



World Heritage Sites

Protected Areas and World Heritage



GULF OF PORTO: CALANCHE OF PIANA, GULF OF GIROLATA, SCANDOLA RESERVE FRANCE

This nature reserve on the west coast of Corsica is centred on the Gulfs of Porto and Girolata between the craggy Scandola peninsula to the north and the turrets of the Calanche of Piana to the south. The vegetation is an outstanding example of Mediterranean maquis. Seagulls, cormorants and ospreys abound. The clear waters, their islets and inaccessible caves, harbour a rich marine life which includes a huge range of algae.

COUNTRY

France

NAME

Gulf of Porto: Calanche of Piana, Gulf of Girolata, Scandola Reserve

NATURAL WORLD HERITAGE SITE

1983: Inscribed on the World Heritage List under Natural Criterion viii.
1994: Inscribed additionally under Natural Criteria vii and x.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE [pending]

IUCN MANAGEMENT CATEGORY

V Protected Landscape

BIOGEOGRAPHICAL PROVINCE

Mediterranean Sclerophyll (2.17.07)

GEOGRAPHICAL LOCATION

The site lies along the northwestern coast of Corsica including the Scandola (Elbo) peninsula and the Gulfs of Girolata and Porto, between 42°14'N to 42°25'N, by 8°37'E to 9°00'E.

DATES AND HISTORY OF ESTABLISHMENT

- 1943: The Calanche of Piana declared a *Site Classé*;
- 1949: The Gulf of Girolata declared a *Site Classé*;
- 1957-61: The Gulf of Porto declared a *Site Classé*;
- 1972: Corsica Regional Natural Park (350,510 ha) established by decree, including the Gulfs of Girolata and Porto and the Scandola peninsula;
- 1976: The Gulfs of Girolata and Porto gazetted a *Zone de Protection Spéciale*;
- 1979: Scandola Nature Reserve gazetted by Ministerial Decree 75-1128;
- 1986: Scandola Nature Reserve awarded the European Diploma for Protected Areas by the Council of Europe; re-awarded in 1990 and 1995.

LAND TENURE

Ownership is mainly communal, although some sections of Scandola Reserve are in state and private ownership. Located in the communes of Osani (Scandola), Ota, Partinello, Piana, Serriera and Galleria. Administered by the Parcs Naturels under the Ministry of the Environment (MoE)

AREA

World Heritage Site 11,800 ha: 7,600 ha (terrestrial); 4,200 ha (marine).
Scandola Nature Reserve 1,919 ha: 919 ha (terrestrial); 1,000 ha (marine).
The Reserve is adjoined on the north by the Vallée du Fango UNESCO MAB Biosphere Reserve.

ALTITUDE

-100m to 619m (Monte Senino).

PHYSICAL FEATURES

Three great ridges, the Elbo peninsula, Capo Senino and Capo Rosso divide the area into three distinct areas: the coast between Punta Stollo and Punta Muchillina, including the peninsula of Scandola; the Gulf of Girolata from Punta Scandola to Capo d'Osani on Cape Senino; and the Gulf of Porto from Capo Senino to Punta Bianca plus its southern coast to Capo Rosso including the *calanche* below Piano. These are all contained within the Corsica Regional National Park, which covers much of the central massif of the island and comes to the sea only here and two shorter coastlines. It is part of the huge geological complex of the Corsican mountains that underwent two cycles of volcanic activity in the Permian period which bequeathed to the site andesitic lavas from the Lower Permian, ignimbrites and rhyolite from the Upper Permian and pillars of basalt, though some ancient metamorphic rocks also remain. In the Tertiary the area was subject to folding and cycles of rejuvenation and erosion. The Calanche coast of drowned ravines is of eroded granite. The livid, sheer and jagged cliffs of the coast contain many grottos and are flanked by numerous stacks, islets and coves such as the Anse de Tuara, almost inaccessible except from the sea. There are also some alluvial wetlands. The coastline is famous for its orange-red cliffs and craggy headlands up to 900 metres high, sheltered sand beaches, and the coves and serrated red ochre pinnacles of the *calanche* of the Piano coast, all much eroded by storms (MoE, n.d.).

CLIMATE

The climate is typically Mediterranean with hot dry summers, mild rainy winters and an average annual temperature of between 14°-17°C. The prevailing winds are the *libecciu* or *mezzogiorno* with the *ponente* from the south and southwest, and the *maestrale* (mistral) a northwesterly from the Rhône valley which can be sudden and violent, is dry in summer and moist in winter (MoE, n.d.).

