

Management Plan for Antarctic Specially Protected Area No. 120

POINTE-GÉOLOGIE ARCHIPELAGO, TERRE ADÉLIE

Jean Rostand, Le Mauguen (former Alexis Carrel), Lamarck and Claude Bernard Islands, The Good Doctor's Nunatak and breeding site of Emperor Penguins

1. Description of Values to be Protected

In 1995, four islands, a nunatak and a breeding ground for emperor penguins were classified as an Antarctic Specially Protected Area (Measure 3 (1995), XIX ATCM, Seoul) because they were a representative example of terrestrial Antarctic ecosystems from a biological, geological and aesthetics perspective. A species of marine mammal, the Weddell seal (*Leptonychotes weddelli*) and various species of birds breed in the area: emperor penguin (*Aptenodytes forsteri*); Antarctic skua (*Catharacta maccormicki*); Adélie penguins (*Pygoscelis adeliae*); Wilson's petrel (*Oceanites oceanicus*); giant petrel (*Macronectes giganteus*); snow petrel (*Pagodroma nivea*), cape petrel (*Daption capense*).

Well-marked hills display asymmetrical transverse profiles with gently dipping northern slopes compared to the steeper southern ones. The terrain is affected by numerous cracks and fractures leading to very rough surfaces. The basement rocks consist mainly of sillimanite, cordierite and garnet-rich gneisses which are intruded by abundant dikes of pink anatexites. The lowest parts of the islands are covered by morainic boulders with a heterogenous granulometry (from a few cm to more than a m across).

Long-term research and monitoring programs of birds and marine mammals have been going on for a long time already (since 1952 or 1964 according to the species). A database implemented in 1981 is directed by the Centre d'Etudes Biologiques de Chize (CEBC-CNRS). Human scientific presence may be estimated at around 4 people for a few hours, twice a month in the protected area.

Among the approximately 30 emperor penguin breeding sites on record, this is the only one located adjacent to a permanent station. It is therefore a providential spot to study this species and its environment.

2. Aims and Objectives

Management of the Cape Géologie Specially Protected Area aims at:

- preventing disturbance in the area due to the proximity of the station;
- preventing disturbance in the area due to the growing number of cruising ships: although the 335 registered tourists visiting the Dumont d'Urville station over the past five years have caused no visible impact on the environment, especially on the avifauna, stringent protection measures must be taken;
- allowing research of a compelling scientific nature which cannot be carried out elsewhere;
- avoiding any major changes to the structure and composition of flora and fauna and the association of different species of vertebrates harbored in the area, which is one of the most representative for both faunistic and scientific interest on Adélie Coast;
- permit scientific research in the field of marine and terrestrial biology, i.e., ethology, ecology, physiology and biochemistry, especially projects related to demographic monitoring and impact assessment of surrounding human activities, including tourism;
- permit research in geology with particular attention to the scheduling of visits when thermo-mechanical sampling means are required.

