives a valuable account of *Cynomorium Fungus spicatus, coccineus melit. planta singularis ac rarissima nunc primum curiosus evulgata.*” As yet, however, it was not widely known, and no botanical treatise was then in existence about the subject, neither was the nature of the plant then known, it was commonly referred to as a fungus, just because it appeared so at first sight. Bonamico said that some curious English people climbed the rock to get this plant, making use of ropes to cross over the intervening sea. He also points out, that what Abela calls a herb, should, in reality, be called a fruit; neither does he agree with Abela that it is not to be found anywhere else. He says that a miniature peninsula at the same locality contained the said “fruit” which was of the same kind and efficiency, but smaller in size. Then follows an account of the way in which it used to be prepared and administered to the infirm, in the manner of the ancient Maltese. This assertion will show that the *Cynomorium* must have been known before Abela made mention of it. He asserts that the containers in which the mixture should usually be prepared are like those often found buried underground with Phoenician inscription, signifying that they were formerly used for the same purpose. Did the Phoenicians really make use of the *Cynomorium*? Of this we cannot be sure. Bonamico says that it used to be taken by the English to heal the venereal disease known as gonorrhoea, a fact which he had found written in medical works of Lipsia, where this “fruit” had been praised, and although it is therein mentioned under a different name, the figure included in that medical work shows it to be the one in question. He is at a loss regarding who first found the “fruit,” but finds written in the manuscripts of an old Gozitan doctor, a friend of his, that immoral women made use of it as a contraceptive. Others superstitiously used it to acquire future happiness. In the said manuscript, Bonamico read that a Capuchin father then abolished these disgusting activities. In his most interesting account, Bonamico says, that the medicinal results obtained by the use of our plant, is more satisfactory than the other antidote, contemporarily in use, by the Americans against dysentery, called “epiquecana.” Incidentally, we usually know this as “Ipecacuanha,” which is a substance taken from the roots of a Brazilian plant belonging to the family Rubiaceae. In medicine it is supposed to aid respiration and perspiration and also to act as an emetic and a stomachic. Bonamico also noted that our plant is also a remedy against apoplexy. The English Lord, Eustace Dor, mentioned a plant, with many properties, to be found in Palestine, and called ‘Baaras’ or ‘Babra’; but Bonamico points out that only its root is useful, unlike ours, which is effective in its entirety. He also remarks that lizards on that rock red in colour, large in size, sucked these fruits in the manner of bees. Needless to say, the lizards there to be found are not red in colour, and also they pick [p.61] off the insects that feed on the *Cynomorium*, rather than suck the plant itself, and may have perhaps appeared red to him, if they had meddled with the red juice of the plant.

### *Boccone and De Soldanis*

We come now to the person that botanically described the Cynomorium for the first time, although under a different name, and false assumptions, as regards its nature. This was Paolo Boccone, 1674, (3) who calls the Cynomorium, “Fungus poster rarite, & usu nulli secundus...” and the word “Typhoides” is included in its definition, because, to a certain extent, it resembles the Bulrush (*Typha latifolia* or *T. angustifolia*). He also tells of its use as a medicine, and that it is to be found on “Scoglio del Generale,” where the fungus is called “Heritz tal-General.” He also mentions Bonamico at the end of the description, and gives an illustration of the plant. In a Manuscript by De Soldanis, to whom we will come later, there is a reference to a phrase taken from the “Giornale dei Letterati di Parigi,” (1677), which reads: — “Il n’est point de remede plus prompte n’y plus assure pour guerir cet sortes de maladies,” referring to blood shedding diseases. Twenty years after his “Icones, etc.,” P. Boccone published an article 1697, (5) entitled “Intorno al Fungus Typhoides, coccineus, tuberosus Melitensis” in which he made several modifications as regards name and localities, but still he did not discover that it was not a fungus. He also made use of a new illustration. Boccone here described several morphological details, comparing it with *Typha* and *Equisetum*, and includes also the locality already known, adding, however, that it is also to be found on another part of the island of Gozo, at “Melica tal Charrucchi,” an extinct name, which, he says, means “Balzo” or “Fenditura scoscesa del Charrucchi.” Adding to previous literature, Boccone records that the “Fungus” was to be found in other lands, besides Gozo, namely, in Trapani, in the islands of Flavignana, Ronciglio and Lampedusa, as well as in Tunis. As in his previous description, Boccone deals at length with its medicinal properties, mostly against dysentery, referring to those before him who had praised its powers. He says that in Trapani it is called “Sanguinaria,” probably because of its efficiency against blood diseases; but couldn’t it also be called thus, because it is blood red in colour at a period of its life? He says that at Ronciglio it is sometimes collected and sold at high prices. The Ipecacuanha is once more discussed, for Milano Helveticus exhorted doctors in Paris, to use our “Fungus Coccineus Melitensis Tuberosa Redice” when the “Hipecoacan” is unobtainable.

