



Sacred ibis

(*Threskiornis aethiopicus*)

Managing the sacred ibis in Western France

National agency for hunting and wildlife

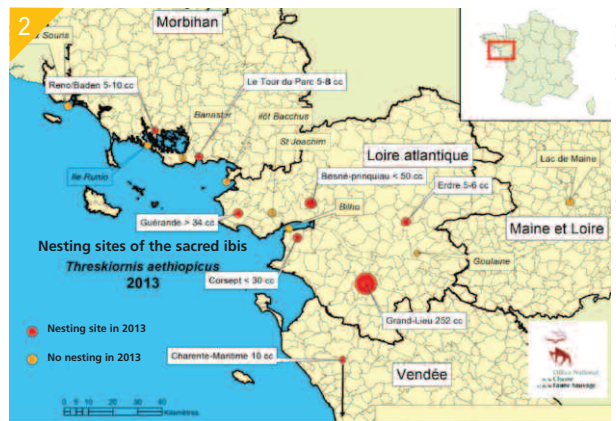
■ Bretagne-Pays-de-la-Loire regional office

- ONCFS is a public agency placed under the supervision of the Ecology and Agriculture ministries.
- Its missions correspond to the guidelines contained in the Grenelle environmental agreement, including research on wildlife and its habitats and participation in the management of invasive alien species.
- The Bretagne-Pays-de-la-Loire regional office covers 9 departments with a work force of 130.
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Intervention site

■ History of species colonisation and management

- 1974-1987. A zoological park imported 30 sacred ibises. The birds born in captivity were allowed to fly freely and dispersed along the Atlantic coast.
- 1991. The first attempt at nesting was observed at Grand-Lieu Lake (Loire-Atlantique department).
- 1994. Scientists and farming representatives drew the attention of the local government to the presence of the sacred ibises and to the risks involved.
- 1997. The young birds were no longer allowed to escape from the zoological park.
- 2004. The managers of natural areas in the Loire-Atlantique, Vendée and Morbihan departments requested that the sacred ibis be included in conservation policies.
- 2005. The Ecology ministry requested that ONCFS and INRA assess the situation and propose management solutions. Their report acknowledged the risks created by the increased numbers and wider geographic area covered by the sacred ibis and proposed scenarios with progressive management solutions. Following a referral by the Ecology ministry, the National council for the protection of nature advised eradicating the species.
- 2006. A total of 1 700 couples and 5 000 birds were inventoried in Western France.
- 2007. Prefectoral orders were signed enabling the start of operations to reduce the numbers of sacred ibises.



1. Site of the Grand-Lieu nature reserve.
2. Nesting sites of the sacred ibis in the Bretagne and Pays-de-la-Loire regions in 2013.

- 2013. Only 280 to 300 breeding couples were inventoried, a significant drop since 2006 that may be attributed to the management work.

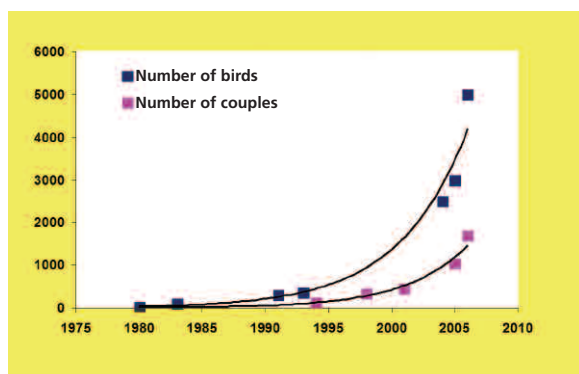
Disturbances and issues involved

■ Impacts on native species

- The birds are predators for a wide range of prey that are already confronted with habitat degradation. The overall impact has not been quantified, however predation has been observed on the nests and chicks of sensitive species (marsh terns, herons, terns and waders).



Numbers of sacred ibises in Western France prior to the management work.



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■ Health risks

■ The alternate food sources on pathogen-rich sites (dumps, bird farms, etc.) represent a health risk for the fauna in wetlands.

Interventions

■ Monitoring the breeding of the sacred ibis

■ In parallel with the prefectural orders to eliminate the sacred ibises in the Loire-Atlantique, Morbihan and Vendée departments, the Bretagne and Pays-de-la-Loire regional environmental directorates requested that ONCFS monitor population numbers in Western France.

■ The ornithological community, the managers of natural areas and ONCFS in the concerned departments all participated in the annual counting of colonies.

■ An annual, regional report was drafted with a map of the colonies, the numbers of couples and of fledglings per colony, the change in the overall population from year to year and the impact of the measures to limit the population.

■ Management work

■ An attempt to remove the eggs from the main colony was undertaken in 2006. This operation resulted in the birds moving to another site and laying new eggs, consequently this method was not implemented twice.

■ In 2007, a first prefectural order in the Loire-Atlantique department was signed to test shooting over a limited period as a management method. Following the experiment and starting in 2008, annual prefectural orders were issued in the Loire-Atlantique, Morbihan and Vendée departments, and in 2009 in the Maine-et-Loire and l'Ille-et-Vilaine departments.

