

# Human expansion is leaving the osprey of the Canaries cornered

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Credit: Beneharo Rodríguez

A team of scientists from the GOHNIC Association in the Canary Islands has concluded in a study that human expansion could be one of the main causes of the precarious situation of ospreys in the archipelago, a species at risk of extinction.

The osprey, an endangered bird species, has sparse spawning stock in the

Canaries. Researchers from the Ornithology and Natural History Group of the Canary Islands (GOHNIC) have studied the areas in which non-migratory ospreys (*Pandion haliaetus*) on these islands currently choose to nest and which ones they used in the past, in order to assess both their density and their habitat selection.

As Beneharo Rodríguez, co-author of the study published in the journal 'IBIS' and researcher at GOHNIC, tells SINC: "According to our prediction models, the Canaries have vast areas of suitable habitats available for these birds, but they are not occupying them. The results of the study imply that human activity could be limiting the settlement and spread of new pairs."

Comparing the places where they nest most frequently with a random selection of areas where they could potentially rear their young, it was found that most of their [nests](#) are on high cliff-tops facing the southwest.

These places are characterised by fewer human pressures and by their proximity to colonies of yellow-legged gulls (*Larus michahellis*) and rearing areas of the Barbary Falcon (*Falco pelegrinoides*).

"The osprey's sparse spawning stock on the Islands has remained stable over the last three decades. However, the population size was larger in the early 20th Century and the sites chosen by the birds to rear their young were generally more accessible," the scientist notes.

The researchers also discovered changes in some characteristics of the rearing habitat. "Of the 68 nests discovered over the whole [archipelago](#), 29 were occupied on at least one occasion between 2000 and 2008 and the rest remained empty during this same period," Rodríguez comments.

The density of nests on the coastline of the Canaries was 0.53 nests/km of coast, although this value rose to 3.38 nests/km when the stretch of

coast was dominated by cliffs over 50 m high.

## **Mathematical models for evaluating nesting areas**

Comparing the nests that they occupied in the past with the most recent, it was reported that the latter are in higher places, near deeper waters, further from roads and less frequently built in cavities.

"This link could have several causes, one of which is the benefit the osprey gains from the warning provided by the aggressive behaviour of the two species that live with them on the cliffs, when faced with a potential predator of their eggs and their young," the scientist affirms.

Several pairs of ospreys in the Canary Islands have built new nests within colonies of yellow-legged gulls, even when suitable places free of these birds were available nearby for rearing.

The mathematical models also enabled the suitability of the habitat to be predicted across the entire Canary archipelago. It was observed that there exists a large number of coastal stretches suitable for this species to reproduce.

"The current low density and apparent stagnation of the population over recent decades appear to imply that factors like human disturbance are playing a considerable role in restricting the spread and establishment of new pairs of ospreys in places where they have not nested for years," they conclude.

Watching for nests and their surrounding areas is, along with the continuous monitoring of each pair, a prime objective to guarantee the conservation of this bird of prey in the Canaries.

**More information:** Rodríguez, B., A. Rodríguez, M. Siverio & F.

Siverio. "Conservation implications of past and present nesting habitat selection of the endangered Osprey *Pandion haliaetus* population of the Canary Islands". *Ibis* 155: 891-897, 2013.

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