

# Protection of the Maltese Top-shell, an Extremely Rare and Endangered Species

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## Abstract

The most characteristic terrestrial ecosystems are those represented by the Mediterranean scrubland, of which the marquis, garage and steppe are the main types present - evergreen woodlands are all but extinct and only four relict patches occur. Marine communities include those characteristic of both hard and mobile substrata. Human impact is significant, and human ecology, the population density is the highest in and built-up areas have increased from in the past. Some is agricultural land and of the area is undeveloped, but even so, no wilderness areas remain. The management practices of the islands include mainly that concerned with agriculture, animal husbandry and herding, and the use of fire, which all proved to be detrimental to the local biota, mainly through habitat destruction, the removal of competing species and the introduction of alien ones, particularly goats, rabbits and sheep

**Keywords:** Mediterranean • Agricultural • Species

## Introduction

All these human activities have put great stress on the Maltese biodiversity, with a consequent impoverishment of the flora and fauna. Other animals are collected for food, mainly to be eaten in situ as in the case of many seafoods particularly limpets, *Patella* spp., sea urchins, particularly, and some types of the Algerian hedgehog the Maltese freshwater crab *fluviatile* the painted frog and occasionally snakes. In the past both the frog and the freshwater crab were used as food and it is recorded that a broth made from frogs used to be given to sickly children [1]. It was also a common practice for children to catch skinks, oscillates, which were then sold to apothecaries who used them for the preparation of pharmaceuticals. In spite of it being covered by protective legislation, the loggerhead turtle *cartha* is still caught for food. Over the centuries a large of wild plants has been exploited on a considerable scale. Many species have been and some are still, used medicinally examples are Maltese, and rue. Of special note is the inappropriately named "Malta Fungus", a parasitic flowering plant to which were attributed a variety of medicinal and magical properties and which was once a valued product, the distribution of which was entirely under the control of the Order of the Knights of St. John. There have been sporadic attempts to grow some medicinal plants commercially, examples being squirting cucumber, elaterium and seaside, and it seems that renewed attempts in this direction are under way. Medicinal plants are often prescribed by traditional herbalists, whose knowledge has been transmitted by word of mouth over the generations. This breed of herbalists is dying out to be replaced by a new breed of more sophisticated but not necessarily any more efficacious practitioners [2].

Several species are used for food or fodder [3]. The carob, olive, fig and pomegranate trees were probably introduced in antiquity. The carob is still used, mainly for animal fodder, but also for human consumption as and for sweetmeats. The olive used to be grown for its oil, but is now no longer

Biodiversity used for this purpose, although the fruit is occasionally harvested and marketed. The pomegranate and fig are common orchard trees, but have also run wild, probably since antiquity. Their fruit is still often sold to shops and markets. The prickly pear, Pontiac, and the almond tree, Prunes dalcas were introduced for their fruit but have now run wild. The prickly pear is also often utilized as fodder and as a very effective hedge, but has the habit of over growing and can pose a danger to the native flora its fruits are ill regularly marketed. Perhaps the most important are the capers, Cappars orientalism spinose, the flower-buds of which are collected on a large scale to be prepared as a condiment, supporting a flourishing cottage industry. Several plants are collected sport adically because of their edibility. A few examples are the edible birdshot trefoil, *Lotus edulis*, which is collected for its pods; the wall-rockets, purslane, *Portulacaoleracea* spiny asparagus, *Asparagus aphyllies* and fennel, *Foeniculumvulgare*. The fruits of bramble, *Rebus ulmifolius*, are often picked while bay leaves from *Luas Nobil's*, and rosemary, *Rosmarinus* are used as culinary herbs [4]. Children sometimes eat the blanched know n locally as Hamaul, of the Cape sorrel, *Oxalis pes-caprice*, an invasive alien, and the unripe fruits of mallows, Malka and Lavatory species. The sea lettuce, *Ulva laetevirens*, is also sometimes eaten. In Malta there is little use of wild mushrooms as a source of food. That a species of oyster mushroom, *Pleuritic eryngo* var. *ferulae*, which grows on the stumps of dead *Ferula* communist, used to be collected and sold at the markets. It is now too rare to make its sale profitable but it is still occasional collected and sometimes crops up in the odd restaurant. A few other edible mushrooms are sporadically collected for food, particularly the wood blewits *Lapita nude*, and pine boletus *Suilluscollinitus*.