Can. Gio. Pietro Agius De Soldanis (1750) (6) discusses “Gherq el-General il Fungo Gozitano detto Maltese” giving its place of growth as “Sqogl tal Gherq General” or “Sqogl ta Dueyra.” He sheds some light on the reason why it is called General’s Root, (as is the meaning of the Cynomorium’s name in Maltese) saying that some call it so, just because such a plant is worthy of a general, so great are its properties; others say, that as in 1600 it was found by the Galera Capitana di Malta, it retained the name of General. De Soldanis refers to it in Latin as “Fungus Melitensis seu Typhoides coccineus tuberosus” and “Pluttosto radica, che pianta” (rather a root than a plant). He recollects, after Bonamico, that it was figured on a glass pitcher or urn obtained by Can. Abb. Ign. di Costanzo. and conserved in a museum in Rome. Examples of its [p.62] infallibility are also given, including the case of a gentleman of Rome, (1748) who despaired of doctors and only after taking once of the plant was he able to recover. De Soldanis gives a warning to those who obtain it, to make sure of its source for, if not picked from the General’s Rock, its properties would not be entirely reliable. He makes known its occurrence on another rock not far away called “tal gebla ta l’altar” and that it grows also at some coastal places in Malta.

This was the first mention of its occurrence in the mother island. We also find the first reference to the fact, that the General’s Rock was taken under the custody of the Grand Master, who yearly appointed a number of his soldiers to guard the “root.” The Grand Master used to send it abroad to the nobles who often asked for some. Still in the time of Tilli, (1728), who noted the plant (7), its parasitic nature was not discovered, so much so, although Tilli observed foreign rhizomes entangled with those of the Cynomorium, he only remarked that they had accidentally mixed together, and left the matter at that. At long last, however, a

person appeared in the shape of Michel, (1729), who dared to say, that our Fungus Melitensis should take its place among the Phanerogams, (8). He gave an illustration which overshadowed those formerly presented by Boccone and Tilli, noted its parasitic nature for the first time, and created a new genus for it, that, is Cynomorion (Cynomorium) purpureum officinarum. Linnaeus used the binomial system of nomenclature, and based on it the specific name of coccineum (1749); thus the plant became Cynomorium coccineum, Linn., placed in the genus Cynomorium, Micheli. (10).

