

SIS Conservation

Publication of the IUCN SSC Stork, Ibis and Spoonbill Specialist Group

ISSUE 1, 2019

SPECIAL ISSUE: GLOSSY IBIS ECOLOGY & CONSERVATION



***Editors-in-chief:* K.S. Gopi Sundar and Luis Santiago Cano Alonso**

***Guest Editor for Special Issue:* Simone Santoro**

ISBN 978-2-491451-01-1

Breeding Status of the Glossy Ibis *Plegadis falcinellus* in Bulgaria

Petar IANKOV*, Georgi POPGEORGIEV

Bulgarian Society for the Protection of Birds – BirdLife Bulgaria, 1111 Sofia, POB 50, Bulgaria.

*Corresponding author; e.mail: petar.iankov@bspb.org

ARTICLE INFO

Article history:

Received 16 March 2018

Received in revised form 30 October 2018

Accepted 10 November 2018

KEY WORDS

Breeding, Glossy Ibis, spatial distribution, numbers, dynamics, Bulgaria

ABSTRACT

Data about the spatial distribution, numbers and dynamics of the breeding pairs of the Glossy Ibis *Plegadis falcinellus* in Bulgaria during the period 1890-2017 are provided. Currently the species breeds in Bulgaria mainly along the Danube River and in the central part of the Bulgarian Black Sea Coast. Two colonies exist along the Danube River: at Srebarna Lake (with 20-175 pairs) and Kalimok Marsh (with 0-150 pairs). A single colony exists along the Black Sea Coast at Poda Reserve near Burgas (4-11 pairs). In inland Bulgaria single pairs bred in certain years at two small wetlands: Trud Fishponds and Konush Reservoir.

Introduction

The Glossy Ibis *Plegadis falcinellus* is a species of Least Concern category, though its global population is decreasing (BirdLife International 2018). This trend is very obvious in countries with limited numbers of wetlands such as Bulgaria where the species is included in the National Red Data Book as Critically Endangered (Michev *et al.* 2011). Information about the Glossy Ibis in Bulgaria is scattered in various publications (Michev 1985; Simeonov *et al.* 1990; Kovachev *et al.* 2007; Michev *et al.* 2011) and there is no publication on the current breeding population situation. The aim of the paper is to present the past and current state of the Glossy Ibis on the base of all available information.

Study Area

The entire territory of Bulgaria was studied in 2012-2017 by BSPB – BirdLife Bulgaria for the purposes of the European Breeding Birds Atlas. Special attention was paid to the sites with known Glossy Ibis breeding in addition to the long-term monitoring of the birds at some sites, especially along the Danube

River and the Black Sea coast.

Methods

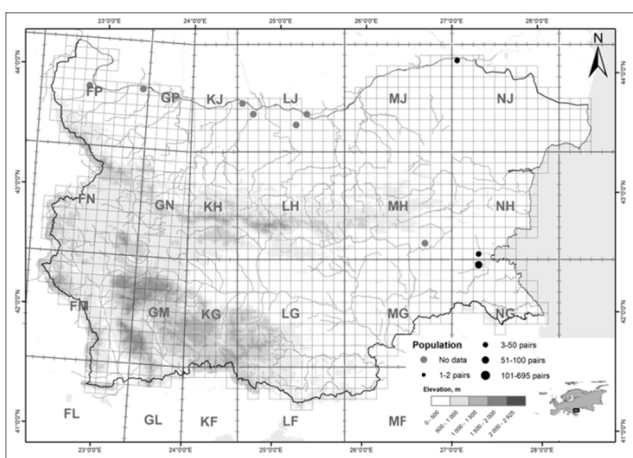
Multiple visits were paid to the sites where breeding was suspected and whenever possible breeding status was clarified, and birds were counted. At some traditional breeding sites, the colonies were subject to monitoring (from twice per month for Poda Reserve, N 42°27'01.62", E 27°27'14.88" during the period 2010-2017 to two-three times per breeding season for sites such as Belene Island, N 43°40'25.98", E 25°13'39.16" and Srebarna Reserve, N 44°06'50.97", E 27°04'04.97"). Numerous single records from different observers all over the country were used to complete the information. In cases where approximate figures were published, (e.g. 18-20 pairs) the bigger one was used for the graphs.

