

AUDOUIN'S GULL *Larus audouinii*, A NEW BREEDING GULL SPECIES IN THE ADRIATIC SEA (CROATIA)

Sredozemski galeb *Larus audouinii*, nova gnezdeča galebja vrsta v Jadranskem morju (Hrvaška)

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The last reliable information on the occurrence of Audouin's Gull *Larus audouinii* in the Adriatic dates back to the end of the 19th century. The nest-sites nearest to the area described herewith are those on the Apulian coast (Italy) and in the Aegean Sea (Greece). The present article deals with the new breeding area discovered in the Adriatic on some islets and rocks around the island of Korčula (S Dalmatia, Croatia). Here, the Audouin's Gull was recorded for the first time on July 19th 1996, when 4 birds were observed at sea off the village of Duba on Pelješac Peninsula. In the springs of 1997 and 1998, the authors surveyed 29 islets and rocks in the area covering some 700 km². In 1997, 7 breeding pairs on 6 islets were recorded, while in 1998 6 pairs were registered on 5 islets. Audouin's Gulls were seen mostly in pairs, and courtship activity by a male was also noted. The Audouin's Gulls breeding in colonies together with the Yellow-legged Gulls *Larus cachinnans* were more aggressive than those breeding separately. During the research, a nest was also found, while on July 21st 1997 a juvenile Audouin's Gull was sighted on the SW coast of Korčula. The authors believe that Audouin's Gull could also breed on some other islands along the Dalmatian coast in Croatia.

Key words: *Larus audouinii*, Audouin's Gull, new breeding site, Adriatic Sea, Croatia
Ključne besede: *Larus audouinii*, sredozemski galeb, novo gnezditveno območje, Jadransko morje, Hrvaška

1. Introduction

Audouin's Gull *Larus audouinii* is a rare seabird whose breeding population is endemic to the Mediterranean region (ORO 1995), where it breeds locally on rocky islets and isolated peninsulas (HOOGENDOORN & MACKRILL 1987), normally not more than 50 m above sea-level (SNOW & PERRINS 1998). Audouin's Gull is more strictly coastal than other large gulls, and is very rarely encountered far from the sea. Nevertheless, there are few records existing from inland Europe, France, Switzerland and the Czech Republic (KING & SHIRIHAI 1996).

The population of Audouin's Gull marked a major increase from less than 1,000 pairs in 1966 to more than 17,000 in 1996 (LAMBERTINI 1996). Two breeding colonies, the Ebro delta and Chafarinas Islands

(both in Spain), hold nearly 90% of the world breeding population with the rest of the population being situated mostly on rocky islands in Italy, France and Greece (LAMBERTINI 1996, JUANA 1997).

There are no recent observations published that would prove the presence of Audouin's Gull in the Adriatic Sea. The only existing information on this species' observation in the Adriatic Sea dates back to the end of the 19th century, when Audouin's Gull was observed in Trieste (Italy) and Piran (Slovenia), whereas the statements of several observations on the Istran Peninsula (Croatia) were not proved to be certain (KRALJ 1997). The closest known breeding colonies to the area described in this article are those in the Aegean and Ionic Seas and in the colony discovered in 1993 in the Taranto Gulf off the Apulian coast in Italy, which is only some 300 km

away (KING & SHIRIHAI 1996, SERRA *et al.* 1997, SNOW & PERRINS 1998).

In the article, the discovery and description of this species' new breeding site are presented. This is the first proved record of Audouin's Gull in Croatia, and together with it the species' new breeding ground is described. Some other areas in the Adriatic Sea, where this gull species could possibly breed, are also referred to.

2. Study Area and Methods

The area discussed involves Korčula Island and the southwestern part of the Pelješac Peninsula (Figure 1). The area is situated in Southern Dalmatia (Croatia, Adriatic coast), approximately 50 km from the town of Dubrovnik, between 42°50' – 43°00' N, and 16°30' – 17°20' E, and covers the area of approximately 700 km². Our research was limited to some smaller islets and rocks around Korčula Island. Altogether, 29 islets and rocks were surveyed. The islets are mostly bare-grounded or covered with short bushes or/and grass (Figure 2), with only few larger ones covered also with tall pine trees *Pinus halepensis*.

