Population status of the Collared Pratincole *Glareola pratincola* in Albania

Mirjan Topi, Zydjon Vorpsi, Ledi Selgjekaj, Vladimir Mladenov

The Collared Pratincole is a breeding species in Albania. Here, we present new findings on its breeding numbers, distribution, and habitat selection in the country. Initial inferences about habitat requirements were based on two already known colonies of the species. Based on this information, we made a map to identify similar habitats in the western coastal lowlands of Albania. These habitats were visited during the breeding season, to search for new colonies. Seven colonies were found, with a total of between 557 and 637 pairs. All colonies were in abandoned agricultural land that was created by drainage of wetlands in the past, now covered mostly with *Salicornia* sp. to an extent of 60–70% vegetation cover, the rest of the cover being bare ground. Adding the newly discovered colonies increased the known national population of the Collared Pratincole by about four times. Albania thus has an important share of the European population, estimates ranging from 4.3 to 8.1%.

The Collared Pratincole *Glareola pratincola* occurs in the Afrotropical, Palearctic and Indomalayan biogeographical regions. In the European Red List of birds, the European population is given as 17 500–35 000 adult individuals, with a best estimate of 23 800 individuals (BirdLife International 2021a). Numbers of pairs per country can be found in the downloadable supplementary material of the Red List (BirdLife International 2021b). In Europe, the countries with the highest breeding population estimates are Spain (2700–5100 pairs), Turkey (1500–3000 pairs), Azerbaijan (500–3000 pairs), and Russia (1400–2000 pairs; BirdLife International 2021a).

The number of breeding pairs for Albania was given as 150–200 (BirdLife International 2021a). Recently, Mladenov et al. (2017) confirmed the breeding of the species around Narta Lagoon, with a total population size of 15 pairs. In a survey covering the western wetlands of Albania, Mladenov and Georgieva (2018) confirmed the species as breeding in three wetlands of Albania: in Divjakë-Karavasta, Lalzi Bay, and Narta Lagoon, with a total population size of 105–108 pairs, of which 60–65 pairs were in the area of Karavasta.

The aim of this study was to report recent findings on the breeding population of the Collared Pratincole in Albania and to give an overview of threats to the population.

1. Methods

The study was carried out in three Albanian coastal wetland and former wetland areas that had been drained for cultivation purposes in the past (Fig. 1): (1) Durrësi wetland, to the north of the city Durrës, formed under the influence of the Erzeni river; (2) the wide wetland complex Seman-Vjosë that includes the Divjakë-Karavasta national park and the Vjosë-Nartë protected area, and (3) the wetland area of Butrint formed under the influence of the Pavllo river, within the borders of the Butrint national park.

We started with collecting information on the habitat requirements of the Collared Pratincole in Albania, based on three breeding sites previously found in the country. The two first sites were described by Mladenov et al. (2017) and Mladenov and Georgievea (2018). The third site was discovered by the authors of this study on 28 July 2019, at the end of the breeding season.

All three sites had the common feature of being flat abandoned agricultural areas that were created by drainage of the wetlands in the past and that, after agricultural abandonment, were covered mostly with *Salicornia* sp. vegetation. These surfaces are rather easy to spot in Google satellite imagery (Fig. 2).

Thus, we used Google satellite imagery to map all surfaces with the features described above. To increase efficiency of the field work and decrease surveying time, the initial map was further elaborated by adding another feature that we found to be important: the extent of vegetation cover. We noticed that Collared Pratincole colonies were situated in areas that were covered

