

# Recent information on the distribution and status of the breeding population of Kentish Plover *Charadrius alexandrinus* in the Canary Islands

Juan Antonio Lorenzo & Keith W. Emmerson

Lorenzo, J.A. & K.W. Emmerson. 1995. Recent information on the distribution and status of the breeding population of Kentish Plover *Charadrius alexandrinus* in the Canary Islands. *Wader Study Group Bull.* 76: 43-46.

A breeding census of Kentish Plover was carried out in the Canary Islands during 1991. The population has been estimated to comprise a minimum of 626 birds and 304 pairs confined to the islands of Fuerteventura, Lanzarote, Gran Canaria and Tenerife. Forty percent of this population is concentrated at just three sites, Playa de Sotavento and Cotillo-Tostón on Fuerteventura and Las Salinas de Janubio on Lanzarote. The species prefer biogenic sandy beaches with intertidal lava platforms and mudflats, and salt-pans. Disturbance-free areas urgently need to be established at all breeding sites.

J.A. Lorenzo & K.W. Emmerson, *Departamento de Biología Animal (Zoología), Universidad de La Laguna, La Laguna, Tenerife, Islas Canarias, Spain.*

## INTRODUCTION

The Kentish Plover *Charadrius alexandrinus* is one of the most widespread waders in the world (Cramp & Simmons 1983; Sibley & Monroe 1990). The European population has been estimated to comprise about 8,000 breeding pairs, mostly breeding on the coasts of Spain, Portugal, France and West Germany (Székely 1991). In recent years, this population has decreased drastically, resulting in increased priority being given to the study of the species (Jönsson *et al.* 1990).

In the Canary Islands, the Kentish Plover is poorly known. Only very limited information exists which refers principally to such aspects as distribution and breeding (*i.e.* Bannerman 1963; Volsoe 1951; Martín 1987), with specific studies of local populations being limited exclusively to the island of Tenerife (Lorenzo & González 1993a). Despite the fact that there are no comprehensive data of the size of its population, the species has been catalogued as threatened (Martín *et al.* 1990). Consequently, the main aim of this paper is to present the

results of a recent census of this population, the most SW European population, as a prerequisite for establishing important areas and to propose effective conservation measures.

## METHODS

A complete census comprising the principal islands of the archipelago was carried out during May-July 1991. In addition, the results of irregular censuses undertaken on specific islands during previous years have also been considered.

Censuses consisted in linear transects along the coast, during low tide. Additional counts were also undertaken at roosting sites and potential breeding areas during high tide. Nests, chicks and "turweith" behaviour (Warriner *et al.* 1986) were considered as definite breeding signs. The number of pairs for each locality was estimated by dividing the total number of birds recorded by two.

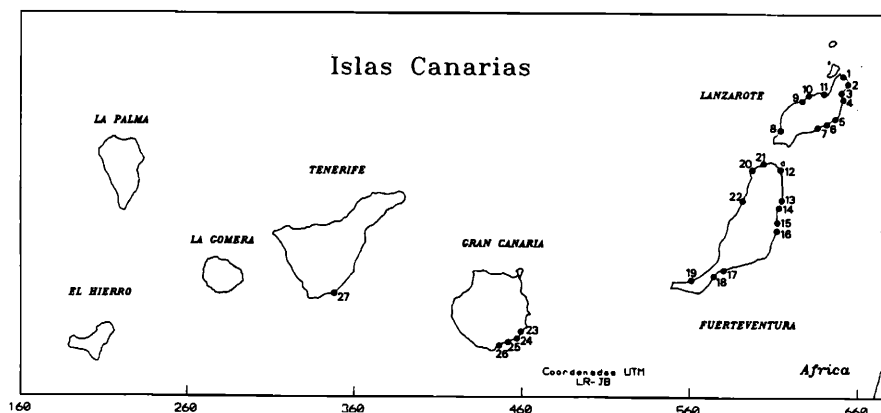


Figure 1. Recorded distribution of the Kentish Plover *Charadrius alexandrinus* in the Canary Islands: localities with plovers during the census (numbering of sites corresponds to Table 1).