Results

Spatial distribution and numbers

During the period between 1890-1950 the Glossy Ibis breed along the Danube River, at Burgas Wetlands and probably in some of the big inland marshes, such as Straldzha Marsh (Michev 1985; Simeonov *et al.* 1990; Kovachev *et al.* 2007, Figure 1).

Figure 1. Breeding localities and size of the colonies (black circles) of the Glossy Ibis in Bulgaria during 1890-1950

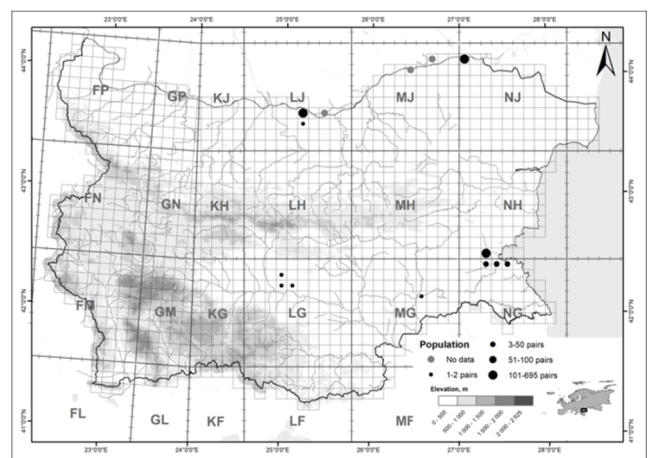


Scarce data about the numbers of the breeding pairs does not allow for a rough assessment of the population size, but it most probably has been (at least in some years) in the hundreds of pairs at each of the main localities.

The population faced significant reduction after the mass drainage of the marshes during the first half of 20th Century and in the period between 1951-1999 when most of the colonies disappeared. Several breeding localities survived along the Danube River, where up to 695 pairs have been recorded at Belene Island and up to 500 pairs at Srebarna Reserve. A population of up to about 200 pairs remains also at the Burgas Wetlands. It is well known that the species numbers are subject to significant fluctuations (Michev 1985; Simeonov *et al.* 1990) and years with no breeding pairs occur in all main localities at both Danube and Burgas regions during this period. Inland colonies disappeared with the drainage of the big marshes, but the creation of a few thousand micro-

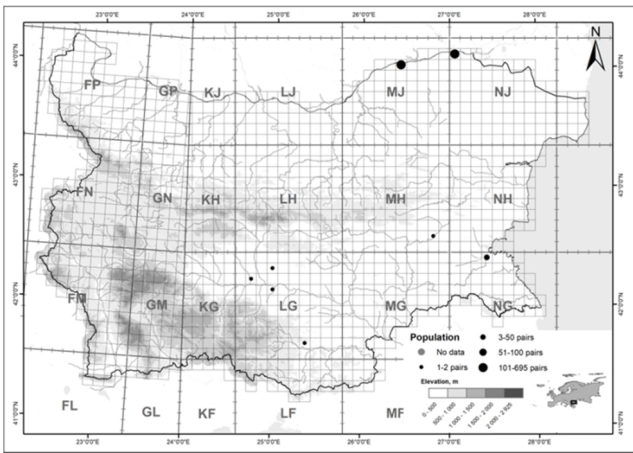
dams enhanced appearances of some heronries and incidental breeding of single pairs of Glossy Ibis in some of the locations (Michev 1985; Simeonov *et al.* 1990; Kovachev *et al.* 2007, Figure 2). During this period some of the breeding colonies went extinct (at Mandra Lake – since 1969, at Burgas Lake – since 1986, at Uzungeren Bay – since 1986), though part of the pairs moved to neighbouring sites and established new smaller colonies (about 30 pairs at Poda Reserve – since 1986).