De Soldanis, before mentioned, was not a naturalist, so that he had no need to keep up to date with botanical developments, and when he wrote his manuscript about Gozo (1746), he still treated the plant as a fungus (9). His work was later translated into Maltese by Dun Ġuzepp Farrugia, and published in 1936. De Soldanis was rather touchy about the fact that the “fungus” had been dubbed “melitensis,” so further on he also called it “gaulitanus,” and later on complains that a large number of things belonging to Gozo are referred to as “Maltese” including the “Gherk Sinjur,” which should rather be called “Gherq Ghawdxi.” Apart from what he had written in 1750, De Soldanis quotes Bonamico at length, mostly to emphasise that it is special to Gozo, and to find fault with the specimens to be found in Malta, so that it will not appear as efficient as the Gozitan one, thus enabling him to justify his allegation that it should be called Gozitan. He considers the few words written by Abela as very appropriate, apparently just because Abela mentioned only Gozo as his reference. When mentioning Abela, De Soldanis remarks that the vicinity in which the plant is found, was formerly known by the now extinct name of “Gebel ta’ Bin Gorg.” When discussing Qala Dwejra he notes the existence of a cave called “tal-ghassa” (of the guard) purposely made in 1745 by Manoel Pinto, the Grand Master of his time, to house the guardian of Gebla tal-General. “Il-Gebla tal-Altar” is again attributed to harbour the “fungus.” Regarding oft mentioned “Altar Stone,” I have repeatedly asked Gozitans to point it out to me, but they are never sure where it is. I have been to Dwejra very often, and the only place I can imagine suitably to be called “tal-altar” is a curious, large structure which very much resembles a neolithic dolmen in shape, being composed of a large slab of rock, resting on two great [p.63] blocks, in the manner of a trilithon, as if placed there by man; but it is too massive to have had anything to do with man’s handiwork, and it is easily seen to be a geological phenomena jutting out towards the sea in the way of a miniature peninsula. Thus it may be the same place mentioned by Bonamico, but if so, it is rather strange that he did not remark on its peculiar shape, to give it an unmistakable identity. Boccone is also quoted by De Soldanis, regarding the external appearance of Cynomorium, and follows this by a long account of its “unbelievable properties.” The Arabs are said to have considered it as a “Treasure among medicines.” De Soldanis states that formerly its numbers were more abundant, saying that it diminished by constant collection before ripening, notwithstanding the harsh punishments imposed by Grand Master Pinto. This Grand Master in 1744, counselled by Merandon, the Order’s engineer, ordered that the sides of the “Fungus Rock” be smoothed out to eliminate easy footholds, so that from then on, access to it became well, nigh impossible. He also ordered that an iron fence be constructed on the approach to the rock, and in 1746 stationed the guard in a specially constructed cave at ġebel Bin Ġorg, and it was also stated, that if anyone made use of the plant before flowering season, there was in store confinement to the oars of the Order’s galleys, for several years.

### *Late 18th Century*

In 1772 appeared another edition of Abela’s work revised and greatly enlarged by Ciantar (11). Ciantar quotes Abela’s reference to the Cynomorium; but whereas Abela had called it “Herbs,” Ciantar writes: “una specie di funghi,” and this uncalled for correction of

Abela's text changed the original meaning. Here is Ciantar's version for comparison with Abela's original text: "una spezie di funghi, di colore che si accosta al vermiglio, non dissimile in quanto alla forma, a i finocchi marini..." After this follows a ludicrous account of Maltese fungi, in which he also says that they grow out of stone, and relies on P. Kirkerio, who affirms that they grow larger than melons. All this, however, may have been in keeping with his times. Ciantar follows with an extract from Bonamico's manuscript, and ends by remarking on the fact that the "fungus" was reserved by the Grand Master. No hint was there yet, that he knew of the findings of Micheli 48 years before him, or of Linnaeus, at least 28 years before, about the parasitic nature of the plant, or that it was no longer botanically considered a Cryptogam, or fungus.

Le Comte De Borch in 1782 (12) was still happily oblivious of botanical developments, and still considered the Cynomorium "un champignon d'un figure oblonge ressemblant un peu à la Morille," and did not know that Boccone, 85 years before, mentioned various other places where it could be found besides Malta and Gozo; because he writes, "une plante particuliere inconnue partout ailleurs." At pages six and seven he gives two plates entitled "champignons Astringens de Malthe." His work is made up of a collection of letters, and the one referring to the Cynomorium was written on 10th January, 1777. This fact points out, that although the plates are alleged to be "dessine par l'Auteur" it does not appear to have been the truth, because he was in Gozo at a time when the Cynomorium was not yet in flower, whilst the illustration he gives shows the plant during flowering time. Therefore we can only come to [p.64] the conclusion that he had copied the pictures from somewhere, or they were given to him by someone else. De Borch remarks on the inaccessibility of "Rhas el General" mentioning also the man stationed up there. He ends with the usual reference to the medicinal properties which have compelled it to be reserved for the use of the Order.

