

Population status of the Kentish Plover *Charadrius alexandrinus* in Eastern Romania

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The results of a survey of the Kentish Plover in the Razim–Sinoie lagoon system south of the Danube delta, E Romania, are presented. *Charadrius alexandrinus* is a common breeding bird and occurs mainly in the southern half of the lagoon complex. The Razim–Sinoie lagoon system is the most important breeding site for the Kentish Plover in Romania. 100–400 pairs, perhaps more in good years, are estimated to breed in this area. Therefore the 400–500 pairs given by Weber *et al.* (1994) for the whole of Romania is considered to be too low. The breeding success of the Kentish Plover is thought to be very poor, partly due to intensive cattle grazing and partly human disturbance. Efforts to protect the Kentish Plover and the unique wetlands in E Romania need to be strengthened.

INTRODUCTION

One of the most important sites for migratory waders in eastern Romania is the Razim–Sinoie lagoon system. Since 1990, surveys of waterfowl and shorebirds in this area have been made by volunteers from the Biologische Station "Rieselfelder Münster" in close co-operation with the Societatea Ornitologica Romana and the Danube Delta Research and Design Institute. The main purpose of the project was to monitor waders and waterfowl on spring migration, identifying sites visited and habitat requirements, in order to assess the international importance of the lagoon system as a stop-over site (see Schmitz *et al.* 1999). In 1995 and 1996, additional information was gathered on the occurrence, distribution and population size of breeding waders and waterbirds.

The Razim–Sinoie lagoon system is situated on the west coast of the Black Sea, south of the Danube delta (Figure 1). Brackish lakes with vast shallow parts and reed beds make up most of the area. Grazed steppe areas and pastureland surround the lagoons. The lakes are separated and protected from the sea by sand dunes, which formerly had gaps in them allowing the penetration of seawater. The lagoons extend over 90,000 ha and are part of the "Danube Delta Biosphere Reserve" comprising 591,200 ha (marine parts included). In 1991, the delta was notified as a Ramsar site and more than half was included in the World Heritage List.

In this paper, we describe the breeding distribution, population size and aspects of the ecology of the Kentish Plover in the Razim–Sinoie lagoon system, as this wetland is of special importance for the species in Romania.

METHODS

Waders and waterbirds were surveyed between 1990 and 1996 during the spring migration and early breeding period.

Survey periods differed from year to year, but taking all years together the period covered extended from the end of March to the beginning of June. Data on the breeding of *Charadrius alexandrinus* were obtained in 1995 and especially in 1996. The number of breeding pairs in the lagoon complex was estimated on the basis of counts in the second and third decades of May 1996.

RESULTS AND DISCUSSION

As a breeding bird, the Kentish Plover is restricted to the eastern parts of Romania (Weber *et al.* 1994). The breeding range extends over the eastern lowlands and the Dobrogea including the coastal lagoons. This distribution resembles that of the steppe zone in Romania. Mean temperatures are comparatively high in this area with low precipitation.

Figure 2 shows the distribution of breeding Kentish Plovers in the Razim–Sinoie lagoon system in 1996. The breeding sites were concentrated in the southern part of the lagoon complex, around lakes Sinoie and Istria, in the surrounding "Grinduls" (sandy and more or less dry areas covered with sparse, often halophytic vegetation) and the nearby seashore. Nesting occurred in three different habitats: (1) on the seashore (sandy beaches, patchily overlaid with seashells where the vegetation of the adjacent dunes sometimes intrudes onto the shore; see Table 1). (2) On the "Grinduls" (mainly on dry ground patchily vegetated with *Salicornia* sp.) and (3) on a sandy area, partly overgrown with *Artemisia* sp. (?), always near the lakeshore or small shallow pools. The highest densities were reached in the latter habitat (counting area 4, Figure 2, see also Table 1), but perhaps the lowest breeding success. In this area, Kentish Plovers, and all other ground-breeding birds, were disturbed by intensive sheep grazing. Similar problems are likely in other parts of the lagoon complex.

