

MALTA INSIGHT HERITAGE GUIDES

# NATURE AT HAĠAR QIM HERITAGE PARK

*Qrendi*

JOHN J. BORG



## GLOSSARY

**ANNUAL** – a plant that lives for one season, and then seeds and dies  
**ANTENNA** – head appendage in certain arthropods used as a sensory function  
**APEX** – the tip of a plant part  
**BIODIVERSITY** – the diversity of living organisms  
**CALCAREOUS** – containing calcium carbonate, e.g. limestone  
**CORYMB** – short, broad, flat-topped inflorescence  
**DECIDUOUS** – leaves that wither and fall at the end of a season; a tree or shrub that sheds its leaves seasonally  
**ENDEMIC** – restricted to a certain geographic area

**HERBACEOUS** – stems not woody  
**HERMAPHRODITE** – an animal with both male and female sex organs on the same individual  
**INDIGENOUS** – native to a geographic area  
**OBTUSE** – rounded at the apex  
**PARASITE** – an organism which lives in or on another species.  
**PERENNIAL** – a plant living longer than two years  
**STAMEN** – the male organ of the flower  
**TEPALS** – used for sepals and petals when they cannot be distinguished

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JOHN J. BORG

PHOTOGRAPHY  
J.J. BORG & AARON TANTI



**HERITAGE BOOKS**

IN ASSOCIATION WITH

 Heritage Malta

## HOW TO GET THERE

**By Public Transport:** Bus Numbers 38 and 138 from Valletta main bus terminus and stop near Visitor Centre

**By car:** Main road leading to Żurrieq/Qrendi and follow the signs. Ample parking available next to the Visitor Centre.

**By open-top sightseeing buses:** Stop near Visitor Centre.

For further information on public transport please consult [www.dca.gov.mt](http://www.dca.gov.mt)

For further information on opening hours and entrance fees, please consult [www.heritgemalta.org](http://www.heritgemalta.org)



### Note on Safety:

Following events of precipitations, one must apply caution to slippery ground. Particular attention while walking along Nature Trail A, especially the area from Congreve's memorial and it-Torri tal-Hamrija (Tower) and along Nature Trail B in the area from the Misqa Tanks and Mhajdra Temple.

### Countryside Code:

- Enjoy the countryside and respect its life and work
- Guard against all risk of fire
- Leave all gates as you found them
- Keep your pets under close control
- Use gates and stiles to cross fences, hedges, and walls
- Take your litter home
- Help to keep all water clean
- Protect wildlife, plants and trees
- Take special care on country roads
- Make no unnecessary noise

### Acknowledgments:

There are many who in one way or another contributed towards the production of this guidebook and without mentioning any names, in the possibility of leaving out one or two, I just wish to say thanks to all. There are two persons that I must mention by name; a big thank you to Katya Stroud (Senior Curator of the Hagar Qim Heritage Park) and to Aaron Tanti for providing some of the photographs.

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*Insight Heritage Guides is a series of books intended to give an insight into aspects and sites of Malta's rich heritage, culture, and traditions.*

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## INTRODUCTION

Very near the village of Qrendi lies an area known as Tas-Sejjieħ, a stretch of land characterized by garrigue landscape and by its world-renowned structures: two megalithic temple complexes dating back 5000–6000 years (Stroud, 2010).

The original landscape in which these two structures were built must have had great significance to the temple architects and builders. A single cataclysmic event that occurred here must have had a huge and significant impact on the early Maltese: the collapse of the southern shoreline, the Magħlaq Fault, a geological event that downthrew a large portion of land into the Mediterranean, resulting in the spectacular seacliffs along the southern shoreline. In the millennia that followed, climate change, erosion, and human impacts all contributed to the paucity of flora and fauna present in the area today, especially when compared to earlier millennia, e.g. the Pleistocene.

The rugged south-eastern coast of Malta and Gozo is characterized by high limestone cliffs spanning almost uninterruptedly from Bengħisa Point all the way to San Dimitri Point in north-western Gozo. These cliffs offer a wide and uninterrupted view of the Mediterranean Sea, with very few

places where one can walk down to the sea, such as Żurrieq, Għar Lapsi, Gnejna, and Għajn Tuffieħa. In most areas, sea access is quite impossible unless one is prepared to scale down the sheer cliffs.

The cliffs and the marine environment play a very important role in the ecology of the area but, since the construction of the temples, the human impact on the surrounding area has also been well marked and the results are still evident today: uncontrolled access has resulted in footpaths criss-crossing the garrigue; man's attitude towards our feathered friends is evidenced by the numerous bird-trapping hides dotting the landscape; and two nearby hardstone quarries have left a huge scar on the garrigue (with no immediate plans whatsoever to rehabilitate the area).

Nevertheless, the Haġar Qim area provides a wide variety of plants and animals not to mention the geological and historical importance. This publication is intended to serve as a basic guide to the ecology of the Haġar Qim Heritage Park, and as a visual aid to the visitor taking any of the two nature trails set up in the area. This publication compliments the official archaeological guide to the area (Stroud 2010).





## THE NATURE TRAILS

Despite the small area of the park, there are two nature trails of different lengths. Both trails start at the Visitor Centre, and fall within the immediate confines of the park boundaries. In the course of identifying the best possible foot-paths, key biological species, and different habitats, one must note that no interventions or alterations which may damage the natural habitat were made. Wherever possible, existing paths have been used and, to avoid eyesores, information panels along the routes are practically at ground level. Along the longer route, two former bird-trapping hides have been converted into shelters from the elements for rambblers.

It is important to wear adequate footwear and proper attire according to the different seasons. Sudden storms may catch the unwary halfway through the trails, so keep note of any changes in the weather, increased clouds, or changing winds.



Meandering valley of Wied Babu





### Route A

The 60-minute walk starts from the left-hand junction some 130m from Mnajdra temples. It leads towards the Congreve Memorial, in front of the small island of Filfla and onto It-Torri tal-Famrija. Then it turns left uphill, runs alongside the boundary wall and ends near the Haġar Qim temples. The route is relatively easy and straightforward.

nature  
trail  
**A**

Estimated  
time:

**A**  
1hr

you  
start  
here

**H** Heritage Malta

Mapping Unit, Malta Environment and Planning Authority

### Route B

The 90-minute walk starts opposite the previous route and heads off towards the north. The first few hundred metres are characterized by garrigue habitat, and as one reaches the top of the hill a narrow path leads towards Il-Misqta tanks (a series of ancient rock-cut excavations that serve as water reservoirs). The route then passes through a disused hardstone quarry and along the west wall of Mnajdra, ending on the main causeway leading back up towards Haġar Qim.

nature  
trail  
**B**

Estimated  
time:

**B**  
1hr, 30min

you  
start  
here

**H** Heritage Malta

Mapping Unit, Malta Environment and Planning Authority



## GEOLOGY

The Maltese Islands, located in the centre of the Mediterranean, lie 90km south of Sicily and some 300km east of the Tunisian coastline. The archipelago is 45km long and is made up of Malta, Gozo, Kemmuna and a number of smaller islands and islets. The archipelago rises up to 253m above sea level along the Pantelleria Rift on the submarine shelf that extends from Sicily to Tunisia. The highest point is found along Dingli cliffs. The fault patterns of the islands are the result of tectonic movements by the European and African plates.

Malta is characterized by two main fault systems that represent the effect of two separate rifting episodes taking place in the vicinity of the archipelago. The older of the two fault systems is the Great Fault running south-west to north-east, while the younger Maghlaq Fault system runs approximately north-west to south-east. This fault is also responsible for the downthrow of the island of Filfla to sea level. North of the Great Fault, a horst-and-graben system (ridges and

valleys) developed.

The geological history of the Maltese Islands falls mainly in the lower and middle beds of the Tertiary system, known as the Oligo-Miocene. The stratigraphic deposition is composed of five main layers:

The **Lower Coralline Limestone** is the oldest outcropping rock formation of the islands. It is exposed up to a thickness of 140m along the vertical cliff-face at Xlendi (Gozo), while in Malta it is thickest (up to 100m) between Bnghisa and Fomm ir-Rih. This layer is composed of calcareous algae, foraminifera, and occasional coral. In most areas it is separated from the overlying Globigerina Limestone by a very distinct band of echinoids (sea urchins), primarily from the *Scutella* family. A well represented case of this layer is to be found at Dwejra (Gozo).