■ Since 2009, another prefectural order has filled out the approach. The National association for the protection of nature (SNPN), in its role as the manager of the Grand-Lieu national nature reserve, the site of the largest colony, was charged with sterilising sacred-ibis eggs.

■ The combined implementation of egg sterilisation in the main colony and shooting of flight-capable birds around the edges of colonies and on feeding sites is a means to limit:

- the number of reproducers the following season (this is due to shooting flight-capable birds that are primarily adults);
- the number of juveniles replacing the eliminated adults (due to the drop in the number of fledglings caused by the sterilisation operations).



3. 4. Sacred ibises in the Massereau Pond.

■ Elimination by shooting:

- the shooting is done by ONCFS personnel, occasionally assisted by other authorised persons acting, for this work, under the responsibility of ONCFS;
- the operations take place on feeding sites or near the colonies;
- safety measures and efforts to avoid impacts of the shooting campaign on other species are important factors during the work to limit the populations of sacred ibis;
- during this work, the personnel also drew biological samples used for studies on the parasites carried by the birds, on the viruses (detection of the avian influenza virus strain H5N1) and on the diet of sacred ibises.

■ Sterilisation of eggs:

- the objective is to limit as severely as possible the number of young sacred ibises capable of leaving the colonies established at Grand-Lieu Lake;
- the process consists of simply running a spike through the eggs;
- this work was carried out by authorised personnel of the nature reserve who were extremely knowledgeable concerning the local conditions, which made it possible to limit the disturbances and the impact on sensitive species nesting nearby.

Results and assessment

■ Nesting of the sacred ibis in Western France in 2013

- In 2013, approximately 280 to 300 couples nested, including 10 couples in the Charente-Maritime department (outside the area currently covered by the prefectural orders to eliminate the species), which represents a decrease of 17 to 27% compared to the 350 to 410 couples in 2012.
- The distribution of the colonies is similar to that in the previous four years, i.e. approximately 90% of the regional nesting population is located at Grand-Lieu Lake.

■ Results of management work from 2006 to 2013

■ Sterilisation of eggs:

- SNPN put great effort into complying with the prefectural order concerning the sterilisation of eggs at the Grand-Lieu Lake;
- in 2013, 422 nests and a total of 1 270 eggs were treated;
- the operation took place during two periods (April and May) in order to sterilise the replacement eggs laid following the first passage;
- the operation was successful in that very few juveniles were born at Grand-Lieu Lake and only a few dozen became fledglings.

■ Shooting campaigns:

- a total of 274 sacred ibises were eliminated in 2013;
- the results indicate that the number of young birds born is significantly lower than the number of birds eliminated;
- consequently, the drop in the regional population should continue in 2014. However, the shooting and sterilisation work must be pursued with vigour to avoid any regrowth of the population;
- the means to halt the development of a colony of breeders in the Charente-Maritime department must be found.



5. Chicks in a nest.
6. Threskiornis aethiopicus.

Results of management work on the sacred ibis in Western France.

Year	Birds shot	Nests sterilised	Couples observed
2006			1 700
2007	226		1 430-1 860
2008	2 939		1 400
2009	1 252	157	850
2010	887	1013	670
2011	413	880	560-600
2012	635	248	350-410
2013	274	422	280-300
TOTAL	6 626	2720	- 82%

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Information on the project

■ An annual report on monitoring results for the breeding population is submitted to the government and made available via the internet.

■ Scientific research has been put into learning more on the biology of the sacred ibis and its impacts (a partnership between INRA, MNHN, SNPN, Oniris and ONCFS). This work resulted in a number of reports and publications on the following topics:

- the primary aspects of its reproduction (Alauda, 2006);
- a status report on the current situation (*Biological Invasions*, 2006);
- the absence of a positive relationship between the sacred ibis and the Eurasian spoonbill (Oryx, 2010);
- an assessment of the health risks (presentation to the European Wildlife Disease Association, 2010);
- feeding habits and impact on sensitive species (*Revue d'Écologie – Terre et Vie*, 2010).

■ Informational articles have been published for amateur ornithologists in the journals *Ornithos* and *Birding World* (2005).

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For more information

■ Bretagne-Pays-de-la-Loire regional office: www.oncfs.gouv.fr

■ Publications are available via the link below:

<http://www.oncfs.gouv.fr/La-luttecontre-les-especes-exotiques-envahissantes-ru152/LIbis-sacre-ar282>

■ Yésou P. et Maillard J.F. 2013. Bilan de la reproduction des opérations de destruction de l'Ibis sacré en Bretagne Pays de la Loire pour l'année 2013. Office national de la chasse et de la faune sauvage. Nantes. 7 pp.

■ Clergeau P., Yésou P., Chadenas C. 2005. Ibis sacré *Threskiornis aethiopicus*, état actuel et impacts potentiels des populations introduites en France métropolitaine. Rapport Inra-ONCFS, Rennes et Nantes. 53 pp.



Office National
de la Chasse
et de la Faune Sauvage