

# Chapter 7

## Dioramas in Natural History Museum—Tools for Nature Conservation

John J. Borg

### 1 Introduction

The art of “reproducing” nature has for long been a substantial part of museum displays. These settings, or as they are more popularly known as dioramas may depict actual locations or fictitious scenes and can vary in size from small showcases to large and impressive setups. The topic varies according to the themes represented. In our case the setting is a natural one. This form of displaying nature found in many natural history museums, has always attracted the attention of the lay person as well as students. In 2004 the National Museum of Natural History, housed in an eighteenth Century Magisterial Palace in the old walled city of Mdina, embarked on an educational program by building and presenting a set of dioramas highlighting local ecosystems. Devoid of large tracts of woodland or open bodies of water, Maltese people are under the impression that Malta is devoid of wildlife. Although bombarded with natural history documentaries aired on foreign television stations, showing wild and exotic animals, there is an acute lack of local productions and this highlights the misconception that Malta is devoid of wildlife. The Natural History museum through its education program is tackling this issue. First and foremost through interactive programs and secondly through the diorama setup.

### 2 Presentation

Six local themes were chosen including a cliff habitat, rural courtyard, agriculture, steep valley, beach habitat, and night time near the fortifications. Added to these are three smaller displays, one highlighting a seabird colony in the North Atlantic, a North African desert scene and the last showing an array of oriental passerine species. The latter three displays measure  $1 \times 1 \times 2$  m while the former ones measure approximately  $2 \times 3 \times 2$  m.

---

J. J. Borg (✉)

National Museum of Natural History, Vilhena Palace, Mdina, Malta  
e-mail: john.j.borg@gov.mt

© Springer Science+Business Media Dordrecht 2015  
S. D. Tunnicliffe, A. Scheerso (eds.), *Natural History Dioramas*,  
DOI 10.1007/978-94-017-9496-1\_7

## 2.1 *Maltese Habitats*

1. **Coastal Cliffs** The coastal cliffs are the least disturbed habitat in the Maltese Islands and so provide a unique and ideal habitat for a diversity of species. Cliffs are one of the most important ecosystems in the Maltese Islands and in respect of this, most cliff areas in the Maltese Archipelago have been afforded legal protection and form part of the European Union's Natura 2000 network of protected sites. In this diorama highlights the importance of cliffs for breeding seabirds mainly though the flag species; Scopoli's Shearwater *Calonectris diomedea*. Several migrant bird species such as the Glossy Ibis *Plegadis falcinellus*, Squacco Herons *Ardeola ralloides* and Little Egret *Egretta garzetta* watch out for any small fish swimming on the surface of the water while wading birds such as the Turnstone *Arenaria interpres* and Common Sandpiper *Actitis hypoleucos* search for minute invertebrates that cling to the rocks. A watchful Kingfisher *Alcedo atthis* present in the Maltese islands from July to April patiently waits on a rock for any passing fish. Beneath the ripples of the water one can see a small variety of marine organisms.
2. **Rural Back Yard** Nature is found even in our back garden. The Spanish Sparrow *Passer hispaniolensis* is the most common bird species and a pair of Sparrow built a nest in the ventilator above the door (Fig. 7.1). White Wagtails *Motacilla alba*, Common Chiffchaffs *Phylloscopus collybita* and Black Redstarts *Phoenicurus ochrurus* are some of the winter bird species. The cultivated everlasting has attracted a number of Large White Butterflies *Pieris brassicae* while grasshoppers are actively mating on the wall of the yard. One of the world's smallest mammals the Etruscan Shrew *Suncus etruscus* chases a tiny beetle across the path while the Moorish Gecko *Tarentola mauritanica* is on the lookout for any unwary insect.
3. **Fields and Rubble Walls** *Fields and rubble walls* provide an ideal habitat for a wide variety of floral and faunal species. The Almond tree offers shelter for a number of birds like the European Bee-eater *Merops apiaster*, Golden Oriole *Oriolus oriolus* and Cuckoo *Cuculus canorus* (Fig. 7.2). The introduced *Chameleon* Chamaleo chameleon is firmly clinging to the branches. A large Algerian Hedgehog *Atelerix algirus* sniffs for some snails while a small flock of Yellow Wagtails *Motacilla flava* is feeding in the field. The cryptic feathering of the Woodcock *Scolopax rusticola* provides the bird with ideal camouflage capabilities. The Wild Rabbit *Oryctolagus cuniculus* is the largest wild mammal in the Maltese Islands and it is not infrequent to see this animal grazing in fields early in the morning or late evening. Watch out for the Ocellated Skink *Calchides ocellatus* sunbathing on the rocks.
4. **Valleys** Deep valleys especially those containing water throughout much of the year are real wildlife sanctuaries. Painted Frogs *Discoglossus pictus* and some water birds such as the Jack Snipe *Lymnocyptes minimus* can be found in the lower parts of the valley near water (Fig. 7.3). Along the valley walls one finds a variety of landsnails and other wildlife. The Blue Rock Thrush

**Fig. 7.1** Maltese courtyard diorama



**Fig. 7.2** Maltese fields diorama (stone wall)



*Monticola solitarius*, our National Bird, is a resident species and frequents such valleys as well as seacliffs. Migrating birds such as Alpine Swifts *Apus melba* and Common Kestrel *Falco tinnunculus* may also be observed here. A Brown Rat *Rattus norvegicus* is attacking a nesting Rock Dove *Columba livia* while

**Fig. 7.3** Maltese valley diorama



various species of land snails are fixed to the valley walls. One Edible Snail *Cantareus aspersus* has also managed to climb on the glass viewing pane.