The main outcropping formation covering much of the central and southern Malta and Gozo is the **Globigerina Limestone**. This layer is not visible on Kemmuna and



The Maghlaq Fault and 'Slick-n-Slide' formation in the foreground



Kemmunnett and features little along the western and north-western hills of Malta and eastern Gozo. The thickness varies from 23m near Fort Chambray (Gozo) to about 207m at Marsaxlokk. Lithologically, this formation consists of yellow to pale grey, fine-grained limestone, almost all composed of the tests (skeletons) of globigerinid planktonic foraminiferans. Most of this layer was deposited in water at a depth of 40m to 150m. This formation provides the most extensive resource of good building and ornamental stone present on the islands.

The **Blue Clay** is found both on Malta and Gozo and its thickness varies from less than 20m south of Rabat up to 65m north of Fomm ir-Rih, while in Gozo its thickness increases to about 75m at Xaghra. It erodes rapidly when wet and forms taluses that flow onto the underlying rocks. This layer is composed of a series of soft blue to grey and yellow clay and marls with an abundance of selenite crystals. Fossils are mostly present along the upper horizons and include *Stephanophyllia*, *Flabellum*, *Balanophyllia*, and various species of molluscs, echinoids, and pteropods. Foraminifera are present throughout. Due to its impermeable composition, the **Blue Clay** is of great importance as it is responsible for the Upper Water Table and natural springs.

A layer that is missing from most localities throughout the archipelago is the **Green Sand**. This layer is composed of a red or yellow-red sandstone and contains abundant black or dark-green glauconitic grains. This layer is most extensive on Gozo with a thickness of 16m in the centre of the island; in contrast, at Dingli Cliffs it reaches a thickness of just 12m. Throughout the rest of

the islands it hardly exceeds 1m in thickness. This layer is highly porous and since it overlies the Blue Clay, it forms a vast underground reservoir for all the surface water percolating through the Upper Coralline Limestone. Fossil bivalves, sea urchins, and a host of other marine organisms abound in this layer.

The youngest rock formation of the Maltese archipelago is found on the top of the stratigraphic succession and is known as the **Upper Coralline Limestone**. It occurs mainly in the western part of Malta, around Rabat and Dingli, as well as in the north. The islands of Filfla, Kemmuna, and Kemmunnett are composed entirely of this rock. This layer reaches its maximum thickness of 162m in the Bingemma area, but in other areas it rarely exceeds 30m. The crust exhibits a toughened skin (*tufa* mantle) and is developed in the generally soft, porous, and much fissured rocks underneath. This is the result of groundwater which is drawn up to the surface during dry weather conditions and, on evaporating, deposits its dissolved content of lime carbonate in all the pores and minute cracks.

While all the above-mentioned rocks were deposited in a marine environment, the next formation, the **Quaternary** deposits, started forming after the islands emerged from the sea some 5 million years ago and are still operating today. The Quaternary is made up of two Epochs: the Pleistocene (2.5 million–10,000 y.a.) and the Holocene (10,000 y.a. to present). During this period, the climate was characterized by severe and rapid changes alternating between glacial and temperate periods. The Holocene epoch has been characterized with a warm climate.





## THE GEOLOGY AND QUATERNARY DEPOSITS OF THE HAĠAR QIM AREA

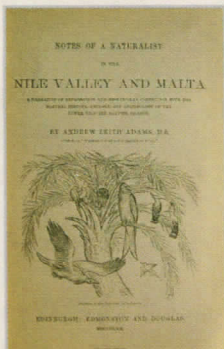
This particular stretch of land is composed of an interesting geological make-up. Three strata outcrop in this area as a result of the Magħlaq Fault system.

The Haġar Qim temple complex lies on top of the Globigerina formation while the Mnajdra temple complex, situated 500m lower down the hill, sits on the outcropping Lower Coralline Limestone. It is interesting to note that the main stone used in the construction of the two temple groups reflect the dominant rock formation on which they stand. It is evident – and understandable – that the temple builders avoided transporting the megaliths over long distances over rough terrain.

The Magħlaq Fault runs along the southwest coast of Malta and is visible

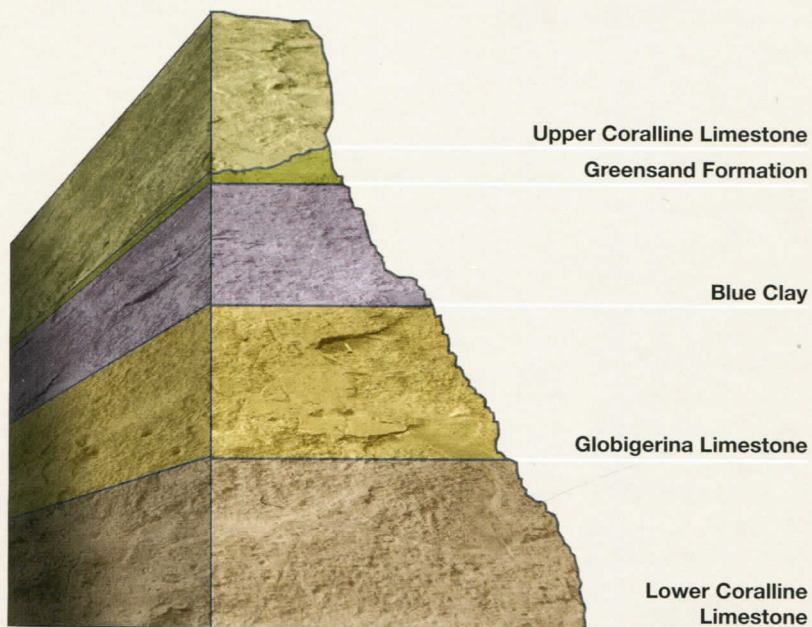
at the foot of the cliff right beneath Mnajdra. As a result of this major subsidence, the two rock strata that normally occur at the extreme ends of the 'layer-cake' here lie at the same level, with Lower Coralline Limestone on one side (the outer side) and Upper Coralline Limestone on the other.

In the Magħlaq region, there are four major Pleistocene surfaces along with fissures and caves, the latter destroyed by the quarry. These caves were excavated in 1858 by Admiral Thomas Spratt (1811–1888) and by Dr Andrew Leith Adams in 1861–1863 (Adams 1870). The caves yielded a vast and varied quantity of animal bones ranging from giant swans and dormice to pygmy elephants.



**Top: Frontispiece to A.L. Adams Book Above: Lithograph from A.L. Adams book highlighting the Magħlaq Fault and Caves**





### Palaeontologists who excavated in the area



**Thomas Abel Brimage Spratt** (11 May 1811 – 12 March 1888) was a vice-admiral in the Royal Navy, hydrographer, and geologist. He was born at Woodway House, East Teignmouth and was the eldest surviving son of Commander James Spratt, RN, who was a hero of the Battle of Trafalgar. He joined the Royal Navy at age 16 in 1827 and was attached to the surveying branch on HMS *Victory*. He was engaged almost continuously until 1863 in surveying the Mediterranean. As commander of the *Spitfire* he rendered distinguished service in the Black Sea during the Crimean War.

At an earlier date he was associated with Edward Forbes, then naturalist to the *Beacon*, and during the years 1841–1843 they made observations on the bathymetrical distribution of marine life. He was especially indebted to Forbes for his interest in natural history and geology. He was elected a Fellow of the Royal Society.

Spratt investigated the caves at Malta and obtained remains of the pygmy elephant (*Elephas melitensis*), which was described by Hugh Falconer. He also investigated the geology of several Greek islands, the shores of Asia Minor, and the Nile delta. He died at Tunbridge Wells on 12 March 1888.



**Andrew Leith Adams** was the son of Francis Adams (1796–1861), a surgeon, and Espeth Shaw. He studied medicine and joined as an army physician in 1848, serving in the 22nd Infantry Regiment in India. Between 1849 and 1854 he was posted in Dagshai, Rawalpindi, and Peshawar. He also served in Kashmir, Egypt, Malta (1861–1868), Gibraltar, and Canada.

He spent his spare time studying the natural history of these countries where he discovered various quaternary deposits as well as writing about the present fauna of these countries. His major contribution in relation to the Maltese Islands came in 1870 when he published *Notes of a Naturalist in the Nile Valley and Malta*.

After his retirement from the army in 1873, Adams was professor of natural history at Trinity College, Dublin, and Queen's College, Cork. He was elected a fellow of the Geographical Society in 1870 a fellow of the Royal Society of Edinburgh in 1872, and Fellow of the Royal Society in 1873. He died of a pulmonary haemorrhage on 29 July 1883 at Rushbrook Villa (Cork).

He is commemorated in the genus of the Pleistocene giant dormouse of Malta and Sicily *Leithia melitensis* and *Leithia cartei*. In 1868 Leith Adams described the very large form of giant dormouse from the Maghlaq cave as *Myoxus melitensis* and the smaller form as *Myoxus cartei*. Late, Richard Lydekker assigned the two species to a new genus, named *Leithia* in honour of Leith Adams in 1895.