## RESULTS

Kentish Plovers breed on the islands of Lanzarote, Fuerteventura, Gran Canaria and Tenerife (Figure 1). No birds were detected on the remaining three islands (La Gomera, El Hierro and La Palma) where breeding is improbable, although there are observations from other years that presumably refer to migratory birds.

Census results are presented in Table 1. The species was detected at 27 localities on the central and eastern islands (Figure 1). A total of 626 birds were observed and we estimate a current minimum of 304 pairs breeding on the Canary Islands.

The total number of birds and the estimated pairs for each island are given in Figure 2.

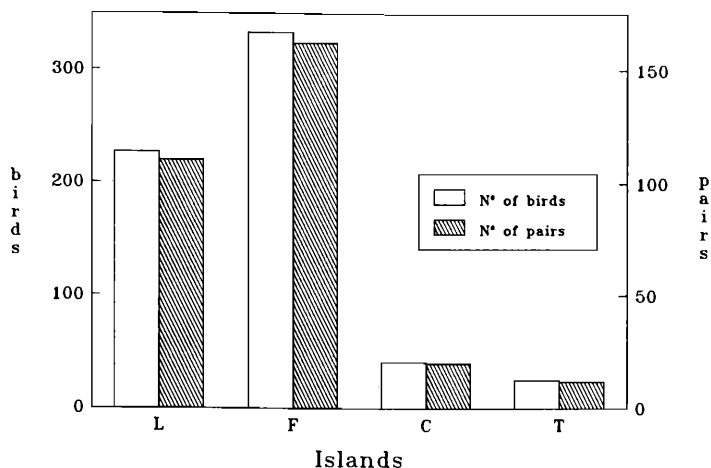


Figure 2. Number of plovers and estimates of breeding pairs on each island (L: Lanzarote, F: Fuerteventura, C: Gran Canaria, T: Tenerife).

On Lanzarote, a total of 227 birds and a minimum of 110 pairs were estimated. The salt-pans of Janubio and Los Cocoteros and the Saladar de La Santa maintained the principal concentration of this subpopulation. The most abundant subpopulation of the archipelago was located on Fuerteventura. A total of 333 birds were recorded estimating a minimum of 162 breeding pairs. Sotavento is the principal locality with 121 birds and 60 pairs. Furthermore, there were important numbers found at Cotillo-Tostón, Matas Blancas and Caleta de Fuste.

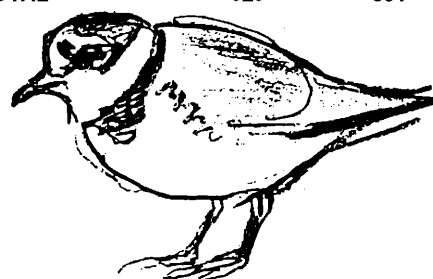
On Gran Canaria the species was found only at four localities in the extreme south. Forty-one birds were observed giving and estimated minimum breeding population of 20 pairs, more or less equally distributed between sites.

On the island of Tenerife, the Kentish Plover was only recorded at El Médano, where a total of 25 birds were observed equivalent to a minimum of 12 breeding pairs.

However, occasional breeding has been detected at other sites on this island in previous years (*i.e.* Las Galletas, Llano de Roja). No birds were detected in these areas during the present study.

Table 1. Numbers and breeding pairs, habitat description and conservation status of the localities censused for Kentish Plover *Charadrius alexandrinus* in the Canary Islands. Numbering of sites corresponds to Figure 1. T: total birds, %T: proportion of birds, P: estimated pairs, %P: proportion of pairs. Habitat codes: A: salt pans, B: sandy beach and intertidal mudflat, C: pebble beach and intertidal lava platform, D: sandy beach and intertidal lava platform, E: sandy beach with supralittoral lagoon and intertidal lava platform, F: reservoir with muddy margins. The site name in **bold\*** indicates the site is an Important Bird Area).