Another feeble illustration of the Cynomorium was given by Petiver in 1784 in his *Gazophylacium* (Tab. 89). Jean Hovel in 1787 also illustrated the Cynomorium. (14) In his account he writes a "Description du Champignon de Malte" as if no Micheli or Linnaeus had ever existed, and like De Borch and others before him, contentedly describes superficially the "Champignon" and its properties. In Houel's work there is a large place depicting the Fungus Rock or General's Rock, with the rope which used to connect it with the mainland, showing the box that travelled over the ropes. Quite a number of persons appear in the picture; buzzing about the place, waiting for, or leaving, with some specimens of Cynomorium.

### *The 19th Century*

De Borch and Houel wrote their account during the reign of Grand Master Emm. De Rohan, just a few years before the end of the Order's stay in our Islands. Then followed the clashes with Napoleon and Nelson, until the first Civil Commissioner, Capt. Alexander Ball, took over under the British Rule (1799). Even during all these changes, some people still felt the need of using the Cynomorium coccineum, and during these uncertain months, the "Fungus Rock" appears to have been assailed again by uncontrollable persons. This circumstance necessitated the following proclamation to be issued in 1800, by order of Alexander Ball:

"Si proibisce a tutti di raccogliere il Fungus Melitensis."

Avendo a caro Sua Eccellenza, che i luoghi produttive le radiche comunemente dette *Fungus Melitensis*, ossia *Ghirch Signur*, sieno mantenuti, ed illesi, come si mantenevano nell's antico governo, ha perciò proibito a qualunque persona di qualunque stato, condizione di non ardire a di raccogliere dette radiche, senza il permesso di Sua Eccellenza, o del suo Segreto, sotto pena di contravventori benvista alla medesima Sua Eccellenza. Dato dalla Corte Capitan ale di 5 Marzo 1800. Barone Francesco Gauci, Capitano di Verga.

Louis De Boisgelin, in 1805, also wrote something about the Cynomorium. (16) Although he mentioned that Micheli wrote a little work on the plant, and also that Linnaeus had called it *Cynomorium coccineum*, he still referred to it as *Fungus Melitensis*. He did not content De Soldanis by calling it “*Fungus gaulitanus*.” He accuses Linnaeus of giving an illustration taken from Micheli, but does not mention at all that the illustration he gives is also the same one. Boisgelin also illustrates the mushroom rock, showing the rope connection with the mainland. It is practically the same picture published by Houe<sup>1</sup>, with similar figures in the same postures, but minus two persons on the left hand side. The most interesting part of Boisgelin’s account, is that, where he describes how people got access to “Hagira tal Gernal” (as Abela had written it). Two very strong ropes connected the shallow mainland with the General’s Rock. On these two cables hung a large case, able to accommodate one or two persons, suspended by four pulleys at the corners. By pulling on the ropes, the box used [p.65] to advance, stopped at the cliff-side, and only a trusted person was in charge of collecting the plant. The rest of the account deals with the usual notes on its uses and control. He also names other localities besides Malta, including Jamaica, where, he says, it is called *Cynomorium erectum breve cylindricum nudum prima estate squamatum*. But this was according to Linnaeus who had recorded the locality on Brown’s authority. Weddell says, that it is probable that Linnaeus mistook an *Helosis* for it.

Padre Carlo Giacinto in 1811, points out that the Cynomorium, “*Fungo melitense*” grows not only in Gozo, but also in Malta, close to Dingli. This was the first definite name to be given for Malta, because when De Soldanis first said that it was to be found in several other coastal places in Malta, he had not named any particular locality. After this, few were they who still called *Cynomorium* a fungus, although, however, the vernacular name survives even to this day, and this causes some confusion among those who have not studied its history, especially illiterate persons, who will continue to maintain that it is a fungus just because their forefathers told them so. Therefore we can assume that the names “Maltese Fungus,” “*Fungo Malti*,” “*Fungu t’Għawdex*, or *ta’ Malta*,” “*Fungo di Malta*,” “*Champignon de Malta*,” etc., will survive merely out of tradition; yet, it goes without saying, that notwithstanding the vernacular names, we should all know that it is not a fungus, especially if we have even the most rudimentary knowledge of Botany.