### Filfla (Trail A)

Sitting offshore and lonely on a carpet of blue Mediterranean Sea is Filfla. This tiny island once formed part of the mainland, but a geological fault brought it to its present insularity. Filfla has an area of 2.5ha, and a circumference of nearly 800m. The 60m cliffs end abruptly in a plateau. The islet is composed almost entirely of Upper Coralline Limestone, with Blue Clay exposed in some areas.

Over the past 200 years, Filfla has undergone a lot of changes in its contours, but not only from natural erosion: for more than a century, British and, later, NATO forces bombed the island from land, sea, and air. From the air, the islet resembles an aircraft carrier and this made it ideal for target practice. Following several years of protests by the Żurrieq Civic Council and BirdLife Malta, bombing on Filfla was finally stopped in 1971.

It has been established that the name Filfla is derived from *filfel*, the Arabic word for pepper seed. It is probable that the islet resembled a pepper seed in shape, or perhaps pepper shrubs used to grow on it in bygone days.

A small chapel dedicated to the Assumption of Our Lady was built inside a small cave in 1343. Every Sunday, mass was held for fisher folk. The cave was destroyed in 1856 after an earthquake rocked the Maltese Islands, and bombing obliterated any remaining traces.

Isolated from the mainland, Filfla holds a unique ecosystem. A number of endemic species of flora and fauna thrive there. Filfla is barren of trees, but a variety of shrubs and other plants occur. The Shrubby Seablite *Suaeda vera* is the dominant plant, while a large variety of leek *Allium* sp. grows profusely on the top part. Capers and other salt resistant plants complete the flora of the island.

**Below: Unexploded bombs on Filfla Island**  
**Bottom: The south side of Filfla**





Insect life occurs on Filfla and these include species of ants, flies, beetles and moths, spiders and scorpions are also present. A top snail *Helicella spratti* var. *despotti* is endemic to Filfla, while species of cricket and a darkling beetle that live on the island have a very limited distribution on the other islands.

Filfla also supports a number of vertebrates. The island hosts the nominate race of the Maltese Wall Lizard *Podarcis filfolensis filfolensis* which is larger than the races found on the other islands. It is black with various blue and green spots. The Moorish Gecko *Tarentola mauretanicus* and Turkish Gecko *Hemidactylus turcicus* are also present.

Three species of seabirds breed on Filfla. The largest is the Yellow-Legged Gull *Larus michahellis* (Gawwija Prima), of which about 200 pairs nest, mainly on the flat top of the island. About 80–100 pairs of Scopoli's Shearwater *Calonectris diomedea* (Ċiefa) also breed as well as an estimated 5000–8000 pairs of European Storm-petrels *Hydrobates pelagicus melitensis* (Kangū ta' Filfla – the largest known colony of this bird in the Mediterranean. The shearwaters and storm-petrel are pelagic, spending most of their lives out at sea and coming ashore only to breed, and they do this under cover of darkness. Until the late 1970s, the Yelkouan Shearwater *Puffinus yelkouan* (Garnija) also nested on Filfla.

Filfla was declared a nature reserve in 1980 and it was identified as an Important Bird Area of International Importance, a Site of Scientific Importance and a Specially Protected Area. Filfla, is listed as a site of international importance under the Ramsar Convention and is an EU Natura 2000 site.

Filfla is a strict nature reserve and landing on it is only granted to scientists for research purposes.

### Congreve Memorial (Trail A)

Sir Walter Norris Congreve (1862–1927) was born in Chatham, Kent and educated at Harrow School and Pembroke College, Oxford. From 1924 to 1927 he served as Governor of Malta, where he was respected by Maltese and foreigners alike. When Sir Walter passed away at Mtarfa Naval Hospital, the population mourned him and no fewer than 20,000 paid their last respects as he lay in state in St Paul's Anglican Cathedral in Valletta. Malta had lost not a governor, but a friend. At his request, Congreve was buried at sea in the channel between the coast and Filfla. From Ħaġar Qim, his widow, Lady Cecilia, and their son Lieutenant-Commander Geoffrey Congreve witnessed the burial, conducted from HMS *Chrysanthemum*. A small stone memorial was erected on the cliff between It-Torri tal-Ħamrija and Mnajdra; the channel between Malta and Filfla is unofficially known as Congreve Channel.

### It-Torri tal-Ħamrija (Trail A)

This two-storey structure perched on the south-eastern cliff is one of 13 coastal towers built by Grand Master Martin de Redin. Built in 1658, this tower guarded part of a low-lying stretch of coastline that was vulnerable to pirate incursions. Like most of Malta's buildings, soft Globigerina Limestone was used for its construction. After many years of neglect, the tower has in recent years been restored to its former glory.



Congreve's memorial

It-Torri tal-Ħamrija



### **Bird-trapping hides (all trails)**

Much of the bird trapping activities are concentrated on the garrigue areas. Large tracts of land have been levelled and cleared to accommodate trapping nets. The use of herbicides to control weeds in the trapping sites scars the land, destroys native vegetation and inhibits the proliferation of insects, which are an important food source for many birds. The whole set-up serves only one purpose: to catch songbirds, like Common Chaffinch *Fringilla coelebs* (*Sponsun*), Greenfinch, and Linnet *Carduelis cannabina* (*gojjin*). Incoming migrating finches are first attracted to a trapping site by the calls of captive birds kept in small cages set up around the trapping site. The trapper then pulls a series of strings attached to harnessed decoys, causing them to flutter, which draws the wild birds towards the middle of the trapping site. When several birds have settled on the ground, the trapper pulls two clapnets shut, trapping the birds. The caught birds are kept in cages as songbirds, or traded with other trappers to use as decoys to trap more birds. With no more trapping, the area

should attract more birds to spend more time feeding and resting before resuming their journey. Moreover, reverting of trapping sites to natural habitat should lead to an increase in ground-nesting species such as Short-toed Larks, not to mention the recolonization of the area by natural vegetation.

### **Bird Shooting**

The area is still very much frequented by bird shooters who roam the whole area from before sunrise to well after sunset. Some hunters are accompanied by their dogs, which are used to flush ground-dwelling species like Common Quail *Coturnix coturnix* and Woodcock *Scolopax rusticola* (*Gallina*). The irresponsible behaviour of some of these hunters leaves little chance for any medium-to-large species to breed in the area.

In the autumn of 2014, the Government opened the trapping season between 20 October and 31 December 2014, both dates included. Although trapping had to be carried out on registered land, some attempts at re-establishing trapping sites within the Heritage Park were noted.



**Bird trapping hides**



## FLORA

This section covers living organisms of the plant kingdom, including lichens and vascular plants. The Maltese Islands are host to over 1,000 species of flowering plants, as well as numerous lichens and mosses.

### Lichens

#### Karst Cladonia *Cladonia convoluta* *Kladonja tax-Xaghri*

Looks like shredded leaves, pale milky green from above and white or yellowish white coloured underneath. Grows on soil pockets that accumulate in rocky depressions in garrigue and steppe habitat. Common.



### Flowering Plants

#### Fig *Ficus carica* *Sigra tat-Tin*

A small- to medium-sized (up to 10m) deciduous tree with large, thick fleshy finger-like leaves. The minute flowers are encased in the fruit and the latter has a tiny hole at the larger end, from



which a species of wasp enters and pollinates the flowers. The fruit varies in form from round to pear-shaped, and in colour from yellow to dark violet. Common.

#### Red Campion *Silene colorata* *Lsien l-Ghasfur*

Annual. Flowers pink in lax clusters of 1–4. Grows on fallow ground, roadsides and on garrigue, usually mixes with other species such as Chamomile. Flowers November to June. Common.



#### Caper *Capparis orientalis* *Kappara*

Leaves thick and rounded. Flowers (50–70mm) white with purple, from May. The flower buds are the edible capers, hand-picked, and pickled. Grows in maquis, garrigue, cliff sides, and even fortifications. Salt-tolerant and widespread in the Mediterranean. Common.





**Blue Stonecrop *Sedum caeruleum***  
**Beżżul il-Baqra**

Annual. Ground-hugging with small, deep-red, bulbous eaves. Flowers small with (usually) seven petals. Common on rocky ground, especially garrigue, prefers small dried-up rock pools, which it covers soon after the rainy season. Flowers March to June.