Islands and localities	T	%T	P	%P	Habitat
<b>Lanzarote</b>					
1 Costa de Orzola	3	0.5	1	0.3	D
2 Jameos del Agua	9	1.4	4	1.3	B, C
3 Punta Pasito	2	0.3	1	0.3	D
4 Salinas Los Cocoteros	31	4.9	15	4.9	A
5 Las Caletas	7	1.1	3	0.9	B, C
6 <b>Arrecife*</b>	13	2.0	6	1.9	A, C
7 <b>Matagorda*</b>	37	5.9	18	5.9	D
8 <b>Salinas de Janubio*</b>	68	10.8	34	11.2	A, E
9 Saladar de La Santa	25	4.0	12	3.9	B, C
10 Costa de Soo	20	3.2	10	3.3	D
11 Playa de Famara	12	1.9	6	1.9	D
<b>Subtotal</b>	<b>227</b>		<b>110</b>		
<b>Fuerteventura</b>					
12 <b>Corralejo*</b>	17	2.7	8	2.6	D
13 Lajas	11	1.7	5	1.6	C
14 Puerto del Rosario	13	2.0	6	1.9	C, D
15 El Matorral	14	2.2	7	2.3	C, E
16 Caleta de Fuste	27	4.3	13	4.3	A, B, D
17 Matas Blancas	35	5.6	17	5.6	D
18 <b>Sotavento*</b>	121	19.3	60	19.7	B
19 Barlovento	13	2.0	6	1.9	D
20 <b>Cotillo-Tostón*</b>	63	10.0	31	10.2	B, D
21 Majanicho	17	2.7	8	2.6	D
22 Los Molinos	2	0.3	1	0.3	F
<b>Subtotal</b>	<b>333</b>		<b>162</b>		
<b>Gran Canaria</b>					
23 <b>Costa de Arinaga*</b>	10	1.6	5	1.6	A, B, C, D
24 Pozo Izquierdo	12	1.9	6	1.9	D
25 <b>Castillo del Romeral*</b>	8	1.3	4	1.3	E
26 Costa del Aeroclub	11	1.7	5	1.6	D
<b>Subtotal</b>	<b>41</b>		<b>20</b>		
<b>Tenerife</b>					
27 El Médano	25	4.0	12	3.9	E
<b>Subtotal</b>	<b>25</b>		<b>12</b>		
<b>TOTAL</b>	<b>626</b>		<b>304</b>		



## DISCUSSION

An estimated minimum of 304 pairs of the Kentish Plover has been found by the census to breed in the Canary Islands. This is about 7.3% of the total Spanish population on the basis of the recent estimations presented by Amat (in press), and 1.5% of the European population (Jönsson 1991).

The best breeding areas are Sotavento (60 pairs) and Cotillo-Tostón (31 pairs) on Fuerteventura and Salinas de Janubio (34 pairs) on Lanzarote. Fuerteventura is the most important island in the archipelago, as it has the greatest extent of optimal habitat for the species (biogenic sandy beaches and gentle sloping rocky intertidal platforms). The second important subpopulation is located on Lanzarote, where the optimal habitat is partially replaced by salt-pans, an equally important habitat (Cramp & Simmons 1983). On Gran Canaria and Tenerife the subpopulations do not attain important numbers due to the fact that optimal habitats for the plovers are very limited and, moreover, are being constantly degraded as well as being subjected to continuous human disturbance. On these two islands drastic destruction of the coastal environment has taken place during the last two decades. For instance on Tenerife this plover was present in the salt-pans of Alcalá and El Guincho. However the destruction of these sites during the 1980s resulted in the extinction of both these breeding populations.