Figure 2. Breeding localities and size of the colonies (black circles) of the Glossy Ibis in Bulgaria during 1951-1999



During the present period (2000-2017) at the same two main areas (the Danube River and Burgas Wetlands) three main breeding localities of the species remained: at Srebarna Lake (up to 175 pairs) and Kalimok Marsh (up to 150 pairs) along the Danube River, and at Poda Reserve (up to 27 pairs) in Burgas area. Accidental breeding of single pairs in different years occurred at five other sites (Figure 3).

Figure 3. Breeding localities and size of the colonies (black circles) of the Glossy Ibis in Bulgaria during 2000-2017



Dynamics of the breeding numbers

During the last five years (2013-2017) between nine (2017) and 291 (2015) pairs of Glossy Ibis have bred in Bulgaria. At around 1990 the national breeding population was estimated to have 100-700 breeding pairs (Simeonov *et al.* 1990), around 1995 – 200-300 pairs (Kostadinova, 1997), 50-150 in 1995-2005 (Kovachev *et al.* 2007).

In spite of the inconsistent data, it is clear that during the period between 1960-2016 in both main breeding areas (the Danube River and Burgas Wetlands) the numbers of the breeding pairs decreased (Figure 4a and 4b and Figure 5a and 5b). Along the Danube the numbers of the breeding pairs fluctuated significantly which can be observed also during the period after 2010. The numbers of pairs at Burgas Wetlands appeared more stabilised, although some fluctuations exist there, too.

Figure 4a. Dynamics of the breeding numbers of the Glossy Ibis along the Bulgarian part of the Danube River during 1960-1995

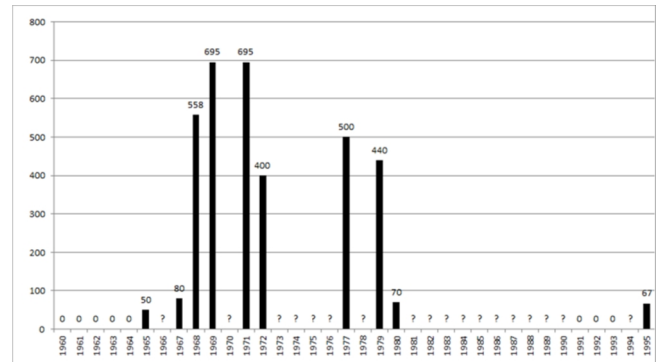


Figure 4b. Dynamics of the breeding numbers of the Glossy Ibis along the Bulgarian part of the Danube River during 1996-2017

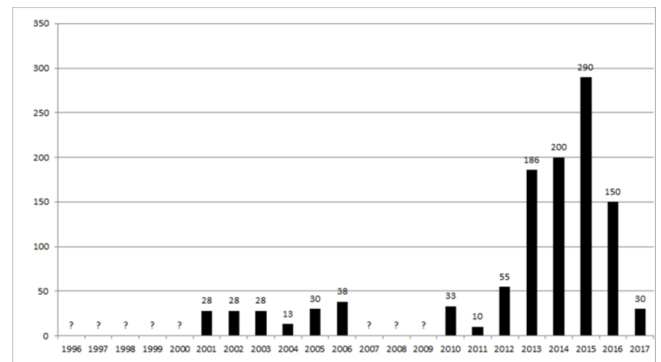


Figure 5a. Dynamics of the breeding numbers of the Glossy Ibis at Burgas Wetlands during 1960-1995