**Carob *Ceratonia siliqua***  
**Siġra tal-Harrub**

An east Mediterranean species, probably introduced into Malta by the Arabs in the 9th or 10th century. An evergreen tree, present in most habitats, including garrigue. In autumn, male trees produce strong-smelling flowers while in late spring and summer the females produces the fruit pod. Common.



**Crimson Pea *Lathyrus clymenum***  
**Ġilbiena tas-Serp**

Annual. Flowers crimson or purple-red, washed with violet. Pod brown, 30–70mm long. Grows on steppe, arable land, and garrigue. Flowers March to May. Common.



**Mediterranean Kidney Vetch**  
***Anthyllis vulneraria ssp. maura***  
**Silla tal-Blat**

Low tufted hairy perennial, lower leaves with a single leaflet, upper with 7-13, elliptical, calyx 14-17mm. Flowers purple, open in spring. Grows on steppe and garrigue. Spread from Portugal to North Africa, Italy, Sicily and Malta. Frequent.



**Cape Sorrel *Oxalis pes-caprae***  
**Inġliża**

Annual with profuse tubular lemon-yellow flowers. Introduced alien from South Africa, now common throughout the Mediterranean. Grows in a variety of habitats, including garrigue. A variety of this plant is also found in this area, with double petals and flowers sometimes lined red. Very common.



**Maltese spurge *Euphorbia melitensis***  
**Tengħud tax-Xaġhri**

Endemic perennial shrub, growing over 1m in height. Flowers are yellow and blossom in early spring. Grows in garrigue, and where it occurs it is



usually the dominant shrub. Secretes white liquid that can cause skin irritation. Protected. Frequent.



**Prickly Pear *Opuntia ficus-indica*  
Bajtar tax-Xewk**

Large shrubby plant, with wide prickly disc-like branches, and leaves reduced to spines. Produces large flowers of different shades and colours. A Caribbean species, introduced into the Mediterranean region – including the Maltese Islands – probably for its sweet fruit. Naturalized in a variety of habitats including garrigue. Common.



**Fennel *Foeniculum vulgare* Bużbież**  
Perennial, grows up to 3m high. Forms yellow umbrella-shaped flowerheads, leaves feathery and thread-like. Grows in waysides, disturbed land, fallow ground, and garrigue.

**Mediterranean Heath *Erica multiflora* Erika**

Evergreen shrub, erect or ascending, very branched, grows up to 1m in height. Leaves are linear, flowers are pinkish, narrow bell-shaped.

Flowers from November to April. Grows on rocky slopes, coastal cliffs, and garrigue, where it is usually the dominant shrub. Frequent to common.

**Wolfbane *Periploca angustifolia*  
Siġra tal-Harir**

Small erect shrub, up to 1.5m. Leaves linear and narrow at base, obtuse at apex. Flowers in small corymbs, greenish in the outside, pods resembling horns, seeds furnished with silk for wind dispersal, hence its Maltese name *Siġra tal-Harir* (= the silk tree). Flowers in spring and autumn. Found on garrigue, maquis, and coastal cliffs. Scarce, but seems to be spreading due to the decrease of goat grazing. Rare in Gozo.

**Mallow Bindweed *Convolvulus althaeoides* Leblieb tax-Xagħri**

Trailing perennial with a slender creeping rootstock, grows on ground level, up to 1m. Lower leaves heart-shaped to kidney-shaped, upper leaves deeply lobed. Flowers (30–50mm) deep pink. Prefers dry fields, steppe and garrigue. Flowers mid-April to June. Common in Malta.

**Field Bindweed *Convolvulus arvensis*  
Leblieb tar-Raba'**

Creeper (up to 2m), slightly hairy. Leaves arrow-shaped to oblong, stalked. Flowers (15–30mm) white or pink with white strips, solitary or paired, weakly scented. Flowers April



**Cose-up of  
Mediterranean Heath**



**Mallow Bindweed**



**Fennel**



to September. Grows in scrub, fallow land, and garrigue. Very common in Malta.

**Olive-leaved bindweed *Convolvulus oleifolius* Leblieb tal-Blat**

Small shrub up to 50cm, with thread-like leaves. Flowers white or pink from spring to autumn. Grows on garrigue, especially coastal ones. Restricted to southern Greece, Cyprus, Crete, Aegean Islands, and Malta, its westernmost limit. Frequent.



its boiled leaves, when drunk, helped relieve urinary problems. Common.

**Olive-leaved Germander *Teucrium fruticans* Żebbuġija**

Rather spreading, very branched, woody shrub, to 1m. Leaves oval, untoothed, resembling the olive, hence the Maltese name *żebbuġija* (= olive-like). Flowers whitish or lilac, present from January to June. Grows in maquis, garrigue, and coastal evergreen thickets. Common.



**Dodder**

**Dodder *Cuscuta epithymum* Pittma**

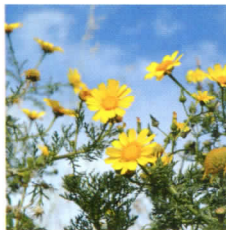
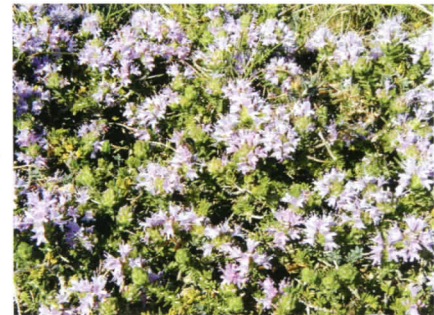
Parasitic, forming thick mat of thin, red, thread-like stems that suffocate various species of low-growing plants, including Mediterranean Thyme, spurges and Sea Squill *Urginea pancration* (Għansar). Flowers minute, white or pink. Common.

**Mediterranean Thyme *Coridothymus capitatus* Saġhtar**

Low (up to 50cm) Aromatic shrub, densely branched with erect or ascending stems. Flowers purplish, borne in clusters. Grows profusely on garrigue, and bee-keepers move their hives to areas where it grows. Flowers mainly in summer. Protected. Common in Malta.

**Borage *Borago officinalis* Fidoqqom**

Low-growing annual. Star-shaped flowers are bright blue with white centre. Grows on fallow ground and garrigue. Formerly used in folk medicine, where its flowers, when boiled, helped ease cough, whereas



**Crown Daisy**



**Crown Daisy *Glebionis coronaria* Lellux**

Annual. Flowerheads (30–60mm) pale yellow on long stems. Grows on



disturbed, cultivated or fallow ground, seashores, and garrigue. Flowers from December to June. Very common.

**Boar Thistle *Galactites tomentosa*  
Xewk Abjad**

A low-lying thistle, occasionally growing up to 1m in height. Annual. Flowerheads white. Usually solitary but also in branched clusters. Found on dry ground, fallow land, and garrigue. Flowers April to July. Very common.



**Wild Artichoke *Cynara cardunculus*  
Qaqoċ tax-Xewk**

Up to 1m high. Perennial plant bearing thick, toothed leaves, edged with yellow spines. Flowerhead violet-purple. Grows in disturbed land, roadsides, clay-slopes, and garrigue. Common.



**Maltese Rock Centaury  
*Chierolophus crassifolius* Widnet  
il-Baħar**

Endemic, with fleshy leaves shaped like a spoon. Flowers in late spring and early summer, flowers are dark pink, borne on long stalks. In the

wild, confined to the south and south-western cliffs. Locally common. Malta's national plant. Protected.

**Branched Asphodel *Asphodelus  
aestivus* Berwieq**

Herbaceous perennial, grows up to 1m in height. Flowers (20–30mm) star-shaped, white, petals with pinkish brown mid-vein; flowers in winter. Found on rocky slopes, steppes, and garrigue. In some years it is almost absent but in good years it dominates the vegetation.



**Sicilian Squill *Scilla sicula* Ghansar  
Ikħal**

Bulbous perennial. Leaves broad and hairy white. Flowers light blue. Known only from Malta, Sicily, and Calabria, but most common in Malta, where it may eventually become confined. Can be confused with *Scilla peruviana*. Grows in maquis and garrigue. Scarce.



Sicilian Squill

**Southern Star of Bethlehem  
*Ornithogalum narbonense* Halib it-  
Tajr Żghir**

Medium perennial with long pyramidal many-flowered spike of



Rock Centaury –  
Malta's national plant



20–50 rather small (16–26mm) milky white flowers; tepals have green stripe. Flowers from April to June. Mostly found in steppe and garrigue. Widespread in the Mediterranean. Frequent.