Torgioni Tozzetti, in 1818, enumerates the *Cynomorium*, as “*Stirpites squamoso, amento cilindrico*,” and in English calls it “Scarlet Mushroom” (mushroom), and adds only the usual well-worn remarks. (18)

L. Cl. Richard, in 1822, discussed the *Balanophoraceae*, and also discovered the embryo of *Cynomorium*. (19) His work is of some importance to us, even though the Maltese specimens in particular, are not referred to.

Stephano Zerapha, a Maltese botanist, listed the plant in his flora of 1827, and wrote, “*Floret Aprili, habitat in Marittimus prope Hal Dingli*” (20). But he does not name the Fungus Rock.

By now, various authors writing on Malta, rarely failed to mention the *Cynomorium*, even if just as a passing remark, because this remarkable plant had become well known, and the fuss created about it had made it part and parcel of any historical or travel literature on our islands. S. Brunner also commented on the *Cynomorium* in 1828, (21) but the anatomy of the plant received special attention through the researches of Unger, 1845. (23), who recorded it as being parasitic on roots of *Cistus complicatus*, of course, not in Malta, but this is of interest when one studies the hosts sustaining the *Cynomorium*. P. Brenner in Badger’s *Description of Malta and Gozo* (1851) just made passing remarks, repeated in other editions of the same work, as that of *Historical Guide to Malta and Gozo* of 1879, improved by Dr. N. Zammit. (24)

Another Maltese Botanist, Johann. Car. Grech *Delicata* (1858) records it as follows: “*Aprili, Junio. In arenosis maritimis parasiticum ad radices Inulae crithroides, etc.*” (25) The

localities he gave were Dingli, Gebla tal-Altar and Hagret il-General. The Maltese names were “Gherq il-General, vel Gherq el Siniur.”

[p.66] Next mention was made by another Maltese naturalist, Dr. Gavino Gulia, in 1855. He added no new data, but said that two guardians used to be employed “coll’annuo, salario di 50 scudi per ciascuno.” (26)

H.A. Weddell was paying attention to the study of the Balanophoraceae and the Cynomorium, for a time, especially during 1850-1851, and the results of his researches at that period were published in 1856. (27) After this publication, Weddell went on with further researches for another few years. Meanwhile, Jos. Hooker, published a contribution on the Balanophoraceae (1856) in the form of a monograph. (28) Only in one chapter of his work does he refer to Cynomorium, as his work was generic, rather than specific. H. Hofmeister specialised in the embryology of the Balanophoraceae, publishing papers in 1857 and 1859. (29, 31) Gavino Gulia, the Maltese physician already mentioned, published the first part of his “Repertorio” (1858-1859) in which he gave the usual details, referring also to Bonamico and Weddell. (30) By this time, Weddell completed his work on the Cynomorium Coccineum, and published a splendid memoir in 1860. (32) In this work he made use also of the researches of Richard, Unger, Hooker and Hofmeister to help him, but differed from Hooker only in a few items, on the grounds that he (Weddell) had much more material available at his disposal. In the introductory section he briefly mentions the work of Boccone, Tilli, Micheli Petiver, Delicata, etc. Discussing the nomenclature of the plant; he said that the generic name means “a similitudine canini genitalia,” and that the Arabs call it “Zeb Arbi” and “Zeb el Turko,” which, more or less agrees with the Greek word, from which the generic name of Cynomorium was formed.

In 1867, Parlato included the plant in question (83) described it at length, giving a number of up-to-date localities. It might here be observed, that in Italian Floras, Malta is usually included as part of the Italian peninsula. Needless to say, although we may be politically detached, we are physically a “chip of the old block” and in the study of our flora and fauna, it would be fatal to ignore those of Sicily and Italy.

