

FIRST CONFIRMED BREEDING OF THE MEDITERRANEAN SHAG *GULOSUS ARISTOTELIS* *DESMARESTII* IN ROMANIA AFTER 60 YEARS OF ITS ABSENCE

**Prvo potrjeno gnezdenje
sredozemskega vranjeka *Gulosus*
aristotelis desmarestii v Romuniji
v zadnjih 60-ih letih**

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Introduction

The European Shag (*Gulosus aristotelis*) is a colonial seabird that breeds in the Western Palearctic. The species can be found along the entire Atlantic coast of Europe as far north as Finland and Iceland and as far south as the coast of Morocco. It ranges through the entire Mediterranean, nesting on parts of the coastline of most European and North African countries, as well as parts of the Black Sea coast (DEL HOYO *et al.* 1992). The species is listed as Least Concern (LC), with its global population estimated at 230,000–240,000 individuals, while the European population is estimated at 153,000–157,000 mature individuals. The overall trend is decreasing (BIRDLIFE INTERNATIONAL 2019). Three subspecies are recognized, *G. a. aristotelis* (Linnaeus, 1761) – Iceland and Scandinavia to southern coasts of Iberian Peninsula, *G. a. desmarestii* (Payraudeau, 1826) – Mediterranean and Black Sea, and *G. a. riggenbachi* (E. J. O. Hartert, 1923) – coast of Morocco. The shags are essentially marine birds, especially along rocky coastlines or island groups (SNOW AND PERRINS 1998). This paper presents the first confirmed breeding of the European Shag in Romania after 60 years of its absence.

Materials and methods

The site of the present study is the Constanta harbour situated on the Western Black Sea coast, south-eastern Romania. It covers 3,926 ha of which 1,313 ha is land and the rest, 2,613 ha is water. The two breakwaters located northwards and southwards shelter the port, creating safety conditions for port activities. The Port of Constanta is the largest on the Black Sea and the 17th largest in Europe (WIKIPEDIA CONTRIBUTORS 2019).

Since 2013, the Constanta harbour has been one of the sites covered by the Romanian Ornithological Society during the International Waterbird Census carried out in mid-January. In this particular time, all inland wetlands are generally already frozen and many waterbirds, especially ducks, grebes, swans, coots, gulls and cormorants find favourable shelters and foraging grounds in the harbour bays. The harbour area is covered by 13 fixed count points from which the birds are counted. The observations are done with the help of binoculars 10x42 or 10x50 and spotting scopes 20–50x. The time spent at each fixed observation points differs due to the abundance of the waterbirds present, but don't last more than 20 min per point. Apart from the harbour infrastructure facilities located on the mainland, one semi-submersible platform is situated in the southern part of



Figure 1: The semi-submersible platform is situated in the southern part of the Constanta harbour where the small colony of Mediterranean Shag was found, 19. 3. 2019 (photo: Emil Todorov)

Slika 1: 19. 3. 2019 je bila najdena manjša kolonija sredozemskih vranjekov na polpotopni ploščadi, ki se nahaja v južnem delu pristanišča Konstanta (foto: Emil Todorov)



Figure 2: Nests of Mediterranean Shags situated on the semi-submersible platform, 23. 4. 2019 (photo: Emil Todorov)

Slika 2: Gnezda sredozemskih vranjekov na polpotopni ploščadi, 23. 4. 2019 (foto: Emil Todorov)

the harbour area 1,700 m offshore and 550 m away from the southward breakwater (Figure 1). Around the platform at a distance between 100 to 700 m in the southern direction, 4 floating navigation buoys are situated that are regularly utilized by the Great Cormorants (*Phalacrocorax carbo*) as breeding sites. The southward area of the Constanta harbour was visited 5 times from January to June 2019 and the observations were made from fixed observation point located at the southward breakwater dike (N 44.088555, E 28.677497) at a distance of 1,200 m.

Results

First observations of the Mediterranean Shag in the study area were made in mid-January 2019. A total of 13 individuals, adults and immatures were registered, resting on anchored navigation buoys, flying over or foraging in the harbour waters. Another visit was performed on 26 February, when 10 adult cormorants were observed, showing behaviour of pair formation. On 17 March, three well visible nest with Mediterranean Shags sitting in incubating position were observed, located on the south-western column of the platform approximately 18 m above the water level. Apart from the shag's nests found on the platform, another 26 occupied nest belonging to the Great Cormorant

(*Phalacrocorax carbo*) were recorded on 4 floating buoys nearby. On 23 April, 5 nests occupied by Mediterranean Shags were registered. Successful breeding was confirmed on 11 May when in 3 out of 5 nests, chicks were observed. Due to the long distance, the exact number of chicks per nest was impossible to determine, but an estimation between 1–2 chicks per nest was the most likely breeding success.

Discussion

The very first observation of the European Shag in Romania was made on 14 July 1959 on the Black Sea coast in offshore zone of the city of Constanta (CĂTUNEANU *et al.* 1978). Along the 240 km Romanian coastline there are no rocky coastlines, the preferred breeding habitats for the shags. The only suitable breeding area within the territorial waters of Romania is Snake Island (nowadays Ukrainian territory) located offshore the Danube Delta, 35 km away from the Romanian border, where breeding was confirmed (LINȚIA 1955). The low-slope rocky island covers 17 ha and was a former Romanian territory before its accession to the former Soviet Union in 1948. In the recent ornithological history of Romania, the first confirmed observation of the species with photos was made on 12 September 2012 near Vama Veche at the border with Bulgaria (DARÓCZI pers. comm.). Afterwards, the species became much more regular, but still rare with small numbers of up to 20 individuals mainly along the southern Romanian Black Sea coast. The nearest breeding colony of the species is located in Bulgarian territory near Cape Kaliakra, 50 km away from the Romanian border, estimated at 180–250 breeding pairs (IANKOV 2007). Another possible breeding site within Romanian waters might be on the Evangelia shipwreck (WIKIPEDIA CONTRIBUTORS 2019), 15 km south from the semi-submersible platform. The deck of the shipwreck has been a well-known breeding area of the Great Cormorant since 2012 when 63 breeding pairs were registered (ROMANIAN ORNITHOLOGICAL SOCIETY 2019). The presence of adult Mediterranean Shags in breeding plumage was registered on the shipwreck's deck in June 2017 (LAJOS pers. comm.), but without clear signs of breeding activity. In April 2019, up to 3 pairs were

registered and copulations observed (STANCIU pers. comm.). Although these are encouraging signs of breeding, nests were not registered, probably due to the fact that the shags chose to nest inside the shipwreck.

The newly established small colony represents the first confirmed breeding of the Mediterranean Shag in Romania after 60 years of its absence and the first established on an artificial breeding structure. In 2013, another newly established colony was found along the Southern Bulgarian Black Sea coast on a small rocky island (MLADENOV 2014), which clearly indicates that the species' population along the Western Black Sea coast is increasing and occupying new habitats.

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Povzetek

240 kilometrov dolga črnomoška obala v Romuniji nima skalnatih pečin, ki so primarno gnezdišče sredozemskega vranjeka. 23. aprila 2019 je bilo v južnem delu pristanišča Konstanca najdenih pet gnezd sredozemskih vranjekov *Phalacrocorax aristotelis desmarestii*. Gnezda so se nahajala približno 18 metrov visoko na jugozahodnem stebru polpotopne ploščadi, zasidrane 1700 m od kopnega. To je prvo potrjeno gnezdenje te vrste v Romuniji po več kot 60 letih njene odsotnosti.

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