**Large Star of Bethlehem**  
*Ornithogalum arabicum* Halib it-Tajr Kbir

Stout bulbous perennial with basal leaves. Leaves 7–8, plain green. Flowers (30–50mm) white or cream, with central violet-black ovary, tepals broad, forming a bowl-shape. Grows in cultivated and fallow tracts and garrigue. Portugal, North Africa eastwards to the Balkans (not Crete) and Palestine. Flowers in April and May. Frequent, formerly common but depleted due to harvesting for trade.



Present in many Mediterranean countries. Common.

**Sand Crocus** *Romulea ramiflora*  
Żaġħfran tal-Blat

Bulb, growing purple-lilac flowers (7–10mm) with yellow throat. Flowers February to April. Found in coastal habitats, bare sandy or grassy, marshy ground, and garrigue. Common. A similar species which prefers more humid areas – the Maltese Sand-crocus *Romulea melitensis* (Żaġħfran tal-Blat Malti) – is endemic to Malta.



**Barbary Nut Iris**

**Barbary Nut Iris** *Gynandriris sisyrinchium* Fjurdulis Salvagġ  
Perennial. Usually single-leaved. Flowers bluish lilac. Grows on fallow ground, scrub and garrigue. Flowering period is from February to May, the flowers opening around midday and closing in the evening. Common.

**Field Gladiolus** *Gladiolus italicus*  
Habb il-Qamħ

Medium to tall perennial. Flowers pinkish purple, lower three tepals with pinkish spear-shaped masks. Flowers in spring, around April–May. Grows in arable land (particularly cereal fields), waysides, and garrigue.

**Maltese Pyramidal Orchid**  
*Anacamptis urvilleana* Orkida  
Piramidali ta' Malta

Occurs from March to early May and grows on rocky ground. Flowers are pale pink to white in dense heads. Endemic. One of more than 30 species of orchids that occur in the Maltese Islands. Frequent.





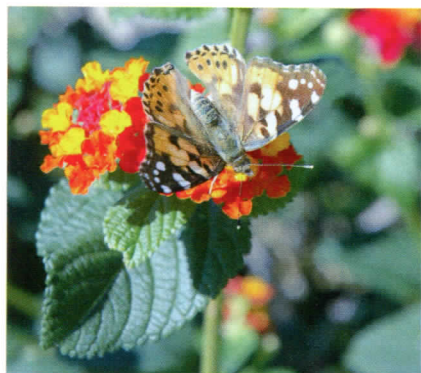
## FAUNA

### Insects

Insect life is abundant especially from late spring to early winter. The garrigue supports populations of a variety of grasshoppers, crickets, beetles, and bugs. Butterflies are represented by the Painted Lady and Red Admiral among others and in the evening several species of moths take flight. In summer the dominant sound in the Maltese countryside is undoubtedly that of the Cicada – a shrill, continuous stridulation that starts as soon as the sun warms up and continues throughout the day.

#### Painted Lady *Vanessa cardui* Farfett tax-Xewk

Upper wings pink when fresh but soon turn orange. Both fore- and hindwings are patterned black, with white markings on forewings. Females lay on a variety of plants, especially thistles. Very common, sometimes migrates in very large numbers. Most evident in spring and autumn.



Swallowtail *Papilio machaon melitensis* Farfett tal-Fejġel  
One of the largest butterflies in Malta. Wings yellow with black veins, purplish blue edge and two red spots on the hindwing. Females usually lay on Fennel *Foeniculum vulgare*

and produces two broods each year. Frequent, formerly very common.

#### Spurge Hawkmoth *Hyles sammuti* Bahrija tat-Tenghud

Large and impressive, with typical hawkmoth streamlined shape. Mainly nocturnal, occasionally seen by day. Lays on spurges (*Euphorbia*), which are the larva's foodplant; larva also large and colourful. Resident and endemic, only recently described as new to science. Rather common. One of about 700 species of moths in the Maltese Islands.



#### Maltese Ruby Tiger Moth *Phragmatobia fuliginosa melitensis* Rubin

This reddish moth is on the wing in autumn from late September to mid-November. The Maltese race is endemic. Common.

#### Churchyard Beetle *Blaps gigas* Hanfusa tal-Kantina

Large, black and shiny. Flightless and walks rather clumsily. Occurs in caves and other damp habitats, also cliff ledges, and crevices. Feeds on vegetable matter, and secretes a foul-smelling oily substance when threatened. Common and widespread.

#### Egyptian Grasshopper *Anacridium aegyptium* Ġurat tar-Raba'

Large, uniform grey-brown (nymphs



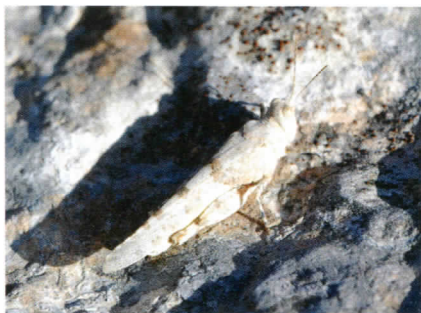
Swallow-tailed  
Butterfly



Churchyard Beetle



bright green), shaped like locust. Females larger than males. Occurs in garrigue, gardens, and most countryside. A fast and agile flier. Common. On some days can be very common, but scarce on other days.



**Two-spotted Field Cricket**

**Two-spotted Field Cricket *Gryllus bimaculatus* Grillu**

Males have golden-brown forewings, paler at base with 'scribbled' markings. Females are black all over with two whitish spots at base of forewing. Occurs near agricultural land, usually nocturnal, but may also be seen by day. Its stridulating song can be heard at night from June to October. Common.



**Praying mantis**

**Praying Mantis *Mantis religiosa* Debba tax-Xitan Kbir**

Long and slender with a body length of 50–70mm, with a long neck ending in a mobile head with powerful jaws. Females usually green or brown. Found on shrubs. A ferocious predator, ambushing its insect prey by lying motionless with its barbed forelegs folded in 'praying' position. After mating, females usually eat their partners. Frequent but well camouflaged.



**Cicada**

**Cicada *Cicada orni* Werżieq ta' Bi Nhar**

Looks like an enormous fly, body dark brown with reddish brown markings on thorax and between the

abdominal segments; wings clear but many-veined. Males attract females by producing a persistent shrill call produced by vibrating membranes on each side of the body – undoubtedly the sound of Maltese summer months! Spends most of its life – up to seven years – underground in nymph form, and emerges to mate and breed. Very common in summer.

**Scarlet Darter *Crocothemis erythraea* Mazzarell Skarlat**

Males deep red all over, including head and eyes; females and immatures are yellowish brown. Occurs most of the year, especially near bodies of water such as pools and small reservoirs. Common, also migratory. Often seen along path from Haġar Qim to Mnajdra.



**Large Carpenter Bee *Xylocopa violacea* Bomblu Iswed**

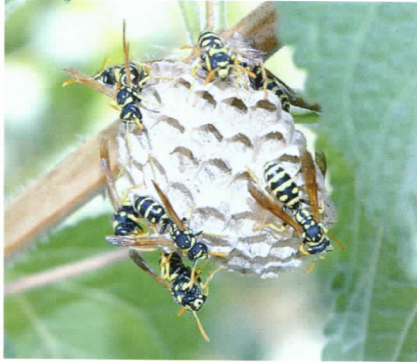
Large, black and hairy, with blue-violet metallic sheen on wings. Our largest bee. Frequents many habitats including open spaces. Often seen hovering over the flowers of Wild Artichoke. Nests in hollow stalks, solitary. Common.

**Common Paper Wasp *Polistes omissus* Żunżan tax-Xehda**

Has narrow waist, hairless abdomen and black-and-yellow pattern. Builds umbrella-shaped nests in the shade of shrubs or rocks. Aggressively defends



nest against intruders. Active as soon as sun warms up. Very common, sometimes forming large colonies in undisturbed areas.



**Garrigue Woodlouse *Chaetophiloscia elongata*** Hanžir l-Art tax-Xaġhri  
One of a few species of woodlice that do not roll into a ball when threatened. Prefers humid pockets in garrigue and maquis habitats. Very common.



**Green Vegetable Bug *Nezara viridula*** Spallut Aħdar  
Large, uniformly green bug, with several stages of growth, all differently patterned. Found on all sorts of plants, wild as well as cultivated. Sometimes considered a pest on potatoes. Common.

**White-spotted Barbary Bug *Oxythyrea funesta*** Busuf tat-Tikek Bojod  
Small, covered with hair, often seen in the middle of flowers, feeds on wild

and cultivated plants where it eats away the pulp. Very common.



## Snails

**Edible Snail *Cantareus aspersus*** Ġħakrux Raġel  
Somewhat large (shell diameter up to 40mm) with a large round mouth. Shell colour is brown, marbled with grey and black becoming paler towards centre; animal is grey-brown. Hermaphrodite, despite Maltese name. Emerges in large numbers soon after first autumn rains, when many are collected for the table. Very common and widespread in various habitats.