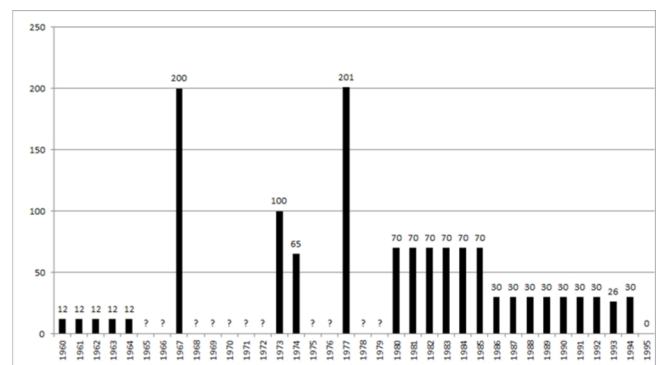
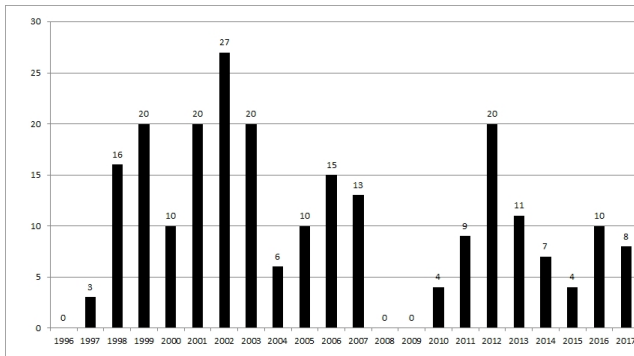


Figure 5b. Dynamics of the breeding numbers of the Glossy Ibis at Burgas Wetlands during 1996-2017



Discussion

Currently the Glossy Ibis breeds in Bulgaria mainly along the Danube River and the Poda Reserve (part of the Burgas Wetlands) in the central part of the Bulgarian Black Sea Coast. During the period between 2013-2017 two colonies existed along the Danube River: at Srebarna Lake (with 20-175 pairs) and Kalimok Marsh (with 0-150 pairs). During the breeding period Glossy Ibises were observed feeding at the marshes of Belene Island, but these are birds, breeding in a colony on the Romanian Bank of the river (S. Cheshmedzhiev, pers. comm. 2018). Along the Black Sea the Glossy Ibis breeds regularly in the mixed colony of herons, egrets, Eurasian Spoonbill *Platalea leucorodia* and Pygmy Cormorant *Microcarbo pygmaeus* at Poda Reserve with 4-11 pairs during the above-mentioned period. During the same period in inland Bulgaria single pairs bred at two small wetlands: Trud Fishponds (2014-2017) and

Konush Reservoir (2014).

Acknowledgements

We are deeply grateful to the volunteers from BSPB – BirdLife Bulgaria and to the other birders, who entered their records into the BSPB National Bird Databank. Sincere thanks to the experts who provided valuable information on the localities and numbers of the colonies, and especially to Anton Kovachev, Emil Todorov, Georgi Gerdzhikov, Girgina Daskalova, Iordan Kutsarov, Petar Shurulinkov, Ralitsa Georgieva, Strahil Peev, Svilen Cheshmedzhiev, Vladimir Mladenov.

REFERENCES

- BirdLife International. 2018. Species factsheet: *Plegadis falcinellus*. <http://www.birdlife.org> accessed 7 March 2018.
- Kostadinova, I. (ed.) 1997. Important Bird Areas in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 1. BSPB, Sofia, Bulgaria.
- Kovachev, A., T. Michev, E. Todorov and T. Alexandrov. 2007. Glossy Ibis *Plegadis falcinellus*. Pp. 86-87. In: Iankov, P. (ed.). Atlas of Breeding Birds in Bulgaria. Bulgarian Society for the Protection of Birds, Conservation Series, Book 10, BSPB, Sofia, Bulgaria.
- Michev, T. 1985. Glossy Ibis *Plegadis falcinellus* (L., 1766). P. 53. In: Botev, B. and Ts. Peshev (eds.). Red Data Book of Bulgaria. Volume 2, Animals. BAS, Sofia, Bulgaria.
- Michev, T., N. Kambourova and B. Michev. 2011. Glossy Ibis *Plegadis falcinellus* Linnaeus, 1766. P. 69. In: Golemansky, V. (ed.). Red Data Book of Bulgaria, Volume 2, Animals, BAS-MOEW, Sofia, Bulgaria. Digital edition, <http://e-coddb.bas.bg/rdb/en/vol2/Plfalcin.html>.
- Simeonov, S., T. Michev and D. Nankinov. 1990. The Fauna of Bulgaria. Vol. 20. Aves. Part I. BAS, Sofia, Bulgaria. (in Bulgarian with English Summary).