3. Management Activities

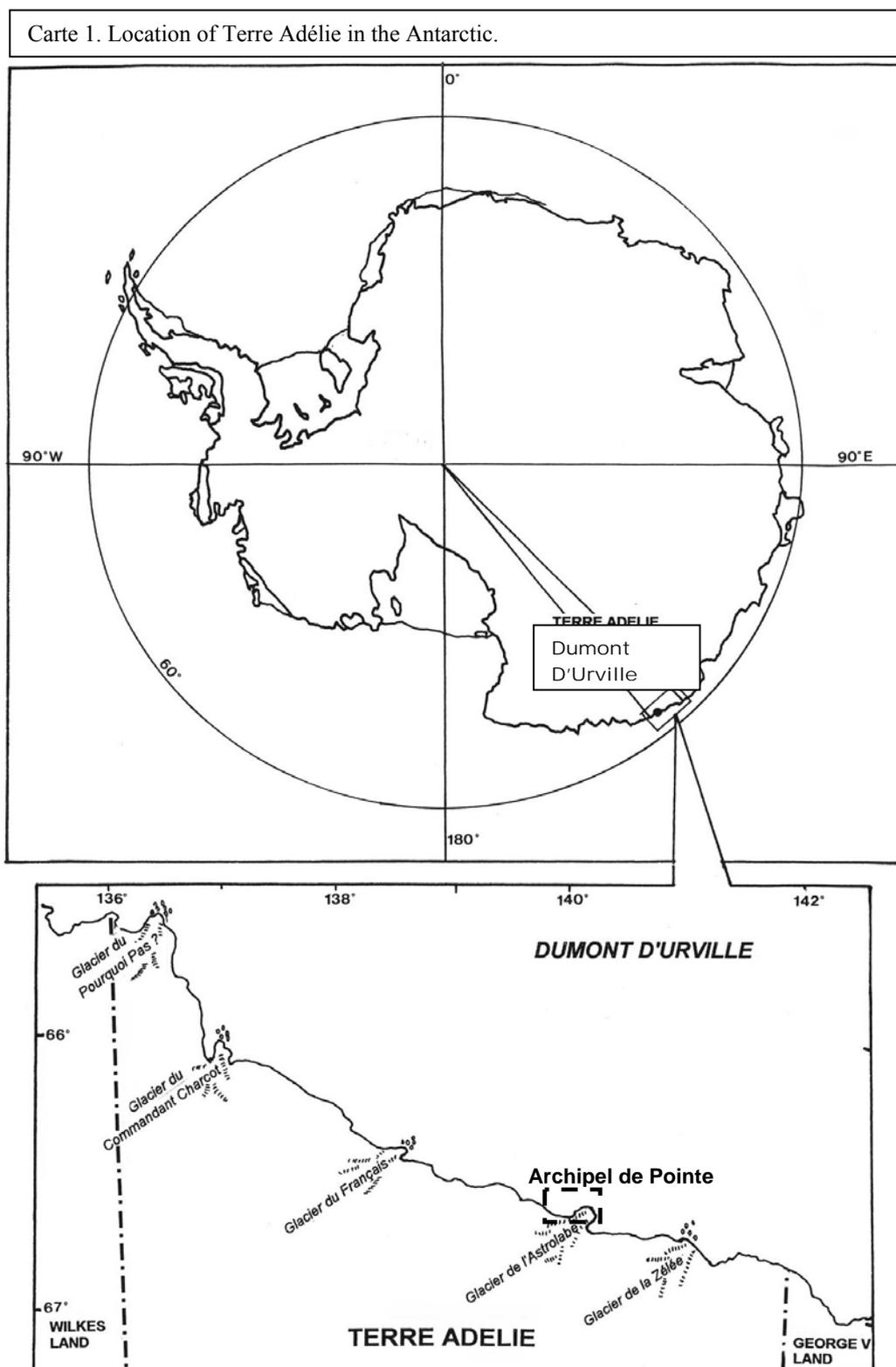
The present management plan is kept under periodical review to ensure that the values of the Antarctic Specially Protected Area are wholly protected. Any activity carried out in the area undergoes an environmental impact assessment before being undertaken.

4. Period of Designation

The Area remains an Antarctic Specially Protected Area (ASPA) for an indefinite period.

5. Maps

The Cape Geology Archipelago map shows the boundaries of the Antarctic Specially Protected Area inside the archipelago with dotted lines.



Map 2. Cape Geology Archipelago showing the Antarctic Specially Protected Area (dotted line) and the breeding sites of the birds. The South Polar skua and Wilson's Storm petrels' nests are not shown on the map (see Table 1). Access of land vehicles to the continent (Nunatak) is shown by means of arrows.