H. Cleghorn read a paper in 1868 and published in 1870 (34). In this he took note of former writers, but besides the usual jargon now inseparable from any mention of the plant, Cleghorn points out one or two interesting items. He noted that the extremity of the village close to Dwejra, is called Strada Fungus Rock, nowadays known as Fungus Rock Street. Further on he writes, that in Palermo he had seen the words “Fungo di Malta” painted on the drawers of a druggist’s shop, but the herbalist informed him that the remedy was then obsolete.

This shows that in Cleghorn’s time the use of Cynomorium was already on the way of decline, if not totally abandoned. He also refers to the flight of steps cut out of the hard rock on the approach to “Fungus Island.”

After this there was a comparative silence of about 12 years, as far as literature on the Cynomorium is concerned, except for the few inevitable and ordinary remarks to be found in travellers’ books or reference books. Among these was Will. Medlycott, in Sedal’s book of 1870 (34), but there was nothing sensational, except that he still called it Fungus. In 1870 Lieth Adams also referred to the plant. (36) He calls the rock, “Fungous Rock” and made several other errors. He did not call it a root, nor a fungus or a fruit, as any [p.67] before him, but came out with the novel name of “Lichen.” Lichens are Cryptogamic plants, but do not in the least resemble the Cynomorium, which name is also spelt wrongly by Adams. A further note he adds says that the 17th century held it to be “a specific for syphilitic diseases.” As if to clarify the allegation made by De Soldanis regarding some corrupt women who were banished to Gozo, Adams gives his own version, and says “Accordingly, many demimonde of Valletta were banished to Gozo where they fed on this fungus (Here he calls it fungus, whilst

a little while ago it was a lichen) and the repute of the drug getting spread about, it became a custom with the Knights to export it to Europe.” Therefore, according to Adams, the reputation of the “drug” originated when it was taken to combat venereal disease. In the index of his book, he refers to the plant as “*Cynomorium coccineum* in syphilis.”

The reputation of this plant as a curiosity was still emphasised by Prof. Carmel in 1874, when, at the International Congress he called it “une plante que pas un botaniste peut-être sur cent n’a l’occasion de voir vivant.” Much later, in 1891, Prof. Henslow, in an article on the natural history of Malta, (88) refers to it as “a curious flowering parasite, closely resembling in shape, the fungus “*Coprinus*.” Of course, the comparison with *Coprinus* is appropriate only, so far as a first, superficial glance goes, and this glance must not be given before the *Coprinus* opens at the base. We have a few species of this genus of *Coprinus*, and they may help comparison. Many other short sentences can be gleaned from a few scattered general works, but these are of negligible importance, and do not in any way affect previous literature on the subject.

The next contribution of substantial value was an article by Count Alfr. Caruana Gatto, in 1892. (39) In his contribution he gave a resume of the works dealing with *Cynomorium*. He also points out that the *Cynomorium*, the only representative of the *Balanophoraceae* in Europe, differs from its congeners, because the latter prefer woody, inland districts, whilst ours lives along the coasts.

Adriano Fiori, in 1896, described the *Cynomorium*, and naturally included Malta in its area of distribution, defining the plant by a clear formula.

### *The Twentieth Century*

The year 1900 brought to light a history book by Mat. Ballou. (41). This traveller seems to have borne plenty of grudges against the Maltese, but these are not to be discussed here. Mentioning the *Cynomorium*, he said that it is known to botanists as *Fungus Melitensis*, although in my opinion he had enough time to discover that this was not so. The rest of his account on “Hagar ta’ Giral” deals with the usual medicinal properties. He pointed out that the nearest village to the General’s Rock was “Casa Garbo” (Gharb). He had also noted the *Cynomorium* at Leghorn and Tunis. In 1910, Prof. John Borg gave the present distribution of the plant as far as Persia and Arabia, (42) and pointed out that it is nowhere common, except on Hagret il-General in Gozo and Hamman el Lif near Tunis. *Inula Crithmoides* and *Halimus portulacoides* the host plants of *Cynomorium*, originate, as does the parasite itself, from North Africa. Borg came to the conclusion, that the separation of Malta from Africa took place after the natural establishment of the *Cynomorium* in the Mediterranean region. I will not enter into the merits of this assertion, as it needs [p.68] lengthy geological discussions, which will also involve other branches of science; but all the same, it is an interesting point to note. Short references still continued to appear in encyclopaedias and other reference works, with no further comments of interest, as also appeared an article on Gozo, by Giov. Gulia, (43) giving only well-worn notes.

