

Threatened Species in Portugal

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Several animal species are threatened in Portugal by the increasing number of industrial plants, by destruction of natural habitats, illegal hunting and pollution. This article takes four examples and shows the influence of these factors on their populations.

MAMMALS

Otter *Lutra lutra*

The otter was first described by Bocage (1863) as found in almost all Portuguese rivers, but in the first quarter of this century scientists reported significant decreases. Since 1979 the Department of Zoology of the University of Coimbra has been engaged in a project to clarify their present distribution and the publications of several scientists (4, 9, 13, 14, 11, 5, 6, 12) give an idea of the otter's present distribution (fig. 1) which was reported in the Douro, Mondego and Tejo, the Guadiana, the Caia river, the Argale stream and some springs near Mertola. Of particular importance is the occurrence of the otter in south-west Portugal from Sardo Cape to Odeceixe; this population is adapted to marine life, eating especially fish and crustacea.

The three main threats to the otter are:

1. Hunting. Although protected by law since 1974, the otter is still hunted for its fur. We suggest an extension of the protected areas.
2. Pollution. Food and cellulose factories are the main industrial plants responsible for river pollution, and sewage treatment plants should be compulsory for this type of factory. Pesticides and domestic sewage also contribute to the pollution.
3. Habitat destruction, the regulation of water streams and the destruction of riverside vegetation.

Wolf *Canis lupus*

The wolf population in Portugal is estimated at approximately 150 individuals. In the north wolves occasionally attack sheep flocks, which would be expected since its normal prey, the roe deer *Capreolus capreolus*, has disappeared completely from the area. Wolves have decreased drastically in the last 20 years. Figure 2 shows the wolf's most probable distribution in Portugal today, from the north of Minho and Tras-os-Montes down to Beira-Alta and Beira-Baixa (Rosmarinhal).

We propose that organized wolf hunting should be forbidden, roe deer reintroduced and wolf habitat preserved.



Distribution of the pardel lynx in Portugal and Spain
Adapted from Palma, 1981

Pardel Lynx *Lynx pardinus*

The lynx has been known in Iberia since the Age of Copper. The pardel lynx is slightly smaller than the boreal lynx; the tail is slightly longer, the body spots more evident and the fur less dense. In the Age of Copper the lynx spread throughout the whole Iberian Peninsula, but since the middle of the 19th century numbers have decreased significantly. Figure 3 indicates the most probable present distribution. In addition to the Doñana National Park area, five other areas can be identified:

1. Malcata, Gata and Bejar Mountains. In 1980 five were killed and in 1982 two more. Also 2000 hectares were converted for agriculture, thus decreasing the natural habitat;
2. Toledo Mountain (about 5 individuals);
3. East Morena Mountain (about 200 individuals);
4. West Morena Mountain (extending to the region of Barrancos) numbers unknown;
5. Algarve Mountains (Caldeirao, Monchique and Espinhaco de Cao) numbers unknown.

The typical habitat is the Mediterranean maquis with oaks *Quercus suber*, *Q. ilex* and *Q. coccifera* and strawberry trees *Arbutus unedo*. The exact

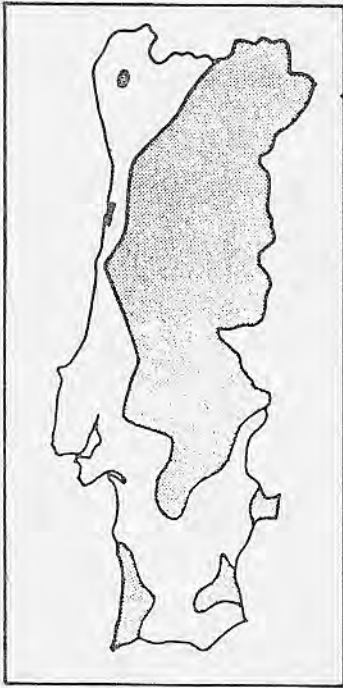


Fig. 1
Distribution of the
otter in Portugal
After Almeida, 1986

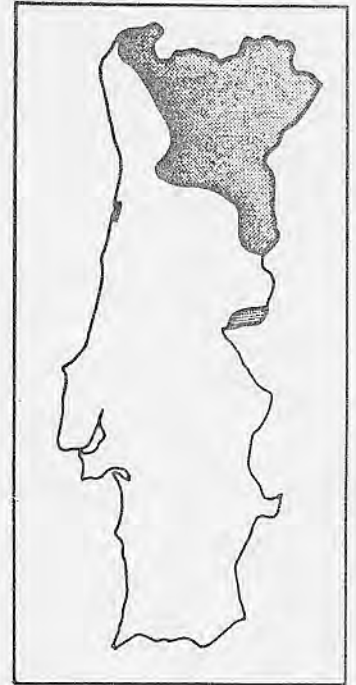


Fig. 2
Distribution of the
wolf in Portugal
After Almeida, 1985

number of lynxes in Portugal is not known but we estimated about ten. The main threat is the destruction of its natural habitat by the elimination of holm oak *Q. ilex* followed by the mass plantation of eucalyptus demanded by the cellulose industries. In the 1950-60 decade, the pardel lynx was indirectly affected by the disappearance of wild rabbit *Oryctolagus cuniculus* due to myxomatosis.

BIRDS

Azorean Bullfinch *Pyrrhula pyrrhula murina*

According to the Bannermans (1966), the Azorean bullfinch was restricted to the dense

Japanese red cedar *Cryptomeria japonica* woods in the east part of S. Miguel island in the Azores, especially to Povação, Furnas and Simplicio Hill; it was considered a pest for damage to fruit trees and killed. Gérald (1985), describes the priolo as one of the most interesting birds in the Azores. Male and female are identical and occupy an area of about 500 hectares. The conservation of its habitat, which consists essentially of bay trees *Laurus nobilis*, common juniper *Juniperus communis*, common holly *Ilex aquifolium* and heathers *Erica spp.*, is a priority.

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