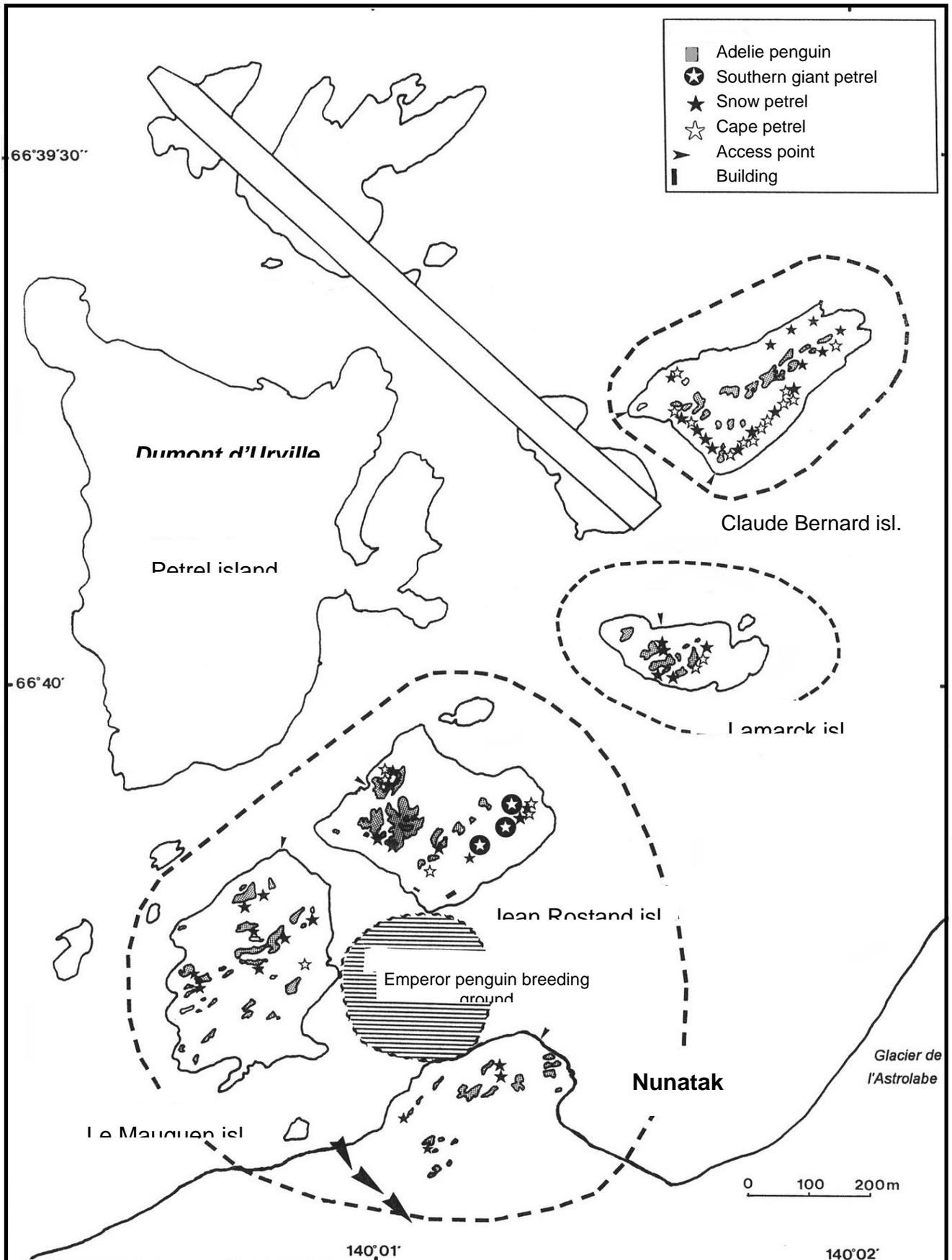


Table 3. Sensitivity to disturbance caused by human beings and status of the Cape Geology

	Emperor penguin	Adelie penguin	South Polar skua	Snow petrel	Cape petrel	Wilson's storm petrel *	Southern giant petrel
Sensitivity to disturbance caused by human beings*	High	Medium	Medium	Medium	High	High	High
Status between 1952 and 1984	Diminishing	Stable	Stable	?	?	?	Diminishing
Status between 1984 and 2000	Stable	Increasing	Increasing	Stable	Stable	?	Stable

populations

* Micol & Jouventin, 2001 (Table 1, refer.)

The area consists of the southernmost rock outcrops of Cape Geology Archipelago, between Petrel Island and the Western edge of Astrolabe Glacier. It is a very large ice-free ground on Adélie Coast.

As a whole, the surface of the rock outcrops does not exceed 2 km². The highest points are distributed along North-East-South-West ridges (C. Bernard Island: 47.6 m; J Rostand Island 36.39 m; Le Mauguen (formerly Alexis Carrel) Island: 28.24 m Nunatak: 28.50 m).

During the summer, only the Southern flanks of the islands are still covered by firms.

The area has clear natural boundary markers. However, markers will be set up in the Nunatak at a later stage.

No tracks or roads exist in the area.

6(ii) Identification of restricted or prohibited zones

Access to any part of the area is prohibited unless authorized by a permit. Location of breeding colonies is shown on the map. Birds are present from October to March, except for the emperor penguins, which breed in winter (Table 2). Their sensitivity to human disturbance varies depending on the species (Table 3). The establishment of the Dumont d'Urville station has resulted in a drastic decrease of the populations of emperor penguins and southern giant petrels in the Cape Geology Archipelago. Conversely, the significant decrease of emperor penguins by the end of the 1970s seems to have been due to long weather anomalies between 1976 and 1982. Since 1995, the breeding areas of these two species have been protected and the populations are now stable (Table 3). No one, except Permit Holders, is allowed to approach or to disturb the emperor penguin colony in any manner during the breeding season, from April to mid-December when the chicks fledge.

The particularly sensitive emperor penguins are also to be protected beyond the boundaries of this breeding area since the colony is not always located on the same spot.