Goat's Snail

**Goat Snail *Cantareus apertus*** Mogħża  
Usually medium-sized, shell olive green, animal black. Present in garrigue habitats where it shelters among fleshy leaves of Sea Squill *Urginea pancration*. Feeds on grasses and other vegetable matter. Hermaphrodite. Common.

**Red-banded Snail *Eobania vermiculata*** Ġħakrux Mara  
Shell diameter up to 25mm, round from above but flattened on the sides as is the mouth. Frequents all sort of habitats, especially cultivated land and garrigue. In summer,



Red-banded Snail



aestivates by moving up tall plants and fences to escape the hot ground air. Hermaphrodite, despite Maltese name. Very common and widespread.

**Decollated Shell *Rumina decollata*  
Trajbu**

Shell cylindrical, in adults usually broken at tip, juveniles have round-ended tip. Normally hides under stones and boulders as well as in soil. Common.

**Reptiles**

This group of animals have in general adapted to a dry environment. Their bodies are covered in scales, impermeable to water, therefore, unlike amphibians they breathe through lungs. Reptiles regulate their body temperature through exposure to the sun. That is why most reptiles are active by day, although some (like geckoes) are most active at night. In summer, reptiles generally avoid the midday sun and are mostly active in the early morning and late afternoons. During cold spells they seek refuge underground or in a deep cavity in walls and cliff faces. Reptiles in Malta are active all year round. It is only during the short cold winter that they become lethargic, and even then they often venture out during sunny spells. Most reptiles lay eggs, either under stones, in the soil, or among vegetation. When they hatch, the young are a miniature replica of the adults. In some species, such as the skink, the young hatch while still inside their mother, and are then given birth.



**Maltese Wall Lizard  
(*P.f. filfolensis*)**



**Ocellated Skink**

**Ocellated Skink *Chalcides ocellatus*  
Xahmet l-Art**

Feeds on a variety of insects and snails and occurs on all the main islands.

On sunny days often basks on rubble walls. Main predators are cats, weasel, hedgehog, snakes, and predatory birds. Produces 4-10 young in the period July to September. Common.

**Mediterranean Chameleon  
*Chamaeleo chamaeleon* Kamaleonte**



An arboreal lizard with excellent camouflage. The chameleon's long, sticky and lightning-fast tongue is specially adapted for catching insects and other

prey at long range. Males have their own territories that often include females, and defend these spaces fairly vigorously. Apparently introduced to Malta from North Africa around 1880 by Jesuit priests who released them in a private garden in San Ġiljan, from where the species has spread (with human aid) to Gozo and Kemmuna. Frequent. In many Mediterranean countries, the occurrence of this species seems to coincide with Phoenician settlements from about 1000BC.

**Moorish Geckoe *Tarentola mauritanica* Wiżġha tal-Kampanja**

Largish (up to 15 cm) and bulky. Has well-developed claws on only the third and fourth fingers. Solitary, spends day usually hidden in crevices and under stones, although regularly basks throughout the day. At night, hunts small insects and other arthropods especially near a light source. Males defend their territories aggressively, making squeaking noises during fights. Like other geckoes, sheds tail if threatened or handled



roughly. Common. Native to Western Mediterranean region of Europe, and North Africa.



**Turkish Gecko *Hemidactylus turcicus* Wizġha tad-Djar**

Smaller (up to 12cm) and less bulky than Moorish. Inhabits similar areas to Moorish and even shares the same places including stone walls, tree trunks, ruins, and dwellings. Nocturnal in hunting habits, but occasionally basks in the sun. Breeding takes place from April to July. The small, white, soft-shelled eggs are normally deposited in cracks in walls, under rocks and in soil. Common.



**Maltese Wall Lizard, *Podarcis filfolensis maltensis* Gremxula**

Up to 28cm. Males generally greenish with profuse black markings; females



brownish and smaller. Prefers rocky environments, but also urban areas and gardens, where it can scurry between rock, rubble, debris, and buildings. Very common. Three other races occur: *P.f. kieselbachi* on Selmunett, *P.f. generalensis* on Il-Ġebbla tal-Ġeneral and the nominate *P.f. filfolensis* on Filfla.

**Western Whip Snake *Hierophis viridiflavus* Serp Iswed**

Largest (up to 150cm) and most common snake. All black (young greenish brown) but pale below. Occurs in dry places along valley sides, cliffs, maquis, and open rocky ground. Feeds on lizards, mice, shrews, young birds, smaller snakes, frogs, and large insects. Non-venomous and harmless to humans. The only snake found on all three main islands. Common.



**Western Whip Snake**

**Leopard snake *Zamenis situla* Lifġha**

Up to 1m. Pale with dark or reddish brown and black patches. Diet consists mainly of young birds, lizards, geckoes, frogs, mice, young rats, and small snakes. Recorded only on mainland Malta. Common, but not often seen.



**Birds**

The ornithological calendar is split between migration, breeding, and wintering seasons. In Malta, some 400 species of birds have been recorded.



## Breeding seabirds on Filfla and nearby cliffs



Mediterranean Storm-petrel

### Seabirds: Procellariiformes

These pelagic seabirds belonging to the albatross family range in size from the tiny Storm-petrels to the massive Wandering albatross. These birds are characterized by their tubular nostrils protruding on the upper mandible, hence their popular name of 'tube-noses'. Four species are known to breed in the Mediterranean of which three breed in the Maltese Islands. The Maltese Islands support large and internationally important colonies of these seabirds. All the sea-cliffs as well as the offshore island of Filfla have been identified as Important Bird Areas (IBAs) at International level and now form part of the EU NATURA 2000 Framework.



Scopoli's Shearwater

### Scopoli's Shearwater *Calonectris diomedea* Ciefa

A common breeding visitor from February to October with smaller numbers seen offshore from November to January. Breeds on rocky offshore islands and along high seacliffs. Spends the day out at sea and visits land after nightfall. Their eerie wailing cries echo along the cliffs during the breeding season when the adult birds return to their nesting sites. Good numbers are frequently seen in the afternoon while flying offshore, forms large rafts (compact group of swimming birds) consisting of several hundred birds.



Yelkouan Shearwater

### Yelkouan Shearwater *Puffinus yelkouan* Garnija

Darker and smaller than the preceding species, the Yelkouan Shearwater visits the breeding colonies from October to July. The largest concentrations are found along the north-eastern coast of Malta but smaller numbers breed along the southern cliffs. Formerly it also bred

on Filfla Island. Like all members of the Procellariiformes, it lays a single egg each year. The egg is laid in late February and the young hatches in late April. Fledging takes place from the end of May to mid-June, sometimes to late June.

### Mediterranean Storm-petrel *Hydrobates pelagicus melitensis* Kangu ta' Filfla

The smallest of the tube-noses. This sparrow sized seabird braves the stormiest of seas and is almost resident around the Maltese Islands. Common but localized breeder. The largest breeding colony in the Mediterranean is located on Filfla with an estimated population of 5,000–8,000 breeding pairs. In former years it was believed to nest only on Filfla hence its Maltese name. In recent years it was found breeding in three other localities in Malta and Gozo. Habits similar to those of its larger cousins but breeding cycle is less synchronized. The nesting sites are characterized by a strong oily odour emitted by the birds.

### Yellow-legged Gull *Larus michahellis* Gawwija Prima

The Yellow-legged Gull is the largest breeding bird in the Maltese Islands. Unlike the shearwaters and storm-petrel this gull is a diurnal species, therefore active during the day. A population of about 200 pairs nests annually on Filfla while smaller numbers breed along the Dingli Cliffs in Malta and the southern cliffs of Gozo. Two to four eggs are laid and the young abandon the colonies by June. The young birds are brown in colour and it takes up to four years for them to reach maturity with a coat of white and grey feathers. Numbers are augmented during the winter months with birds from the north coming down to spend the winter in milder temperatures.



### Breeding Birds

Twenty species breed regularly, 10 of which are year-round residents, while the other 10 are summer breeding visitors. Seven species have been recorded breeding in the park area.

### Breeding Birds in the park

#### Short-toed Lark *Calandrella brachydactyla* Bilbla

Small (14–16cm), sand-coloured, blends well with habitat. Occurs in open country, especially agricultural land and garrigue. Summer resident, present from March to October. Sings from March to the end of July in short sequences of bubbly notes, usually given in flight. Nests (twice in a season) on ground in the shade of shrub or large rock, clutch size 3-5 eggs, incubation 13 days, chicks fledge after 10 days. Formerly very common, but disappeared from many areas in recent decades. Declining. Protected.