VEGETATION

The natural vegetation is Mediterranean dry forest. The coastal plains are part of the Tyrrhenian-Adriatic sclerophyllous and mixed forest ecoregion, of forests and woodlands of evergreen oaks, chiefly holm and cork oaks *Quercus ilex* and *Q. suber*, with maritime, Corsican, stone and Aleppo pines *Pinus pinaster*, *P. nigra laricio*, *Pinus pinea* and *P. halepensis*. Typical Mediterranean *Olea-Lentiscus* maquis vegetation grows on the more gentle slopes. This is succeeded by arborescent seaspurge *Euphorbia dendroides* at about 200m. Holm oaks edge this, but many oak woods have been cleared. The coastal area around Scandola has open cliff-top grass swards and tall maquis degraded by past fires or ancient pasture. It is dominated by myrtle *Myrtus communis*, strawberry tree *Arbutus unedo*, *Phillyrea media*, *P. angustifolia*; and submediterranean maquis with tree heath *Erica arborea* and rockrose *Cistus* species such as *Cistus salvifolius*, *C. albidus*, *C. creticus* and *C. monspeliensis*. The rare endemic *Armeria soleirolii* grows on the coastal cliffs with tree spurge *Euphorbia dendroides* and Phoenician juniper *Juniperus phoenicea*.

The littoral zone is dominated by samphire *Crithmum maritimum* and sea lavender *Statice articulata*. All the 450 species of marine algae known in this part of the Mediterranean are found, including *Halimeda tuna* and several species such as red algae unrecorded anywhere else in France. Because of the highly transparent waters, meadows of the sublittoral neptune grass *Posidonia oceanica* as deep as 35m, the calcareous alga *Lithophyllum tortuosum* where the substrate is rocky, and spectacular coralligenous concretions, can be found over quite large areas (MoE, n.d.).

FAUNA

Scandola Nature Reserve contains a rich resident and migrant fauna including the uncommon European free-tailed bat *Tadarida teniotis*. The avifauna includes cliff-breeding colonies of yellow-legged gull *Larus cachinnans* (1,200-2,000), Audouin's gull *L. audouinii* (2 pairs), Cory's shearwater *Calonectris diomedea*, Manx shearwater *Puffinus puffinus* and several dozen pairs of shag *Phalacrocorax aristotelis desmarestii* (50-270 pairs); peregrine *Falco peregrinus* (10-15 pairs) (Heath & Evans, 2000) and (in 1997) the only nesting colony in France of osprey *Pandion haliaetus* (3-4 pairs). Golden eagle *Aquila chrysaetos* and lammergeier *Gypaetus barbatus* occur in the neighboring forested mountains. There are numerous species of snakes, lizards and geckos. The bottlenose dolphin *Tursiops truncatus* is seen in the surrounding seas. The Mediterranean monk seal *Monachus monachus* (CR) once had a colony near Galeria but it has now disappeared.

The marine fauna contains a wide range of littoral and sublittoral invertebrates, including spiny lobster *Palinurus elephas*, the giant Mediterranean limpet *Patella ferruginea*, blue limpet *Patella caerulea*, sponges, ascidians, gorgonians *Eunicella singularis* and *Paramuricea clavata*, and the precious Mediterranean red coral *Corallium rubrum*. The strong currents offshore attract a large number of pelagic fish. These include the dusky and golden groupers *Epinephelus marginatus* (EN) and *E. costae*, dentex bream *Dentex dentex*, saddle bream *Oblada melanura*, weakfish *Corvina nigra*, saupe *Sarpa salpa*, the seabreams *Diplodus vulgaris*, *D. sargus* and *D. cervinus*, mullet *Mullus surmuletus* and marine goldfish *Anthias anthias*.

CONSERVATION VALUE

The Reserve with the massive and little degraded Scandola peninsula which is being rehabilitated, provides an outstanding and scenic example of Mediterranean maquis, key cliff sites for osprey and bearded vultures and a very rich marine fauna. The Park lies within a Conservation International-designated Conservation Hotspot, a WWF Global 200 Eco-region and a WWF/IUCN Centre of Plant Diversity.

CULTURAL HERITAGE

Corsica has been settled and disputed over for millennia. There are the sites of prehistoric pastoralists, of a Roman port near Porto, and several low circular coastal forts built in the 16th and 17th centuries during the 250-year long Genoese occupation which are now notable elements of Corsican culture. Four have been restored including the watchtowers at Elbo and Porto. The island has been French since 1798 but preserves a determinedly Corsican character. The area conserves traditional agriculture and grazing which used to include transhumance from the mountain pastures in winter.