In the first, really comprehensive Flora of Malta, by Sommier and Caruana Gatto, in 1915, it is given a full description, ending with the statement that its medicinal uses have ceased to be of any value, but some peasants in Malta still believe in it at times. (44) In 1924, Tankredi Borg, editing a “Dizjunarju Enciklopediku” reproduced the before mentioned article by Caruana Gatto (45), and in the same work, the *Cynomorium* is given the English name of Scarlet Mushroom of Malta. Further on in the same work, in 1927, the plant is mentioned in a list of Medicinal herbs prepared by C. Penza (47), and still later, in 1931, in a classification of the Flora and Fauna of Malta, Gius. Despott listed the *Cynomorium*, with Hagret il General as

the only locality. (49) Practically the same material appeared in “Storja ta’ Malta u Ghawdex” edited by T. Borg (46).

Dr. John Borg now published his *Descriptive Flora of the Maltese Islands* in 1927 (48). When he comes to the Cynomorium, he writes that “according to Abela, it was also used by some people for superstitious and immoral practices.” As we have already seen, it was not Abela who mentioned the immoral practices, but Bonamico.

Another period of silence was broken when C.R. Zammit, in *Melita Agricola*, (1933) wrote in Maltese about “*Il-Fungu ta’ Malta*,” where hasty mention was made of Abela, Bonamico and Boccone. The rest was a technical description of the Cynomorium (50). To this short account, Borg added a footnote where he included just a few more items not mentioned by Zammit, and concluded by saying that a missionary father once brought him some specimens of Cynomorium from Hammam il-Lif, near Tunis. The work of De Soldanis, of 1746, was translated into Maltese by Rev. Gius. Farrugia in 1936 giving only the material appearing in that Manuscript (51). A year after this, appeared a “Guide to Gozo” (52) by J.E. Gatt, where he also mentions the Cynomorium in a translated quotation from De Soldanis, calling the plant a “Shrub,” apparently not translated literally from De Soldanis.

In 1940, Carm Penza wrote a short article on “*Il-Fungu ta’ Malta*” (58). In this he gave the most necessary, and inevitably the most dog-eared points, as his intention was merely to present the plant to those knowing nothing about it. However, he adds a further note of interest, in which he says that the Cynomorium is to be found in patches, sometimes abundant, as in April of 1920, 1926, 1931 and 1938. He gives its English name as “Malta Fungus,” thus retaining its traditional names.

In an interesting folkloristic work, Cassar Pullicino, in 1947, mentions the plant, and discusses its ancient traditions (58).

In January of 1958, J. Bezzina gave a broadcast talk for Gozitans on “Hagret - Ġeneral,” inevitably noting the Cynomorium, ending by saying its uses had ended by 1839 (55). Another broadcast by myself this time on the Cynomorium itself, was given under the title of “Pjanta Storika,” under the auspices of the Malta Historical Society (56) in 1958.

[p.69] Finally we come to the point where we must round off the history of this remarkable plant. It is no longer important, but it still lives, peacefully oblivious of its great adventure. If ever you come across it, protect it, as it is a precious relic of our history. Whereas it used to be protected for its alleged powers, it should now be protected from extermination, because even the slightest intrusion might be followed up with a chain of well-meaning but clumsy enthusiasts, and modern apparatus for climbing would easily help to obliterate for ever this living inheritance.

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