

**PROPOSAL FOR INCLUSION OF SPECIES ON THE APPENDICES OF THE CONVENTION ON
THE CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS**

A. PROPOSAL: Proposal for amendment of the Appendices (Res. 1.5) Appendix I

B. PROPONENT: Government of Chile

C. SUPPORTING STATEMENT.

1. Taxon

1.1	Class	Aves
1.2	Order	Procellariiformes
1.3	Family	Pelecanoididae
1.4	Genus and species	<i>Pelecanoides garnotii</i> (Lesson, 1828)
1.5	Common names	Yunco, Pato Yunco, Patoyunco, Peruvian diving petrel; Garnot-Lummensturmvoegel; Puffinure de Garnot.

2. Biological data

2.1 Distribution

The Procellariiformes group and its abundance of species suggest that they play a potentially important role as consumers in the marine pelagic eco-systems (Prince & Morgan, 1987). More specifically, the range of the family Pelecanoididae is restricted to the southern hemisphere, and the greatest breeding concentration is found in the Antarctic and Sub-Antarctic convergence zone. Only the Peruvian diving petrel, (*Pelecanoides garnotii*), a guano bird, nests over 6°S, but without reaching the equator (Warham, 1990).

P. garnotii is a species endemic to the Humboldt current, and the only species of diving petrel found in waters where the temperature exceeds 7°C, in the continental littoral of western South America (Murphy, 1936). In Chile, it ranges from Arica (18°S) to Corral (39°S) (Araya & Millie, 1986). Breeding colonies are found in the coasts of Chile and Peru, between 6° and 38° S (Murphy, 1936).

The greatest reported concentrations for this species, in Chile, are located in the Gulf of Arauco (37° S), and in Isla Chañaral (29° 02' S), where foraging groups of more than 200 individuals were observed (Jehl, 1973).

Pelecanoides garnotii is a sedentary species within its group, and prefers to inhabit sectors near the coast, since these are the surest source of food (Roby, 1989). In the case of the population of Isla Choros (29° 16' S), its habitat has been described as highly productive, since it is linked to an intense upwelling process (Acuña *et al.*, 1989).

2.2 Population

Recent studies are scarce in Chile. Previously the species used to nest in Isla Santa María (37° S), yet recent reports indicate it has disappeared from there since the beginning of the 19th century (Paessler, 1922). All the same, Murphy, in 1936, indicated the presence of the species in Arica (18°S), Iquique (20°S), Taltal (25°S), Valparaíso (33°S), Corral (39°49'S) and Valdivia (39°48'S). Then there is a great void of information, up to 1973, when Jehl, after a cruise along the Chilean coast, indicated the presence of the species in only two littoral sectors: the Arauco gulf (37°S), and the vicinity of Isla Chañaral (29°S) (Jehl, 1973). In 1992, Collar indicated the presence of Peruvian diving petrels in Pan de Azucar, Isla Pájaros, Chañaral, Choros and Isla Mocha. Recently, in Reserva Nacional Pingüinos de Humboldt, IV region, Isla Choros, a breeding colony of 1500 pairs has been detected. The species has been reported in

Valdivia, but only with sporadic sightings (Schlatter, pers. com., 2001). In Isla Pan de Azucar (26°S) there is a small nesting colony, and in Isla Pájaros there are no signs of nesting (Luna, pers. com, 2001).

2.3 Habitat

Diving petrels are strictly marine birds that inhabit waters near the coast, spend most of their time swimming at surface level, and show a clear predilection for diving (del Hoyo, 1992). Information in literature indicates that the maximum depth to which they dive is of up to 31.6 ± 3.6 m (Zavalaga & Janhncke, 1997). On land they are very gregarious, and create dense breeding colonies. They build their nests/caves in flat, limy and compact soils, but may also be found in rocky cliffs, though in smaller numbers. All the reported populations of *P. garnotti* are linked to cold waters, surfacing sectors and are found near the coast.

The birds have a marked photoperiod, highly influenced by the moon. By daytime they are seen at sea, and they return to their nests at twilight. This depends on the amount of light present in the colony, and in the absence of light, they return at the onset of darkness, whereas when there is a full moon they may return later, and even be active all night (Contreras *et al*, 2001).

2.4 Migrations

There is no information on regular migrations of the species. It may present sporadic dispersion, but only within the Humboldt current (Murphy, 1936). During “El Niño” episodes, when the littoral sea warms up, its range may alter due to food scarcity.

3. **Threat data**

3.1 Direct threat to the population (factors, intensity)

As it happened in Peru, the species populations have decreased markedly (Collar, 1992).

The guano industry was one of the main enemies of the species, through direct destruction of its habitat, and its nests, causing a rapid decrease of its population trends (Collar, 1992; Schlatter & Simeone, 1999), until the 1963 publication of decree F.L. N° 25 that regulates the extraction, trade and export of guano (Iriarte, 1999).

The species has a multitude of natural predators such as the *Pequen* (*Athene cunicularia*), white owl (*Tyto alba*), peregrine falcon (*Falco peregrinus*), *Jote* (*Cathartes aura*), *Carancho* (*Polyborus plancus*), Dominican sea gull (*Larus dominicanus*) and the marine otter (*Lontra felina*); all of which keep a natural balance in the species' population. However, man introduced animals have created great imbalances in these populations (Schlatter & Simeone, 1999). Such is the case in Isla Chañaral (29°S), where, in 1938, the population was estimated at 200.000 individuals. After the introduction of the fox, there was no longer any indication of nesting taking place (Araya and Duffy, 1987). Today, foxes are no longer present

3.2 Habitat destruction

The main threat is presented by the guano industry, not regulated until 1963. The present legislation, besides regulating the trade on fertilizers, sets standards for the use of breeding grounds of guano birds, and prohibits its collection in areas with nesting birds.