The milk-vetch *Astragalusbaeticus* used to be grown on a limited scale and used like coffee, either on its own or mixed with real coffee. In the case of traditional foddors, it is often difficult to establish whether they are wild plants which were taken into cultivation, or cultivated foddors which have run wild [5]. Apart from the most commonly grown species, *Hedy arum*, which was almost certainly imported, one may mention the white vetch, *Lathrup* and the common vetch, *Viciasativa*. This last is also sown around Christmastime and grown in the dark for blanching. It is then used for decorating Christmas cribs [6]. The great reed, around Dana, was probably introduced in antiquity and has become widely naturalized. It is still harvested to be used for fencing, basketry and curtain making [7]. The narrow springy twigs of the chaste-tree, *Vitec Agnus*, were used and are still, to a very limited extent, owing to its rarity as supports for basketwork, in mu the same manner as willow twigs are used elsewhere, were, and to a limited extent still are, used for be sentry as were the leaves of Biodiversity Conservation and Utilisation in the dwarf fan-palm, *Chimaeras homilist*, now extinct in the wild. The sea-grass, ocean, sheds its leaves which accumulate as thick masses, known as banquettes, on the

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seashore. This material is sometimes used as a fertilizer. Wild plants have also been widely used as firewood. Whenever there were wars and invasions, trees were cut down for burning a practice which must have contributed greatly to the loss of Malta's tree cover. Other plants have also been regularly used as kindling, notably the yellow rest harrow, Onions matrix, while the phagnalons, Phagnalon spp. and some bracket fungi, mainly Phellinus., have been used as tinder [8].

The Mediterranean thyme, *Thymus capitatus*, is frequently collected around Christmas time to decorate cribs, notwithstanding the fact that it enjoys legal protection, while leafy olive twigs, mainly of cultivated origin, are used during Eastertide particularly for Palm Sunday celebrations. Many species of indigenous plants are also cultivated as ornamentals. This includes a number of indigenous trees including holm oak, *Quercus ilex*, Tamarin, sandarac tree, *Tetraclinis articulata* Aleppo pine, *Pinus halepensis* and dwarf fan-palm, *Chamaeras homilies*. The last two are virtually extinct as wild plants, but the pine has been reintroduced in afforestation schemes and is regenerating, and there is no reason why the palm cannot also be reintroduced. In public gardens one may see the Mediterranean heath, which has become popular as an ornamental plant since, in, it was declared the National Plant of Malta. The seaside shrub, a triplex thalamus is widely cultivated as a hedge. Attractive wild flowers, particularly French daffodil, *Narcissus gazette*, are often picked in large quantities to be sold. Others include branched asphodel, *Asphodels aestivalis* common pyramidal orchid, *Anacamptis pyramidalis* Mediterranean heath, *Erica multiflora* corn-flags, *Gladiolus* southern iris [9].

Pheasant's eye, *Adonis microcap*, has been driven to near extinction as a result of this practice. Also, leaves of the giant fennel, *Ferula communis*, are often used as greenery by florists. Human Influence on local Biodiversity the Maltese Islands were settled around by an agricultural pastoral society. The islands have been experiencing considerable, and at times intense, anthropic pressure ever since. The present population is of about with a population density of as the highest in open and is projected to reach by the year. Such a high population density is augmented further by tourist arrivals, which are currently about one million annually. Such a high population density creates a considerable stress on natural Biodiversity Conservation and Utilisation in the Maltese Islands. Habitats and their biota, and the islands' biodiverse risky are under threat and ever decreasing [10]. In fact, human influence is a key feature of the islands' ecology. Human activities have created a variety of habitats such as cultivated and abandoned fields, private and public gardens, road verges, and land cleared of the natural vegetation cover for a variety of purposes. Much of the land area is given either to agriculture or is built over

and only some of the land area can be described as undeveloped, although even this is greatly influenced by human activities.

## Conflict of Interest

None.

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