The South-Eastern part of Jean Rostand Island is designated as a restricted area in order to preserve the remaining breeding colony of southern giant petrels. Access to this restricted area is strictly prohibited during the breeding period, from August to February. Access is restricted to one ornithologist, holding a Permit, to the extent spelled out in the present paragraph, i.e. once a year when chicks are being banded, for the purposes of monitoring the population. The boundary of the restricted area is defined by the NE-SW ridge going through the 33.10 metre and 36.39 metre marks North West of the colony, marked on the floor with stakes. This condition shall hold for an indefinite period, but it may be subject to re-evaluation every time the Management Plan is reviewed.

II: Measures

6(iii) Location of structures in the Area

Prévoist hut and a shelter are located on Rostand Island. There are no other buildings anywhere else in the Area.

7. Permit Conditions

- Entry into the Area is prohibited except in accordance with a Permit issued by an appropriate national authority.
- Permits may be granted to carry out various scientific research, site monitoring or inspection activities entailing sampling of biological material or animals in small quantities. For each single entry and length of stay, permits will authorize the scope of the tasks to be undertaken, their time-span and the maximum number of people commissioned to enter the Area.

7(i) Access to and movement within the Area

- No helicopters or terrestrial vehicles are authorized within the Area.
- No overflights over the Area, either by helicopters or other airplanes are authorized.
- Access to the Area is only permitted by foot or by zodiacs (in summer). However, very rare departures of terrestrial vehicles from the Nunatak are allowed, but only when sea-ice conditions hinder from proceeding otherwise and with special attention to the presence of birds in the Area.
- Access to the Area is restricted to ornithologists holding a Permit and to the 2 or 3 people who must accompany them for safety reasons.
- Access to and movement within the Area shall, in any case, be limited, in order to avoid unnecessary disturbance to birds, especially by crossing their pathways and to ensure that breeding areas or their access are not damaged or endangered.

7(ii) Activities which are or may be conducted within the Area, including restrictions on time and place

- compelling scientific activities which cannot be conducted elsewhere and essential management activities provided special care is bestowed on both the emperor penguins and the southern giant petrels located in the restricted area (*see para 6.ii*);
- visitors granted access to the Area by a Permit shall ensure that their visit will cause no disturbances to the monitoring programs under way.

7(iii) Installation, modification or removal of structures

- No structures are to be erected or scientific equipment installed in the Area except for compelling scientific reasons or management activities as authorized by the competent authorities in the framework of the urbanistic and public domainality regulations in force.

7(iv) The location of field camps

- Only safety tents should be erected when security reasons so require it provided all precautions have been taken in order to avoid damaging or disturbing the fauna.

7(v) Restriction on materials and organisms which may be brought into the Area

- According to the provisions set forth in Annex II to the Madrid Protocol, no living animals or plant materials, poultry products, including dried eggs, shall be introduced into the Area.
- No chemicals shall be brought into the Area, except chemicals which may be introduced for a compelling scientific purpose as specified in the Permit. Any chemical introduced shall be removed from the Area at or before the conclusion of the activity for which the Permit was granted
- Fuel, food and other materials are not to be stored in the Area, unless required for compelling purposes connected with the activity for which the Permit has been granted.

Such materials are to be removed when no longer required. Permanent storage is not permitted.

7(vi) The taking of or harmful interference with flora and fauna

- Taking of or harmful interference with native flora and fauna is prohibited except in accordance with a Permit. If an activity is determined as having less than a minor or transitory impact, it should be carried out in accordance with the SCAR Code of Conduct for the Use of Animals for Scientific Purposes in Antarctica, as a minimum standard.

7(vii) The collection or removal of anything not brought into the Area by the Permit Holder

- Collection or removal of anything not brought into the Area by a Permit Holder is prohibited unless otherwise specified in the Permit for scientific or management purposes.
- Debris of man-made origin may be removed from the Area and dead or pathological specimens of fauna or flora may be removed for laboratory examination.

7(viii) Disposal of waste

- All waste produced, except for waste water, must be removed from the Area.

7(ix) Measures that may be necessary to ensure that the aims and objectives of the Management Plan can continue to be met

- Visits to the Area shall be restricted to scientific and management objectives only.

7(x) Requirements for reports of visits to the Area

- Parties should ensure that the principal Holder of each Permit issued submits to the appropriate authority a report describing the activities undertaken. Such reports should include, as appropriate, the information identified in the Visit Report form suggested by SCAR.
- Parties should maintain a record of such activities and, in the Annual Exchange of Information, should provide summary descriptions of activities conducted by persons subject to their jurisdiction, in sufficient detail to allow evaluation of the effectiveness of the Management Plan. Parties should, wherever possible, deposit original or copies of such original reports in a publicly accessible archive to maintain a record of usage, to be taken into consideration both when reviewing the Management Plan and when organizing the scientific manipulation of the Area.