In suitable habitats, Kentish Plovers breed semi-colonially

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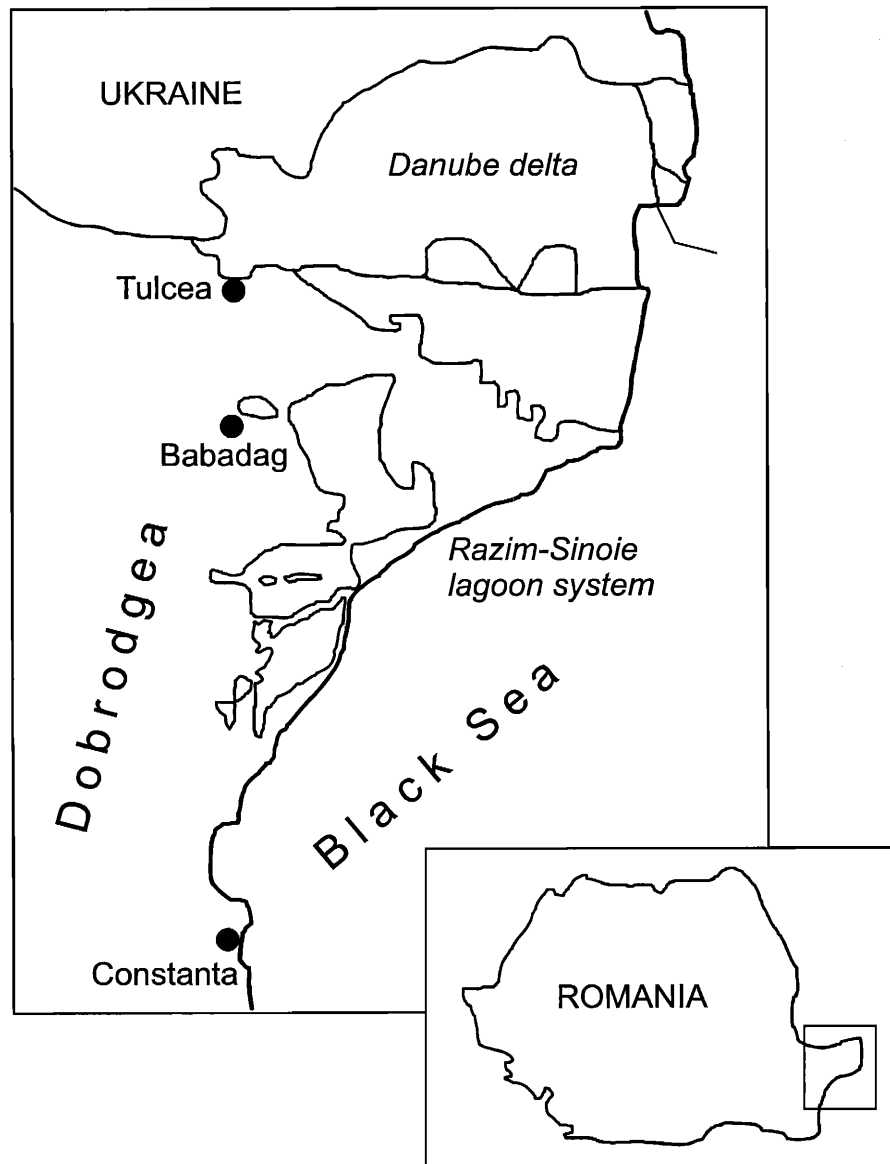


Figure 1. Location of the Danube Delta and the Razim-Sinoie lagoon system.

in eastern Romania, but the occurrence of single pairs is not unusual. They were often accompanied by colonies of Collared Pratincoles *Glareola pratincola* on the "Grinduls" of the Razim-Sinoie lagoon system and in some cases shared the same habitat with Little Terns *Sterna albifrons*.