An unknown percentage of birds breed in the interior of the islands. In this respect, on Tenerife, in previous years, a few pairs have been observed breeding on plains and at reservoirs. During the study, on the island of Fuerteventura, we detected a pair breeding at Los Molinos reservoir although the birds abandoned the site when the chicks fledged. Bannerman (1963) also mentions such breeding behaviour for a small proportion of pairs. However, locally, at Sotavento, an important sandy environment, breeding birds occur from the shoreline to several kilometres inland and subsequently our estimation could be less than the real figure. Furthermore, it is important to mention that the species also breeds on the islets situated off the north coast of Fuerteventura (Lobos) and Lanzarote (La Graciosa) though in the present study we did not census these sites, and thus the precise number of pairs is unknown.

During the past the breeding population was much more numerous (Bannerman 1963), principally because the current negative impacts affecting the species were either not present, or they were less intensive.

The Kentish Plover is a threatened species in the Canary Islands, especially on those islands with small populations (Martín *et al.* 1990; Blanco & González 1992). The most serious hazard for the species is probably the loss of habitat, with the transformation of the best areas into tourist resorts. Also, breeding success is clearly sensitive to direct human disturbance (surfing, four wheel drive cars, tourists, *etc.*) and to the impact of introduced mammals (rats, feral cats and dogs). For

example, at El Médano, the only breeding area on Tenerife, the plover's reproductive success is extremely low. Of hatched chicks, 81% die during the first three weeks as a consequence of human disturbance, principally from tourists and cars (Lorenzo & González 1993a, 1993b), resulting in unusual breeding behaviour (Lorenzo 1993). Similarly, this negative impact has been registered at other coastal sites in Europe with a high human presence (Schulz & Stock 1993).

As regards the habitat occupied by the Kentish Plover in the Canary Islands, birds show a marked preference for biogenic sandy beaches, coastal areas with a mesolittoral lava platform with an adjacent supralittoral area where nests are situated, and salt-pans.

Conservation measures in the Canary Islands must increase the number of sites designated with protection status as only eight of the 27 localities in which plovers have been found breeding are currently declared as such (Table 1). These eight IBAs (Important Bird Areas) harbour 54% of the total number of birds and 55% of the estimated number of breeding pairs. In addition, it is necessary to establish disturbance-free areas at all breeding sites to assure successful reproduction.

## ACKNOWLEDGEMENTS

The census was financed by ICONA (Instituto Nacional para la Conservación de la Naturaleza) through Tragsatec. We are grateful to R. Barone, G. Delgado and D. Trujillo for their collaboration in the fieldwork.

## REFERENCES

- Amat, J.A. (in press). Status of the Kentish Plover in Spain. *Wader Study Group Bulletin*.
- Bannerman, D.A. 1963. *Birds of the Atlantic Islands. Volume I. A History of the Birds of the Canary Islands and of the Salvages*. Oliver & Boyd, Edinburgh and London. 358 pp.
- Blanco, J.C. & González, J.L. (eds). 1992. *Libro Rojo de los Vertebrados de España*. Colección Técnica ICONA. 714 pp.
- Cramp, S. & Simmons, K.E.L. 1983. *The Birds of the Western Palearctic*. Vol. III. Oxford University Press. 913 pp.
- Jönsson, P.E. 1991. The WSG Kentish Plover Project. Newsletter No 1. September. *Wader Study Group*. 31 pp.
- Jönsson, P.E., Meininger, P.L., Schulz, R. & Székely, T. 1990. The WSG Kentish Plover Project. *Wader Study Group Bulletin* 60: 1-3.
- Lorenzo, J.A. 1993. A case of three clutches in the same nest by the same pair of Kentish Plover *Charadrius alexandrinus*. *Wader Study Group Bulletin* 71: 25-26.
- Lorenzo, J.A. & González, J. 1993a. Datos sobre la biología del Chorlitojeo Patinegro (*Charadrius alexandrinus*) en la última población nidificante en la isla de Tenerife con vistas a su futura protección y conservación. *Alytes* VI: 199-219.
- Lorenzo, J.A. & González, J. 1993b. El Chorlitojeo Patinegro y los 4x4: una difícil convivencia. *Guajara* No 5: 64-71.