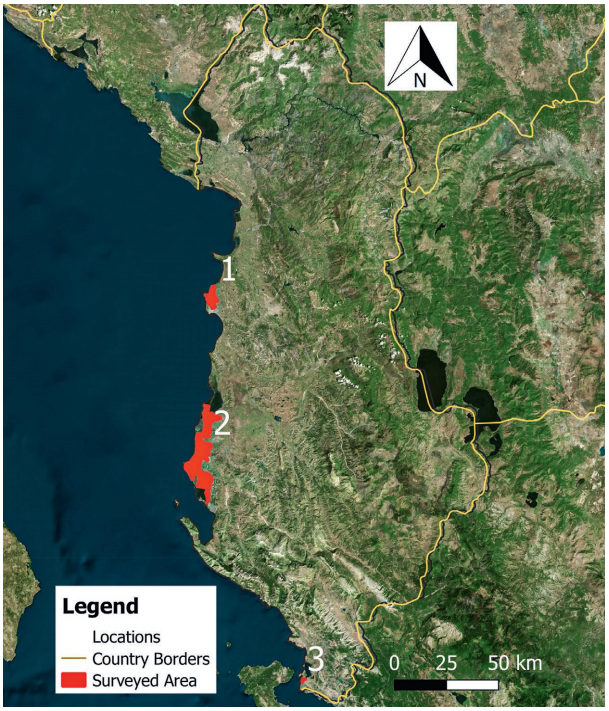

Figure 1. Map of Albania with the surveyed areas. 1 = Durrësi wetland, 2 = Seman-Vjosë, 3 = Butrint.
Karte von Albanien mit den untersuchten Gebieten. 1 = Feuchtgebiet von Durrës, 2 = Seman-Vjosë, 3 = Butrint.

Figure 2. Aerial photo of the habitat required by the Collared Pratincole (left, red line) and of cultivated land (right, yellow line).
Luftbild des von der Rotflügelbrachschwalbe benötigten Lebensraums (links, rote Linie) und der Anbauflächen (rechts, gelbe Linie).

by *Salicornia* sp. to an extent of 60–70%, the rest being bare ground. Therefore, the survey area was divided into two strata: (1) areas matching the more specific habitat requirements, taking the extent of vegetation cover into account (yellow areas in Fig. 3), and (2) potential habitats to be surveyed (red areas in Fig. 3).

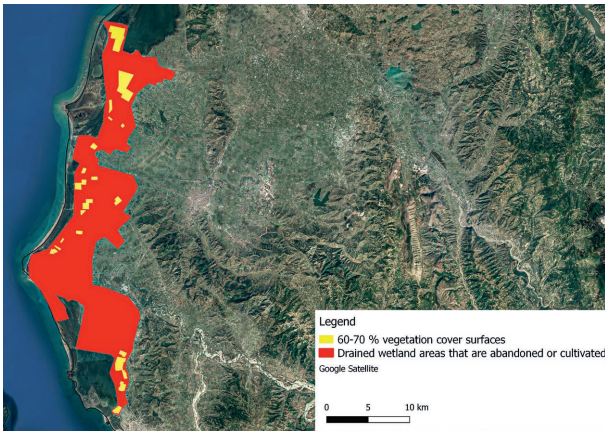

Figure 3. The surveyed area in Seman-Vjosë. Red plots are all potential habitats of the Collared Pratincole; yellow plots are areas that match more specific habitat requirements, i.e., that the vegetation cover is 60–70%.
Das Untersuchungsgebiet in Seman-Vjosë. Die roten Flächen sind alles potenzielle Lebensräume der Rotflügelbrachschwalbe; die gelben Flächen sind Gebiete, die spezifischere Lebensraumanforderungen erfüllen, d.h. die Vegetationsdecke beträgt 60–70 %.

The yellow areas were surveyed through walking through the entire habitat, while the red areas were surveyed through approaching the potential sites and surveying the area with binoculars from a car that offered some elevation in the totally flat environment.

In the breeding season of 2020, we searched for new colonies in site 1 (Durrësi wetland) on 1 and 2 July. On 16 and 17 July 2020, we searched for colonies in site 2 (Seman-Vjosë, where we visited only part of the area). Additional field work in site 2 (in Narta) was carried out on 12 and 13 June 2021. On 9 to 11 July 2022, the entire site 2 area was visited to search again for new colonies. We surveyed site 3 (Butrint) on 21 and 22 May 2020.

Once the colonies were found, the breeding pairs in some of the colonies were counted by a team of three researchers, walking within the colony in a triangular formation. The first two members of the team walked ahead, flushing the adult birds, while the third observer was standing about 70 m behind the others, to count the flushed birds. To obtain the number of breeding pairs, the total number of adults was divided by two. In some colonies, the numbers of breeding pairs were counted by only one researcher. In this case, the numbers were considered approximative, because exact counts were hard to obtain with only one observer. Counts were done no more than five days after a colony was discovered.