In 1996, about 205 pairs of Kentish Plovers bred in the surveyed parts of the lagoon complex (Table 1). However, numbers seem to vary considerably from year to year. Brehme *et al.* (1992) reported 200 pairs for the "Histria wetlands" (counting areas 1–5, Figure 2) in 1986 and Weber (2000) considered that there may be as many as 400 pairs in the southern part of the lagoon system. The numbers estimated in the 1996 survey for these areas were far less (despite the concentration of about 65 pairs in counting area 4). A higher density of breeding Kentish Plovers may be possible. However, this is very much dependent on the water level in the lagoon system and the coverage of the vegetation. When there is high precipitation in late winter and early spring, there may be a larger area of shallow pools and unvegetated ground making the habitat more suitable for *Charadrius alexandrinus*. The breeding population of the

entire lagoon system can be estimated at 100–400 pairs, perhaps more in good years. Weber *et al.* (1994) give 400–500 pairs as the population of the whole of Romania, but mention that this may be an underestimate. Our results for the Razim-Sinoie area alone indicate that this is likely to be the case.

On migration, *Charadrius alexandrinus* inhabits muddy shallow parts of the lakeshore, temporary waters in grazed steppe areas, dried-up fish-ponds and the seashore. The distribution of migrants closely resembles that of the breeding population (see Figure 2), because habitats used during migration are adjacent to the breeding grounds or also occupied as breeding areas. Like the breeding birds, migrating Kentish Plovers concentrate in the southern part of the lagoon system, at Lakes Sinoie and Istria and their environs.

CONCLUSIONS

The Kentish Plover is a common breeding species in the Razim-Sinoie lagoon system. It is also a regular and plentiful migrant in spring and autumn. In view of the size of the