Martín, A. 1987. *Atlas de las aves nidificantes en la isla de Tenerife*. Instituto de Estudios Canarios. Monografía XXXII. S/C de Tenerife. 275.

Martín, A., Hernández, E., Nogales, M., Quilis, V., Trujillo, O. & Delgado, G. 1990. *Libro Rojo de los Vertebrados Terrestres de Canarias*. Servicio de Publicaciones de la Caja Insular de Ahorros de Canarias. S/C de Tenerife. 135 pp.

Schulz, R. & Stock, M. 1993. Kentish Plovers and tourists: competitors on sandy coasts? In: Davidson, N.C. & Rothwell, P. (eds.) *Disturbance to waterfowl on estuaries*. *Wader Study Group Bulletin* 68, Special Issue: 83-91.

Sibley, Ch.G. & Monroe, B.L. 1990. *Distribution and Taxonomy of Birds of the World*. Yale University Press. New Haven & London. 1111 pp.

Székely, T. 1991. Status and breeding biology of Kentish Plover *Charadrius alexandrinus* in Hungary - a progress report. *Wader Study Group Bulletin* 62: 17-23.

Volsoe, H. 1951. The breeding birds of the Canary Islands. I Introduction and synopsis of the species. *Vidensk. Medd. fra Dansk. naturh. Foren* 117: 117-178.

Warriner, J.S., Warriner, J.C., Page, G.W. & Stenzel, L.E. 1986. Mating system and reproductive success of a small population of polygamous Snowy Plovers. *Wilson Bull.* 98(1): 15-37.

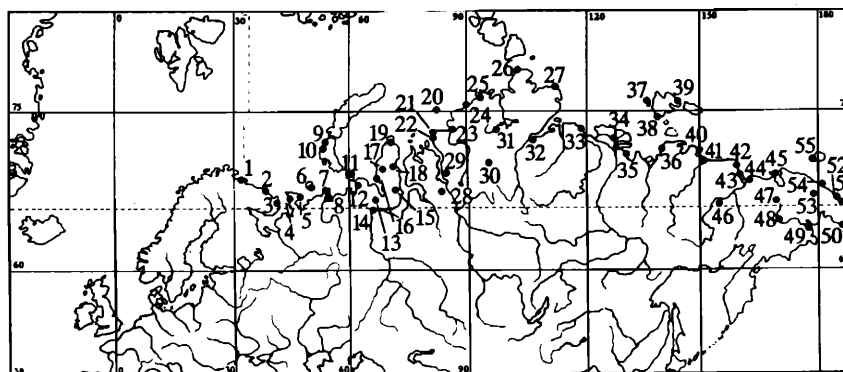
## Summary of breeding conditions for waders in the tundras of Russia in 1994

We hope to publish in Bulletin 77 the full translation of this paper which has just been published in the bulletin of the Russian Working Group on Waders. We reproduce here the summary of the paper and a map showing the localities at which information on wader breeding success and environmental conditions was recorded in 1994.

Late spring, and cool but generally favourable weather for breeding waders was reported by correspondents for almost all 55 areas of the Russian arctic from Kola to Chukotsky Peninsula. The prediction of a peak in numbers of lemmings in some regions of Siberia was

confirmed. Some regions were inhabited by breeding Arctic Foxes *Alopex lagopus*, Snowy Owl *Nyctea scandiaca* and skuas *Stercorarius* spp. at high densities. However the decline of lemming numbers in many areas early in the season was the reason for the switching of predators from lemmings to bird clutches and chicks. This led in general to a lower breeding success of waders than was expected. Large numbers of predators and low numbers of lemmings in 1995 will not permit the birds to have even moderate breeding success.

*We shall see!*



Tomkovitch, P.S. (collator) 1995. Breeding conditions for waders in the tundras of Russia in 1994. *Information Materials of the Working Group on Waders* 8: 25-40. (In Russian with English summary).