5. **Beaches** To us humans beaches are a place of relaxation during the hot summer months. But beaches are more than that. They offer food and shelter to large numbers of animal lifeforms, including migratory birds such as gulls and wading birds. A pair of Kentish Plovers *Charadrius alexandrinus* are combing the beach for any invertebrates as is a Greenshank *Tringa nebularia* perched on a small rock. On the beach one can also find dead or remains of sea creatures that have been washed ashore by the rushing waves. A wrecked fishing boat provides a perch to an adult Yellow-legged Gull *Larus michahellis* and a Teal *Anas crecca* flies overhead.
6. **Nocturnal Wildlife (Mdina Bastions)** Our bastions and fortifications are not only cultural icons but provide a refuge to our wildlife. The very rare Barn Owl *Tyto alba* has built a nest in a crevice in the walls and our largest bat species the Maghrebian Bat *Myotis punicus* is flying about in the shelter of the bastions while a lone Grey Long-eared Bat *Plecotus austriacus* is being watched by an adult Night Heron *Nycticorax nycticorax*. Nightjars *Caprimulgus europaeus* are active during the night as are most of our mammals and male Weasel *Mus-*

*tela nivalis* is chasing a Brown Rat over a small mound of rubble. Most insects are also nocturnal and some of the most interesting are the large Hawk Moths *Hyles sammuti*, two are clinging onto the bastion walls.

## 2.2 *Smaller Displays*

*Seabirds of the Northern Hemisphere* This diorama displays coastal cliffs in the north Atlantic. Here one can see the variety of seabird species that nest colonially on the ledges and inside burrows of these sheer cliffs. The most dominant species is the Northern Gannet *Morus bassanus*. The white and black plumaged adult male keeps watch over its nesting site. On the ledges below one finds different species from the auk family, such as the Common Guillemot *Uria aalge*, Brunnich's Guillemot *Uria lomvia*, Black Guillemot *Cepphus grylle*, Razorbill *Alca torda* and Atlantic Puffin *Fratercula arctica*, the latter species nesting inside small burrows.

*Birds of the North African Desert* North Africa is very rich in wildlife and birds are plentiful. The Lanner Falcon is one of the top predators in the avian world and a juvenile male forms the centerpiece of this small display. In the bushes and on the sand one finds diverse and unique species such as the North African endemic Moussier's Redstart *Phoenicurus moussieri*. The Dupont's Lark *Chersophilus duponti*, Rufous-tailed Scrub Robin *Cercotrichas galactotes* and Southern Grey Shrike *Lanius meridionalis* complete this display.

*Tropical Bird Species* Tropical birds are amongst the most colourful and spectacular animals. Parrots, lorikeets and leafbirds have colour combinations that dazzle the eyes. This small display highlights some of these species. Lorikeets, Rosella's, Green Magpies, and Oriental White-eyes are displayed.

**Why no labels?** The majority of the Maltese people are unaware of the natural richness that these islands host. Nature for many is something to exploit and even today it is not infrequent to find children collecting frogs and tadpoles, cutting wild plants and catching butterflies, chameleons and hedgehogs. The catching and killing of wild birds is still common occurrence as is the total disregard to nature and everything natural. Therefore the main aim of these displays was to introduce nature to children and adults as well as to entice them to observe the natural world and all its wonders. So, these dioramas serve as an educational tool in nature conservation and appreciation. The setup of each display highlights a local ecosystem and familiar localities were chosen so visitors could easily identify each locality depicted. One fundamental issue in this area is that the dioramas are devoid of any labels or information panels. During organized visits, participants are invited to list the animals and plants they observe in the displays and then, with the help of museum staff they go through each display and see which species have been missed. From such an exercise we could also identify the difference between visitors coming from urban areas with those originating from rural areas. Museum staff also helps visitors to place in perspective to their natural surroundings the various animals present in the display.

Another environmental issue addressed by these dioramas is the need to maintain a clean and therefore healthy environment. Much to our dismay and in spite of the numerous educational campaigns, one still finds rubbish being dumped in the countryside. In one of the dioramas (Bastions at Night) an empty food tin was placed and the boulder scree and interestingly enough it immediately create a reaction from the local visitors. Here we take the opportunity to elucidate the need for a garbage free environment.

With such an interest in dioramas and their value as educational tools, in the coming months the museum will be enhancing its displays with a number of micro-dioramas highlighting life in the undergrowth.

**John J. Borg** joined the ranks of the Museums Department in 1992 where he spent most of the time assisting the curator of Geology and Palaeontology at Ghar Dalam Cave and museum. In 2001 he moved from Ghar Dalam to the National Museum of Natural History taking charge of the biological collections. An ecologist by training John focuses his research on seabird biology and the ecology of micro mammals, particularly bats. Results from his research have been published in local and foreign peer reviewed journals. Apart from the natural history aspect he is also interested in the history of the subject, especially Maltese naturalists of the nineteenth and early twentieth Century. John is the Senior Curator of the Natural History Section of Heritage Malta responsible for the National Museum of Natural History, Ghar Dalam and the Gozo Nature Museum.