#### Blue Rock Thrush *Monticola solitarius* Merrill

Medium size (21–23cm). Male dark blue and black, female dark brown with mottling. Occurs on rocky coasts, especially cliffs, often perches on tops of walls, ruins and rural buildings. Year-round resident. Feeds on small reptiles, snails, and large insects. Song fluty and melodious. Nests (twice

in a season) in crevices and derelict country buildings. Clutch size 4–5 eggs, incubation 13 days, chicks fledge after 14 days. In autumn, young often disperse inland. Protected. The national bird of Malta. Frequent.

#### Zitting Cisticola *Cisticola juncidis* Bufula tal-Imrewħa

Smallest (10–11cm) breeding bird. Largely sandy-coloured. Favourite habitat open agricultural land and valleys with long grass. Feeds in insects and arachnids. Year-round resident. Song (January–July) is a persistent *tsipp...tsipp...tsipp* usually delivered in undulating flight. Bottle-shaped nest is built of spider-web and thin grass, and woven around stalks and leaves in grass or short shrubs. Clutch size 6–8 eggs. Male polygamous. Common. Protected.



#### Sardinian Warbler *Sylvia melanocephala* Bufula Sewda

Small (13–14cm), male with black head, female with grey head. Occurs in gardens and urban areas, but



Blue Rock Thrush (male)



Spanish Sparrow  
(male)

also, maquis, and field edges with vegetation. Very active. Call is a sharp *tch-tssh-tssh-tssh* scolding, often from exposed perch, especially on approach of intruder. Males highly territorial. Feeds on insects and berries. Year-round resident. Nests (two to three times in a season) mostly from March onward. Clutch size 3–4 eggs, incubation 13 days, chicks fledge after 12 days. Common. Protected.

**Spectacled Warbler *Sylvia conspicillata*** *Bufula hamra*

Small (12–13cm). Resembles Sardinian, but cap always grey, with brownish (not grey) back and wings; females drabber than males. Occurs in open country with scattered low shrubs. Forages for insects and other invertebrates among low-lying vegetation. Call is short, low trill. Year-round resident. Males highly territorial, often seen chasing other males off. Breeding starts from late February. Nest is a neat cup made of vegetation and animal hair, built in low shrubs. Clutch size is 3–5 eggs, incubation 12 days and chicks fledge after 12 days. Formerly common, suffered drastic decline in the 1980s. Protected.



Spanish Sparrow *Passer hispaniolensis* *Ghasfur tal-Bejt*  
Small (14–16cm) and chunky, with chocolate brown crown and large



Spanish Sparrow  
(female)

black big. Occurs in most habitats, including (abundantly) in urban areas and human habitation, feeding on scraps and litter, but also seeds, fruit, and invertebrates. Call is a loud and varied series of chirps. Year-round resident, breeding starts in February. Nest is an untidy affair, built in trees, buildings, pylons, broken drainpipes, caves, etc. and, more recently, even in the framework of the temple coverings. Up to four broods raised in a season. In late summer, congregate in large flocks – sometimes several thousand strong – to roost communally in large trees. Very common. Protected.

**Wintering Birds**

The open spaces and sparse vegetation of the park offer ideal habitat for several wintering species such as larks, pipits, chats, and warblers. A small number of Sky Lark *Alauda arvensis* (*Alwetta*) overwinter, but are invariably decimated by the strong concentration of hunting activity in the area. Meadow Pipits *Anthus pratensis* are present throughout the winter months, as are Robins, Common Stonechats *Saxicola torquata* (*Bucaqq tax-Xitwa*), Black Redstarts *Phoenicurus ochrurus* (*Fjamma Sewda*),





Song Thrushes *Turdus philomelos* (Malvizz), and other thrushes, and several warblers.

**Common Chiffchaff *Phylloscopus collybita* Vjolin tax-Xitwa**

A common to very common winter visitor from October to March (September–May). Observed singly or in small groups near waterholes and around shrubs and small trees. Feeds on insects as well as on pollen. Greenish-brown upper-parts with dirty white underparts. The characteristic *zilp-zalp-zilp-zalp* call can be frequently heard during sunny days.

**Common Starling *Sturnus vulgaris* Sturnell**

A very common winter visitor from October to March. Forms large feeding flocks, sometimes of several hundred at feeding areas, and at roosting sites. Frequently seen perched on electricity cables and other suspended wires. In winter, adult birds are almost completely black but in spring small white spots cover the entire body.

**Meadow Pipit *Anthus pratensis* Pespus**

A common autumn and winter visitor from October to March. Often forms small flocks before nightfall. Frequent in garrigue habitat. Its characteristic *ps-us-us* whistling call can be heard when flushed from the ground or when flying overhead.



**Robin *Erithacus rubecula* Pitirross**

A very common autumn migrant and winter visitor from September to April. Highly territorial, with males continuously singing or calling to advertise their presence. Its orange breast renders this bird one of the easiest birds to identify.



**Spring and Autumn Migrants**

During migration most birds are encountered outside their normal preferred habitats, e.g. species preferring woodland may be encountered in open areas and vice-versa. The Hağar Qim area is well known as a place for observing migrating herons and raptors such as harriers which are frequently seen flying low in the area. The open grounds are ideal for Short-eared Owls, Stone-curlew, and Common Quail, as well as small passerines such as wheatears, chats, and warblers. Finches too are frequent in these parts, as the many trapping sites amply show, during the passage seasons. This being a coastal area, there is a greater chance of spotting birds, as most migrating birds tend to hug the coastline, and adverse weather conditions often force them to land.



**Cetti's Warbler (young bird)**

**Herons and Egrets (Rsieset u Agretti)**

Passage migrants. Ten species of herons and egrets recorded. Grey



Common Kestrel  
(male)

**Heron** *Ardea cinerea* (Russet Griž), **Night Heron** *Nycticorax nycticorax* (Kwakka) and **Little Egret** *Egretta garzetta* (Agrett Abjad) are the most frequently seen. Flocks of herons and egrets are seen flying along the coast or offshore during spring and autumn. Sometimes large V-shaped flocks are seen over park.



#### Raptors (Tajr tal-Priza)

Passage migrants. About 30 species of raptors recorded. Some of the common species in spring and autumn are **Marsh Harrier** *Circus aeruginosus* (Baghdan Ahmar) and the **Honey buzzard** *Pernis apivorus* (Kuċċarda). Both species can be seen in singles or small flocks but sometimes up to 100+, especially in the late afternoon when they are searching for a roosting site.



#### Common Kestrel *Falco tinnunculus* Spanjulett

Common spring and autumn migrant and scarce breeding visitor. Some overwinter where, if left alone, may breed the following spring. Often hovers over fields and garrigue in search of prey which includes small rodents, lizards and large insects. May also be seen perched on pylons and rocky outcrops.

#### Common Quail *Coturnix coturnix* Summiena

A few pairs attempt to breed each year but most are shot as soon as the spring hunting season opens. Ground nester; breeding starts in mid- to late February. Young birds leave nest soon after hatching and venture in search of food with parents. Seen mostly when flushed from hiding. Male's characteristic *wek-ti-pot...wek-ti-pot* call can be heard in the early morning. Formerly a regular breeding bird.

#### Stone Curlew *Burhinus oedicephalus* Tellerita

A bird of open spaces, and breeds on the ground. Medium-sized but difficult to spot due to cryptic coloration. Has characteristic whistling call, usually heard at dawn and dusk. Regular passage visitor. Formerly bred (up to the early 20th century) but hunting, human pressure and habitat destruction led to its extinction as a breeding bird.

#### Golden Plover *Pluvialis apricaria* Pluviera

Frequent autumn and winter visitor from October to March. Migrates during the night but frequently seen by day. Present also on garrigue and steppe habitats. One of numerous waders that occur.





**Short-eared Owl *Asio flammeus*  
Kokka tax-Xagħri**

Frequent spring and autumn migrant, found mainly in garrigue habitats. Unlike other owls, it prefers to sit on the ground and hides among thickets of grass. One of four species of owl that regularly occur. Formerly bred.



**Scops Owl *Otus scops* Kokka**

A spring and summer migrant with single birds overwintering. Spends most of the day sleeping among branches and leaves of Carobs and other trees. Preys on large insects such as beetles and crickets. Sometimes flushed from roost site when approached. Its monotonous

whistling call can sometimes be heard at twilight in spring and autumn. Frequent.

**Turtle Dove *Streptopelia turtur*  
Gamiema**

Regular spring and autumn migrant, scarce breeder. Migrates predominantly at night and in the early morning hours, often seen flying across the countryside. Much more numerous. Much sought after by hunters.