Censuses were made during the end of April and early May in 1997 and 1998, at the beginning of Audouin's Gull breeding period (GLUTZ VON BLOTZHEIM & BAUER 1982). Additional observations were made at the end of May and in mid July 1997.

The censuses were carried out by a thorough examination of the islets from a small boat, by rounding the islets or, in the cases of slightly larger islets, on



Figure 2: Typical breeding habitat of Audouin's Gull *Larus audouinii* in the Adriatic Sea are small islets and rocks (photo: B. Rubinič)

Slika 2: Značilno gnezdišče sredozemskega galeba *Larus audouinii* v Jadranskem morju so otočki in čeri (foto: B. Rubinič)

foot. The surface was additionally examined from the shore with the aid of field telescopes (20–60 × magnification). With this method, the existing larger colonies of Yellow-legged Gulls *Larus cachinnans* were also examined in search of possible Audouin's Gulls. For each islet, the numbers of Audouin's Gulls and whether seen solitarily or in couples were recorded. Notes on every territorial and courtship activity were taken, too. Apart from the Audouin's Gull numbers, a census of Yellow-legged Gulls breeding pairs was made in 1997, separately for each islet, on which the vegetation type (grass, bushes, trees) was also noted.

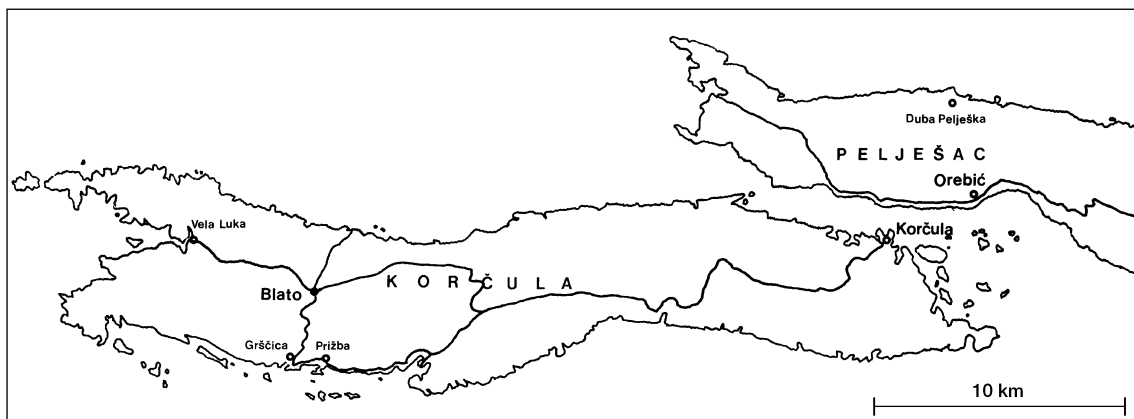


Figure 1: Study area where new breeding site of Audouin's Gull *Larus audouinii* in the Adriatic Sea was found

Slika 1: Obravnavano območje v Jadranskem morju, v katerem je bilo odkrito novo gnezdišče sredozemskega galeba *Larus audouinii*

Table 1: Results of censuses carried out on islets and rocks near Korčula Island at the end of April and in the beginning of May 1997 and 1998 (only the locations with discovered breeding gulls are presented)**Tabela 1:** Rezultati popisa na otočkih in čerih v bližini Korčule ob koncu aprila in v začetku maja 1997 in 1998 (predstavljene so le lokacije z ugotovljenimi gnezdečimi galebji kolonijami)

location / lokacija	number of pairs / število parov			vegetation type / tip vegetacije
	1997		1998	
	<i>L. audouinii</i>	<i>L. cachinnans</i>	<i>L. audouinii</i>	
I	1	1	-	bare / goli
II	-	40	-	grass, bushes / trava, grmičevje
III	1	1	1	mainly bare / pretežno goli
IV	1	50	-	trees / drevje
V	-	few	2	trees / drevje
VI	1	-	1	grass / trava
VII	-	200	-	grass, bushes / trava, grmičevje
VIII	-	100	-	grass, bushes / trava, grmičevje
IX	-	-	1	trees, bushes / trava, grmičevje
X	2	100	1	grass / trava
XI	1	20	-	grass / trava
total / skupaj	7	>512	6	

3. Results and Discussion

The first observation of Audouin's Gull was on the NW side of the Pelješac Peninsula, near the village of Duba, where four birds were observed on July 19th 1996. One of the birds was in adult summer plumage, two in 3rd summer, and one bird was moulting from 2nd summer to 3rd winter plumage. This observation gave us the initiative for the later research in the years 1997 and 1998.