Colonies found in 2020 were visited also in 2021 and 2022, to check whether they were still present and to count numbers of breeding pairs.

Figure 4. Aerial photo of site 1 (Durrësi wetland), where two colonies were found in 2020. The dots represent the center of a colony, and the numbers are estimates of breeding pairs.
Luftbild von Standort 1 (Feuchtgebiet von Durrës), wo 2020 zwei Kolonien gefunden wurden. Die Punkte stellen das Zentrum einer Kolonie dar; die Zahlen sind Schätzungen der Brutpaare.

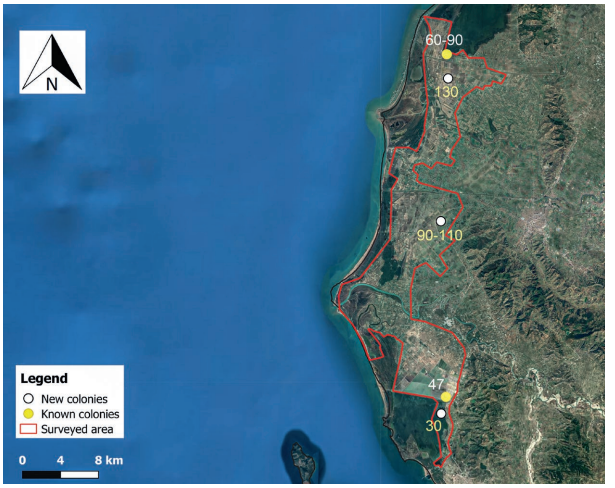

Figure 5. Aerial photo of site 2 (Seman-Vjosë), where five colonies were found. White dots are the newly discovered colonies, yellow dots are colonies that have been already known. Numbers are estimates of breeding pairs.
Luftbild von Standort 2 (Seman-Vjosë), wo fünf Kolonien gefunden wurden. Die weissen Punkte sind die neu entdeckten Kolonien, die gelben Punkte sind bereits bekannte Kolonien. Die Zahlen sind Schätzungen der Brutpaare.

2. Results

Two new colonies were found in site 1 (Durrësi wetland), in about 2 km distance from each other (Fig. 4). A total of 200 to 230 pairs were counted in the site, 130 pairs in the southern colony and 70 to 100 pairs in the northern colony.

In site 2 (Seman-Vjosë), three new colonies were found, in addition to the already known two colonies (Fig. 5). In the first colony situated at the southernmost edge of the Karavasta Lagoon, a total of 60 to 90 breeding pairs were counted. In the second colony that was newly discovered in about 2.5 km distance to the south, a total of 130 breeding pairs were counted. In the third colony, discovered in 2022 close to the city of Fier, the total number of breeding pairs was 90–110. In the fourth colony, in the Salinas of Vlora, 47 breeding pairs were counted in 2020. 30 pairs were counted in the newly discovered fifth colony in 2021, breeding in the embankments of former fish-farm ponds in the Lagoon of Narta. The total number of breeding pairs in site 2 was 357–407.

In site 3 (Butrint national park), no breeding pairs of the Collared Pratincole were found.

The total number of breeding pairs in the entire surveyed area in Albania was between 557 and 637. All colonies were in the same habitat type: drained areas of wetlands, with a vegetation cover of about 70% *Salicornia* sp. vegetation.

3. Discussion

Using the existing data, it is difficult to evaluate if the breeding population of the Collared Pratincole has increased or decreased, compared to previous years. The oldest data about the Collared Pratincole in Albania are from 1906, when Reginald B. Lodge reported the species to breed at the Bojana river in north-western Albania, but did not give population estimates (Lodge 1908). Ticehurst and Whistler (1932) saw seven individuals of the species in the area of Vlora during the breeding season in May, but they were not able to confirm breeding. Kattinger (1943) reported the observation of one individual on 22 June in the western part of the city Vlora. Lamani and Puzanov (1962) described the species as common in the Albanian lowlands but did not give specific geographical locations or data about the size of the breeding population. Barbieri et al. (1986) reported around 10 individuals in the saline areas of the Karavasta lagoon.