3.3 Indirect threats

The main indirect threats to the populations of marine birds are overexploitation of marine resources, and “El Niño” episodes (Wolf & Valdivia, 1983; Tovar & Cabrera, 1983). Both together could give rise to serious problems to the species' populations. This is why we must monitor and conserve them.

Present competition based on scarce marine resources involves not only the national economy, but also the availability of nourishment for different bird species. Lack of food has a negative impact on the life cycle of birds, and has consequences for the structure and dynamics of the population.

The species' diet in Chile is made out exclusively by *Vinciguerria nimbaria* and *Euphausia mucronata* (Contreras *et al.*, 2000), which are abundant in northern Chile. Studies made during El Niño of 1997-98, indicated a decrease in the percentages of adults laying eggs (45.25% to 17.5%), as well as a higher mortality of chicks (Janhcke and Goya 1998).

3.4 Threats connected especially with migrations

Within the family of diving petrels, the Peruvian variety is considered a sedentary species (Murphy, 1936; Warham, 1990; del Hoyo, 1992). The present dispersion of the species would presumably be related to the lack of nourishment, associated to climatic-oceanographic phenomena such as ENSO.

3.5- National and international utilization

There is no direct use.

4. **Protection status and needs**

Information on the species populations in Chile are scarce. There is no present monitoring of its populations, and information regarding population trends is sparse in time and unclear. Only 10.5% of the total territory of the species range is monitored, any other data on its present population is incidental. However, if an evaluation is made with the available information, it is likely to show that the populations of *P. garnotii* are endangered. The status of connectivity and population interchange between existing colonies is particularly worrying (Schlatter, pers. com, 2002). It is therefore urgent to obtain greater information on the present situation of the species in Chile, since such information would allow us to make a clear and precise evaluation of the status of population trends, and of its southernmost breeding range.

4.1 National protection status

The population of *P. garnotii* had been declared vulnerable in Chile (Schlatter & Simeone, 1999). The population in the IV Región, is located in the National Reserve "Humboldt Penguino", administered by National Forest Cooperation (CONAF), a government institution in charge of the protection of the flora and fauna of protected wild areas.

The birds enjoy legal protection since 1955, date of the promulgation of Decree. S. 268, which prohibits, all over Chile, the hunting of wild birds during nesting, the collection of eggs, and the capture of chicks. It also forbids the sale or export of Chilean wild birds, and their captivity, without previous authorisation from the General Directorate for Fishing and Hunting. (See also the previously mentioned decree F.L. N° 25, which regulates trade in guano).

4.2 International protection status

In the international field, the species is considered a population for which not enough is known about its conservation status (del Hoyo, 1992). Conservation measures applied so far are obviously not enough (Collar, 1992).

Chile has subscribed 10 agreements or international treaties related to the sustainable use of species of marine vertebrate fauna, such as Regulation of the work of marine hunting in the South Pacific, ratified in 1954 by D.S. N° 432; Convention for the protection of Flora and Fauna and Ecosystems of esthetical value of America, ratified in 1967 by D. S. N° 531; CITES, ratified in 1975 by D. L. N° 873; Convention

Concerning the Protection of the World Cultural and Natural Heritage, ratified in 1980 by D. L. 259; CMS (Bonn Convention), ratified in 1981 by D. S. 868, and the Convention on Biological Diversity in 1995, ratified by D.S. 1.963, among others. One of the international conventions that has had a greater effect on conservation and sustainable use of marine species is CITES. Since its promulgation in Chilean law in 1975, 48 marine species of birds, mammals, and reptiles have been included in its appendixes (16 in appendix I and 32 in appendix II). Humboldt's penguin is the only bird species in this list (Iriarte, 1999)

4.3 Additional protection needs

Beyond its classification as a vulnerable species, no other conservation measure is afoot in order to protect the population of the Peruvian diving petrel.

Research is being carried out on the species by the Universidad Católica del Norte (UCN), in Coquimbo, to gather data on the ecology of feeding, the eco-physiology and the behaviour of the species. All very valuable, because unknown so far. However, conservation of marine birds is being contemplated, as well as plans for getting finance for setting up a rehabilitation centre for birds in the future.

An agreement is being coordinated between UCN and CONAF, to facilitate monitoring of the species in the Reserva Nacional Pingüinos de Humboldt. This will allow a better information flux between governmental organisations and Universities for the benefit of the conservation of the birds in the reserve.

SERNAPESCA (National Fishing Service), is also a governmental organisation devoted to the conservation of species of birds, and it manages a joint project with UCN, devoted to promoting the importance of marine birds in the ecosystem, by spreading information among fishermen.

5. **Range States**

In Chile the most important population reported, so far, is located within the Reserva Nacional Pingüinos de Humboldt, a three coastal islands complex,. Choros, one of the islands, places more restrictions on visitors, and only allows the presence of persons authorized to carry out scientific research.

6. **Comments from range States**

CONAF and UCN are the only two institutions devoted to observations of the species in Chile, centred in the population of *P. garnotii* that inhabits the Reserva Nacional. In the remainder of Chile there is no information or monitoring of the species.

The National Institute for Natural Resources (INRENA) is in charge of coordinating actions for the conservation of the species in Peru, and it is hoped that these will be developed jointly with Chile.

7. **References**

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