In 1997, altogether 7 breeding Audouin's Gull pairs on 6 different islets were found (Table 1). In 1998, 5 islets held 6 breeding pairs, but only three sites were the same as in the previous year. In 1998, 3 sites that had been inhabited in 1997 were not occupied and 2 were new.

The Audouin's Gulls were usually seen in pairs, twice the courtship activity was observed. When the islets occupied by Audouin's Gulls was approached too closely, the birds usually became excited and began to fly around the boat and the islets at a respectful distance. When we landed on an islet, the birds flew some 100 m away to the sea and landed on the water, choosing not to return until we had left. On the islets where Audouin's Gulls were nesting together with Yellow-legged Gulls, the Audouin's Gulls were generally slightly more aggressive, and usually kept on flying around the islets even after we

had landed on them. The Audouin's Gull's alarm calls were recorded only in mixed colonies, never on the islets with only Audouin's Gulls present. General impression was that, comparing with the more aggressive Yellow-legged Gulls (when approached, the breeding colony the Yellow-legged Gulls were giving strong alarm calls and low flying attacking behaviour was commonly recorded), the Audouin's Gulls were relatively shy and non-aggressive. Their »carefree« behaviour was hardly recognised as nesting, although such behaviour is characteristic for smaller colonies of this species (LAMBERTINI *pers. comm.*).

During the research, only one abandoned nest of Audouin's Gull was found. There was one broken egg with half-developed embryo in the nest. The nest was situated on the margin of the Yellow-legged Gull's colony. On July 21st 1997, a fully fledged juvenile was observed on the SW coast of Korčula Island.

The shy behaviour and changing of nesting localities indicate that this breeding site was probably only recently established (LAMBERTINI *pers. comm.*).

Due to the large expansion of Audouin's Gull in the Western Mediterranean (HOOGENDOORN & MACKRILL 1987, LAMBERTINI 1995) we can conclude that this species has slightly increased in its numbers in the Eastern Mediterranean as well. So far, the evidence for such increase has been provided by the new discoveries of Audouin's Gull's colonies on the



Figure 3: An adult Audouin's Gull *Larus audouinii* near Korčula Island on April 27th 1998 (photo: B.Rubinič)

Slika 3: Odrasel sredozemski galeb *Larus audouinii* na Korčuli 27.4.1998 (foto: B. Rubinič)

Apulian coast in Italy and in the Adriatic Sea in Croatia (auth. comm.). Furthermore, we can expect some new discoveries of the Audouin's Gull's colonies elsewhere in the Adriatic (islands off Dalmatian coast in Croatia) and in the Eastern Mediterranean.

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4. Povzetek

Zadnji podatki o pojavljanju sredozemskega galeba *Larus audouinii* v Jadranskem morju so s konca 19. stoletja. Najbližja gnezdišča Jadranu so znana z Apulijske obale (Italija) in Egejskega morja (Grčija). Prispevek opisuje najdbo novega gnezdilnega območja v Jadranskem morju na otočkih in čerih v okolici otoka Korčula (J Dalmacija, Hrvaška). Prvič je bil sredozemski galeb na tem območju ugotovljen 19.7.1996, ko so bili na morju pred Dubo na Pelješcu opazovani 4 osebk. Spomladi leta 1997 in 1998 sta avtorja pregledala 29 otočkov in čeri v okolici Korčule na območju, velikem 700 km². V letu 1997 sta registrirala 7 gnezdečih parov na 6 otočkih, leta 1998 pa 6 parov na 5 otočkih. Sredozemski galebi so bili opazovani večinoma v parih, opazovano je bilo tudi dvorjenje samca. Sredozemski galebi, ki so gnezdili v kolonijah skupaj z rumenonogimi galebi *Larus cachinnans*, so bili bolj agresivni kot tisti, ki so gnezdili ločeno. Med raziskavo je bilo najdeno tudi gnezdo, 21.7.1997 pa je bil na JZ obali Korčule opazovan juvenilni osebek sredozemskega galeba. Avtorja menita, da bi sredozemski galeb lahko gnezdil tudi na nekaterih drugih otokih vzdolž dalmatinske obale.

5. References

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