From the above cited literature, the only source that reports the species as «common» is Lamani and Puzanov (1962; without giving numbers of breeding pairs). The other sources rather suggest that the species was a rare breeder in the past.

It could be possible that the population of the Collared Pratincole in Albania has increased from the 1990s. After the fall of the centralised economy in the early 1990s, the saline agricultural areas that were ar-

Figure 6. Colony site situated in the south of Divjakë-Karavasta national park borders, where 130 breeding pairs were counted. Photo 14 May 2022, Mirjan Topi.
Koloniestandort im Süden des Nationalparks Divjake-Karavasta am 14. Mai 2022, wo 130 Brutpaare gezählt wurden.

Figure 7. Nesting Collared Pratincole in the colony of Narta Salinas, where 47 pairs were found. Photo 15 June 2020, Mirjan Topi.
Brütende Rotflügelbrachschwalbe am 15. Juni 2020 in der Kolonie von Narta Salinas, wo 47 Paare gefunden wurden.

Figure 8. Birds in the colony of Durrësi wetland; here, 130 pairs were counted. Photo 8 May 2021, Zydjon Vorpsi.
Vögel in der Kolonie des Feuchtgebiets von Durrës am 8. Mai 2021; hier wurden 130 Paare erfasst.

tificially created by the drainage of the wetlands were abandoned, and the natural vegetation started to take over. These wide flat areas, covered by around 60–70% with *Salicornia* sp. vegetation, appear to provide favourable habitats for breeding Collared Pratincoles in Albania. Therefore, the availability of nesting habitats has increased, and this might have promoted an increase of the breeding population in Albania.

The Collared Pratincole is listed as «least concern» at the global level, although the population has seen a decline in range and numbers in its entire range and a strong fluctuation in Europe (Wetlands International 2015, BirdLife International 2021b). In Albania, the species holds the status «vulnerable» in the Red List of the Albanian flora and fauna (Ministria e Mjedisit, Republika e Shqipërisë 2013). It is important to emphasize that the breeding habitat of the species in Albania is under strong pressure from infrastructure development. All colonies are severely threatened by habitat destruction, apart from one of the colonies that is situated within the borders of the national park Divjakë-Karavasta. In the Lalzi bay, both colonies are likely to be destroyed due to urbanization in the near future. In Divjakë-Karavasta, the colony that is outside the borders of the national park is also threatened by habitat destruction, as the usage of the area where it is situated is planned to be changed. Moreover, in Vjosë-Nartë, the colony was in dry pools of the salinas that have not been used for years. After our surveys, however, some of the dried pools covered with *Salicornia* vegetation were turned back into function, hence destroying a considerable part of the habitat for the Collared Pratincole.

4. Conclusions

This study showed that the breeding population of the Collared Pratincole in Albania is larger than previously reported and constitutes about 4.3 to 8.1% of the European population. Based on these findings, Albania is one of the most important countries for this species in Europe, being the country with the fourth-largest European breeding population. Nevertheless, the population of this species is highly threatened and might decrease soon, due to the loss of breeding habitat. It is important to preserve these breeding habitats and to work towards their proclamation as protected areas.

Acknowledgements

Our thank goes to the Adriatic Flyway 4 Project that sponsored some of the field work costs in Durrësi wetland. We thank also Ardian Koçi and Ervin Allushi from the regional administration of the protected areas Fier, who helped in the inventorying of the Collared Pratincole in Karavasta.

Zusammenfassung

Topi M, Vorpsi Z, Selgjekaj L, Mladenov V (2022) Brutbestand der Rotflügelbrachschwalbe *Glareola pratincola* in Albanien. Ornithologischer Beobachter 119: 376–381.