LOCAL HUMAN POPULATION

There are several small villages or hamlets within the site: Girolata, accessible only by boat or footpath, Osani, Curzo and Partinello on the main west coast road (route 81), and the small town of Porto, outside but surrounded by, the Reserve. Since the turn of the century the area has been depopulated except for the villages along the main road and many of the terraces around the villages have been abandoned (MoE, n.d.).

VISITORS AND VISITOR FACILITIES

An estimated 30,000 people visited Scandola each year in the 1980s (SPARAC, 1987). Porto is very popular and its Magazinu de Porto is the main centre for information and for exhibitions for the Corsica Regional Natural Park of which the site is a small part. There are hiking circuits though much of the actual coast cannot be reached on foot and Scandola is closed to tourism. Viewing the coast from the sea is popular, as are diving and underwater fishing but only outside the boundaries of the Reserve. A number of public information programmes are being developed. There are hotels and a tourist bureau in Porto. The nearest airport is 30 km north near Calvi.

SCIENTIFIC RESEARCH AND FACILITIES

Scandola has had a Scientific Committee since 1979 and local scientists work closely with colleagues from the Faculties of Science of the Universities of Marseilles and Nice. The research program includes bird studies, evolution in marine life and, since 2003, regular observations under the Life LINDA program to limit negative interactions between dolphins and human activities. The ichthyofauna of Scandola has been examined fully and densities of eleven fish species were found after 13 years of protection to be five times higher in the Reserve than in fished sites (Francour, 1991). There are small laboratories, a guest house and a diving centre for the Scandola Reserve at Galeria village just to the north, and a bird observatory in the Elbo tower. The island's *Institut de la Mer et du Littoral de la Corse*

at Galeria, just to the north, brings together many marine and government professionals with fishermen and sportsmen to reconcile environmental protection and economic development.

MANAGEMENT

As far back as 1930 a law, updated in 1976, was passed prohibiting destruction or modifications in classified protected areas without authorisation from the Minister of the Environment. A National Planning Directive in April 1979 established measures for management of nature and littoral areas and for the five communes around and within Girolata and Porto. Though much of the surrounding area has been altered by man, Scandola Reserve is strictly protected in order to return the area to its natural state. It is in the heart of a maritime section of the Regional Park, off limits to hikers, but covers only a small part of the coast. The marine reserve is well signposted on land and kept under daily supervision in summer by the Regional Park's qualified marine guides. There is a patrol boat permanently on station at Scandola to guard the area. The seas around the Isle de Gargalo and Punta Palazzo appear to get the strongest protection (MoE, n.d.). The area is governed by the Regional Park management plan. Spearfishing, scuba diving, angling, collecting marine life, collecting plants and trees, removal of eggs, photography too close to animals, dumping of waste, laying fires and camping are all strictly prohibited. However, commercial fishing is permitted outside the Reserve. Mooring is limited to 24 hours. Restoration of several cultural landscape features is underway. In the Capo Rosso area, traditional agriculture is encouraged to preserve certain species which disappear when grazing animals are removed. Measures to organise tourism include the design of paths and controlled parking areas behind the beaches. The program begun in 2003 to minimise the conflict between bottlenose dolphins and sea traffic, LINDA (*Limitation des Interactions Négatives entre Dauphins et Activités humaines*) patrols the coast from south of Calvi to Capo Rosso.

MANAGEMENT CONSTRAINTS

Before the creation of Scandola Reserve, large areas of the local maquis were burned for agriculture and grazing. This damage which annually destroys thousands of hectares of woodland and maquis, was considerable, although in the Reserve these areas are now recovering. More recently, the Corsica Regional Natural Park has again been threatened by professional arsonists who fire large tracts of land to obtain permission to build. This land will take decades to recover. There was severe overfishing of spiny lobster, with several tons per day being taken during each summer season, and fishing conflicts with the dolphin population. Rapid expansion of tourism poses another threat to both cultural and natural heritage: there are plans to open up the Reserve to more motorised vehicles by building car parks behind the beaches. Pleasure boat anchors have damaged the neptune grass beds, and coastal industries have polluted the Scandola coastline. The pressure may become too high for so well preserved but fragile an ecosystem (MoE, n.d.).

STAFF

One ornithologist and three guards under the authority of the Parcs Naturel (MoE, pers. comm., 1995).

BUDGET

Funding comes partly from the Corsican Regional Environmental Department. In 1995 this totalled Fr.750,000 (MoE, pers. comm., 1995).

LOCAL ADDRESS

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DATE

1982. Updated 5-1990, 10-1995, 1-2008, 5-2011, January 2012.