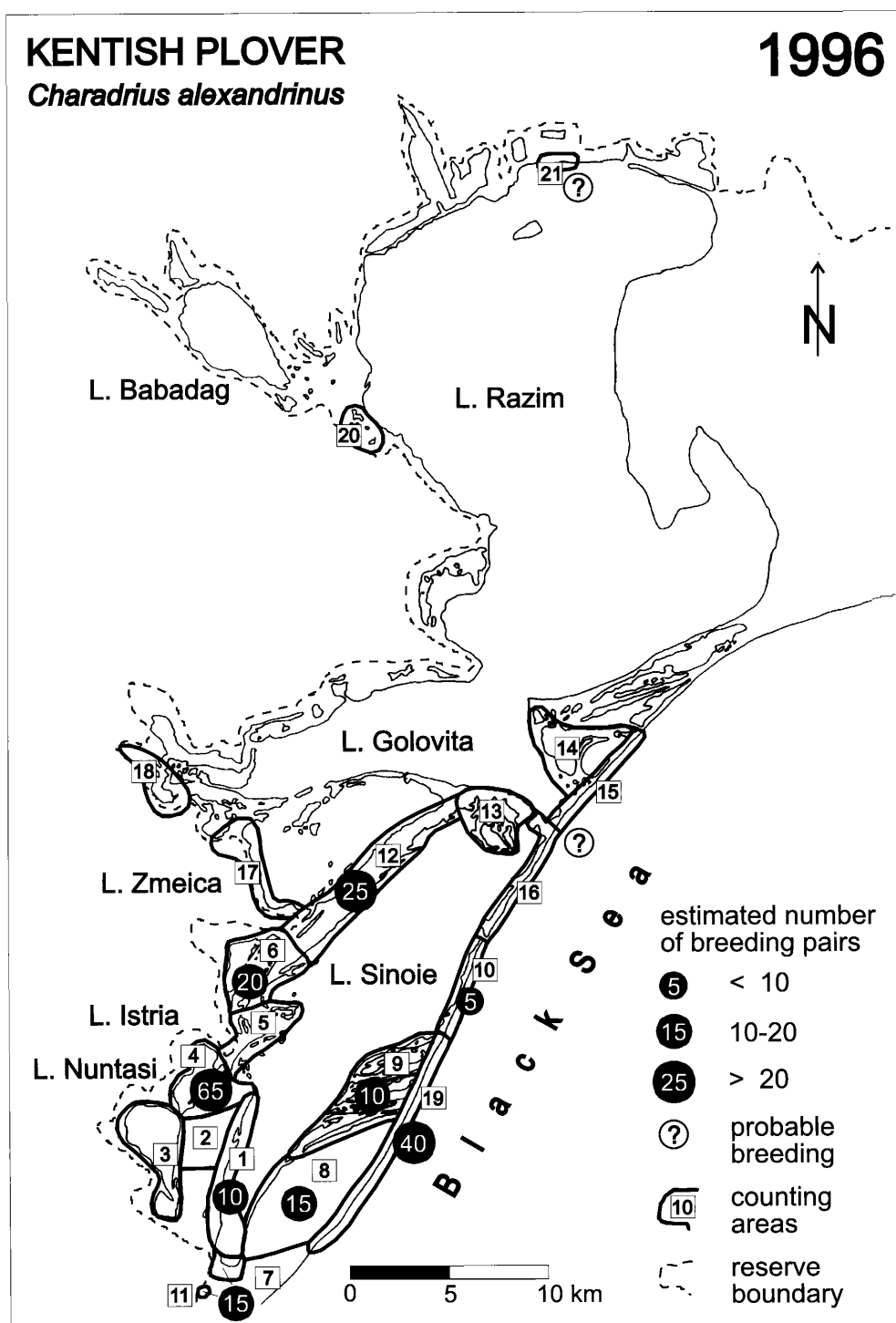


Figure 2. Distribution of breeding Kentish Plovers in the Razim-Sinoie lagoon system in 1996.

breeding population, the area is of national importance for the species. With the exception of some small lakes and fishponds to the north of lake Razim, suitable breeding habitats and migration stop-over sites for Kentish Plovers are confined to the southern half of the lagoon complex (Figure 2). All areas described also hold large numbers of other waders and waterbirds.

The Danube Delta, including the Razim-Sinoie lagoons, is now protected as a Biosphere Reserve (Decree No. 283 of the Romanian government: "The legislation for the establishment of the Danube Delta Biosphere Reserve"). However, for

the conservation of the most important areas for Kentish Plovers as well as other waders and waterbirds, the designated area of the Reserve is not yet large enough. Many very important parts only have the status of 'buffer zones', such as the southern bight of Lake Sinoie, or are situated right on the reserve's boundary (Figure 2, see also Schimtz *et al.* 1999). There are also frequent proposals for infrastructure projects and increasing tourism that threaten the Kentish Plovers and the whole lagoon system. The breeding success of *Charadrius alexandrinus* and other ground-nesting birds is thought to be very low, partly due to disturbance by grazing cattle and partly



Table 1. Breeding Kentish Plovers in the Razim–Sinoie lagoon system in 1996.

Counting area	Estimated population (pairs)	Comment/Breeding conditions
1	10	Just one small area at a bigger pool suitable for Kentish Plovers and occupied in 1996. Probably higher numbers in some years, depending on water level.
4	65	Largest concentration of Kentish Plovers in the lagoon system, highest densities were reached here. The breeding success is thought to have been extremely low as a result of intensive sheep-grazing.
6	20	
7 + 11	15	
8	15	Only partly suitable for Kentish Plovers in 1996. Probably higher numbers in some years, depending on water level.
9	10	Nearly inaccessible part of the lagoon system (only by boat) which may hold higher numbers in some years, depending on water level.
10	5	No counting was conducted on the beach, so some pairs may have been overlooked.
12	25	Most parts of the area suitable for Kentish Plovers.
15 + 16	probable breeding	Suitable habitat on the beach, but areas not checked during the species' breeding period.
19	40	Not evenly distributed. Most Kentish Plovers were concentrated on a wide sandy beach covered to a great extent with seashells.
21	probable breeding	In some years suitable breeding habitat in dried-up fish-ponds; not checked during the breeding period in 1996.
Total	205	

other human activities. Continued monitoring of the breeding population and management of the grazed steppe areas, as well as an expansion of the Biosphere Reserve's boundaries, are all needed in order to maintain a viable population of Kentish Plovers in Romania and prevent further decline (see also Jönsson 1994 and Meininger & Székely 1997).

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