Die Rotflügelbrachschwalbe brütet in Albanien. Wir stellen hier neue Erkenntnisse über ihren Brutbestand, ihre Verbreitung und die Wahl ihres Lebensraums in Albanien vor. Erste Rückschlüsse auf die Lebensraumansprüche wurden anhand von zwei bereits bekannten Kolonien gezogen. Auf der Grundlage dieser Informationen haben wir eine Karte erstellt, um ähnliche Lebensräume im westlichen Küstentiefland Albaniens zu identifizieren. Diese Lebensräume wurden während der Brutzeit aufgesucht, um nach neuen Kolonien zu suchen. Es wurden sieben Kolonien mit insgesamt 557–637 Brutpaaren gefunden. Alle Kolonien befanden sich auf verlassenen landwirtschaftlichen Flächen, die in der Vergangenheit durch die Trockenlegung von Feuchtgebieten entstanden waren und heute zu 60–70 % mit *Salicornia* sp. bewachsen sind, während der Rest des Bodens kahl ist. Mit den neu entdeckten Kolonien hat sich die bekannte nationale Population der Rotflügelbrachschwalbe etwa vervierfacht. Albanien hat somit einen bedeutenden Anteil an der europäischen Population, der schätzungsweise 4,3–8,1 % erreicht.

References

Barbieri F, Bogliani G, Prigioni C (1986) Note sull'ornitofauna dell'Albania. Rivista Italiana di Ornitologia 56: 53–66.

BirdLife International (2021a) European Red List of birds. Publications Office of the European Union, Luxembourg.

BirdLife International (2021b) *Glareola pratincola*. The IUCN Red List of threatened species 2021: e.T22694127A166268593. https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T22694127A166268593.en, accessed 8 October 2022.

Kattinger E (1943) Beiträge zur Vogelkunde von Albanien (Shqipnia) und einiger jugoslawischer Nachbargebiete. Larus 12–13: 123–216.

Lamani F, Puzanov V (1962) Inventarizimi i shpendëve të Shqipërisë. Buletini i Shkencave Natyrore 3: 87–103, 4: 110–118.

Lodge RB (1908) Bird-hunting in Wild Europe. Robert Culley, London.

Ministria e Mjedisit, Republika e Shqipërisë (2013) Urdhër 1280, datë 20.11.2013. Për miratimin e listës së kuqe të florës dhe faunës së egër. https://dokumen.tips/documents/urdhr-nr-1280-dat-20112013-pr-miratimin-urdhr-nr-1280-dat-20112013.html?page=1, accessed 8 October 2022

Mladenov V, Georgieva R (2018) Distribution, population size and main threats of breeding shorebirds along Albania's seacoast wetlands, 2018. Technical report under the project financed by the International Wader Study Group small project grants.

Mladenov V, Georgieva R, Iliev M, Barzova Y, Djulgerova S, Topi M, Lleshi R, Nikolov SC (2017) Breeding birds in the Narta Lagoon (SW Albania) in 2016. Acrocephalus 39: 7–25.

Ticehurst CB, Whistler H (1932) On the ornithology of Albania. Ibis 2: 40–93.

Wetlands International (2015) Waterbird population estimates. wpe.wetlands.org, accessed 17 September 2015.

Manuscript received 28 April 2022

Authors

Mirjan Topi has been working in the field of bird conservation in Albania for a decade. He is co-author of the first complete field guide of birds of Albania published in 2016. Apart from research, he also works as a birding tour leader in Albania. Zydjon Vorpsi has been working in conservation and the study of birds in Albania in the last 5 years, particularly on the Egyptian Vulture and the White Stork. He is particularly interested in networking, capacity building, and institutional consolidations of civil society organizations (CSOs) in Albania. Ledi Selgjekaj currently coordinates the study and conservation efforts for the Egyptian Vulture in Albania as well as other conservation projects. She is a keen birder but is also interested in reptiles and amphibians. Vladimir Mladenov has a special interest in the study and conservation of waders. He is one of the leading ornithologists in the Balkans for catching pelicans and geese with traps and equipping them with satellite transmitters. He currently works mostly on the wetland of Burgas in Bulgaria.

Mirjan Topi, Center Birds of Albania, Rr. Petro Marko Nr. 42, Vlorë, Albania, e-mail m.topi@birdsofalbania.org
Zydjon Vorpsi, Ledi Selgjekaj, Protection and Preservation of Natural Environment in Albania, Rr. Janos Hunyadi, Godina 32, Ap. 11, Tirana 1019, Albania
Vladimir Mladenov, Bulgarian Society for Protection of Birds/BirdLife Bulgaria, Yavorov complex, bl. 71, vh. 4, PO box 50, 1111 Sofia, Bulgaria