**Common Swift *Apus apus* Rundun**

Common passage migrant from March to October, and scarce breeder. Sometimes seen in huge flocks. Spends all the time on the wing (even sleeping), landing only to nest. In recent years some pairs started breeding

**Bee-eater *Merops apiaster* Qerd in-Naħal**

Regular passage migrant in spring and autumn. Very colourful and highly vociferous, more often heard first before seen. In September, flocks can be seen from the park area. Has increased in recent years, and occasionally bred.



**Common Swift**

**Northern Wheatear *Oenanthe oenanthe* Kuda**

Common passage migrant. White rump and upper tail highly conspicuous when in flight. Frequents open spaces like garrigue and steppe habitats. Stands very upright, on top of a stone or rubble walls.



**Black-eared Wheatear *Oenanthe hispanica* Kuda Dumnikana**

Regular spring and autumn migrant. Resembles Northern but lacks grey on back and has more black on face. A bird of open spaces. The boulder scree in the area provide ideal nesting habitat for this bird. One pair nested in 1982 at Ta' Huta but female was shot by hunters.

**Greenfinch *Carduelis chloris* Verdun**

Common passage migrant from October to March. Migrates in medium to large flocks along the coast. Some overwinter, and occasionally to breed. Much sought after by trappers and bird fanciers for its distinctive call.

**Yellow-legged Gull**





## MAMMALS

The Maltese Islands are host to about 20 species of terrestrial mammals, half of which are bats, and the rest largely introduced by man. Bats, with their ability to fly, have been present in the Maltese Islands since at least the late Pleistocene (ca. 250,000 y.a.) as demonstrated by bone remains from Għar Dalam and other Quaternary sites. Since then, our terrestrial fauna has changed a lot; the pygmy elephants and hippopotamuses that once roamed the Maltese Islands have long become extinct. The same happened to the deer, bears, wolves, and foxes.

### Algerian Hedgehog *Atelex algericus* Qanfad

Present in many habitats. Mainly active at night but occasionally seen during the day. Hides among rubble or in vegetation. Two colour phases occur: a light form and a dark form. Feeds on snails, slugs, birds' eggs, and small vertebrates. Introduced from North Africa. Common.



### Pygmy White-toothed Shrew *Suncus etruscus* Buggedum Żgħir

Smallest European mammal and one of the smallest in the world. Resembles small grey mouse but has long snout, totally different from that of rodents. Spends most of the time

in hiding but continuously searches for food, which includes small invertebrates. Goes into torpidity when temperature falls, but awakens when temperature rises, sometimes fatally if it finds no food. Young 'caravan', i.e. they move about by holding each other's tail, with the first attached to its mother's. Common.

### Lesser Horseshoe Bat *Rhinolophus hipposideros* Rinolofu Żgħir,

The smallest representative of the horseshoe bat family. Roosts in caves and in human habitations. Active after sunset, when it preys on beetles and other invertebrates. Hunts low over the ground frequently in the shelter of a wall or thick vegetation. Roosts by hanging freely from the ceiling and envelopes its body with its wings. Common.



Lesser Horse-shoe Bat

### Maghrebian Bat *Myotis punicus* Vespertin tal-Magreb

One of our largest bats (wing span >30cm) Roosts in caves and in human habitations. Flies low over the ground in search of beetles, moths and crickets. Common. Formerly, more common, but numbers declined since the 1980s. Used to form large colonies, some of 200+ individuals, but now 30-40 are more the norm.





**Soprano  
Pipistrelle**

**Soprano Pipistrelle** *Pipistrellus pygmaeus* **Pipistrell**  
Small (wing span 180–240mm), frequenting urban as well as rural areas. Active all year round, mostly nocturnal but sometimes flying while the sun is still over the horizon. Preys on small insects such as mosquitoes and midges. Common. Three other pipistrelle species occur: **Common Pipistrelle** *Pipistrellus pipistrellus* (*Pipistrell Komuni*), **Kuhl's Pipistrelle** *Pipistrellus kuhli*, (*Pipistrell ta' Kuhl*), and **Savi's Pipistrelle** *Hypsugo savii* (*Pipistrelle ta' Savi*). All share similar habits and habitats.



nocturnal but sometimes seen by day chasing rodents among rubble and boulder scree, as well as over the megaliths at Mnajdra. The only carnivore that occurs. Rare. Absent from Gozo and Kemma. Protected.

**Wood Mouse** *Apodemus sylvaticus*  
**Ġurdien tar-Raba'**

Very similar to the more common House Mouse, but has larger eyes and ears. Upper fur brown with yellowish tinge, silvery grey underneath. Found mainly in rural areas, but also encountered in suburban habitats. Active mainly at night. Not common.

**Brown Rat** *Rattus norvegicus* **Far tal-Kampanja**

Present in many habitats, especially near human habitations where it occurs in cellars, sewers, refuse tips, and any other site that can provide shelter and food. Sometimes reaches pest proportions. Mainly nocturnal but frequently seen during daytime. Very aggressive towards siblings and towards the smaller Black Rat. Communicates verbally through squeaks and squeals. Very common.



**Black Rat** *Rattus rattus* **Far Iswed**  
Smaller, more slender, and often darker than Brown Rat. Primarily an urban species but also present in

Ye



**Grey Long-eared  
Bat**

**Grey Long-eared Bat** *Plecotus austriacus* **Buwidna Griz**  
Very long ears – almost as long as body – distinguish it from all other similar-sized bats. Roosts in caves and human habitations. Flies from very low close to the ground to very high altitudes. Gleans insects off rocks or leaves. Flies soon after sunset. Present in many habitats. Common. Protected.

**Weasel** *Mustela nivalis* **Ballottra**  
Preys largely on mice and rats but can take rabbits and young birds. Primarily





other habitats including garrigue and seacliffs. Nocturnal, preys on all sorts of edible material including seeds, fruits, and vegetable matter. May have 3–5 litters each year with up to 16 young in each litter. Young can breed at three months old. Very common.



**Western House Mouse** *Mus domesticus* Ġurdien tal-iMramma

Frequents all types of habitats, especially where food and shelter is readily available. The House Mouse feeds on a wide variety of matter, mostly grain and seed, but also paper and plastics. Causes damage to stored food. Mostly active at night but frequently seen by day as well. Breeds all year round and may produce up to 10 litters each year with up to six young

in each litter. At six weeks old, the young are able to breed. Very common.

**Wild Rabbit** *Oryctolagus cuniculus*  
Fenek Selvaġġ

Largest wild land mammal. Long ears and familiar shape distinctive. Occurs in two colour morphs: brown or grey. Mainly active in early morning and late afternoon, although in spring may be seen throughout day. Habitat is open countryside, including garrigue. Piles of small round brown droppings are a tell-tale sign of rabbit presence in the area. Males polygamous. Females can produce up to 12 young in each litter. Probably introduced from Spain by the Arabs in 9th or 10th century, or possibly earlier by the Romans. Hunted from June to December. Common, very common in some areas.

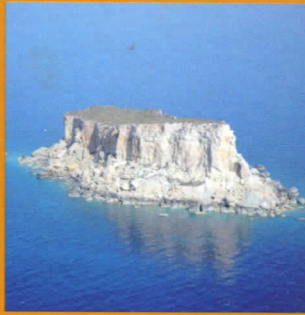


**Wild Rabbit**

**Cetaceans** – the sea between Malta and Filfla is very rich in marine life and while most fish remain ‘hidden’ beneath the surface, it is not rare to see small dolphins and other cetaceans swimming and jumping out of the water. Common and Bottle-nosed Dolphins as well as some species of whales are seen offshore sometimes within a few metres from the coast.



**Common Dolphin**



VERY NEAR THE VILLAGE OF QRENDI LIES AN AREA KNOWN AS TAS-SEJJIEH, A STRETCH OF LAND CHARACTERISED BY GARRIGUE LANDSCAPE AND BY ITS WORLD-RENOWNED STRUCTURES: TWO MEGALITHIC TEMPLE COMPLEXES DATING BACK 5000-6000 YEARS. THE ORIGINAL LANDSCAPE IN WHICH THESE TWO STRUCTURES WERE BUILT MUST HAVE HAD GREAT SIGNIFICANCE TO THE TEMPLE ARCHITECTS AND BUILDERS. IN THE MILLENNIA THAT FOLLOWED, CLIMATE CHANGE, EROSION AND HUMAN IMPACTS ALL CONTRIBUTED TO THE PAUCITY OF FLORA AND FAUNA PRESENT IN THE AREA TODAY.

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