

Shorebirds present on Fracasso Beach (San José Gulf, Valdés Peninsula, Argentina): Report of the 1999 migrating season.

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INTRODUCTION

Numerous neotropical and nearctic species of migrating shorebirds frequent the coasts of Argentine Patagonia (Harrington & Morrison, 1980; Morrison & Ross, 1989; Blanco & Canevari, 1995; Yorio, 1998). Fracasso Beach, our study site, is a coastal wetland that shelters high densities of birds. The seagull *Larus dominicanus* is an important resident, while among the migratory wading birds, *Calidris canutus rufa*, *Calidris fuscicollis* and *Calidris alba* (Scolopacidae), and *Charadrius falklandicus* (Charadriidae), are notable for their abundance and/or regularity.

The present communication shows the results of a migration census carried out during March/April 1999 on Fracasso Beach. Detailed information on the ringed birds observed over the fieldwork period is provided.

STUDY SITE

Fracasso Beach is a fine sediment (fine sand and mud) flat located at the south-eastern limit of San José Gulf (Figure 1). It has the shape of a crescent moon, and

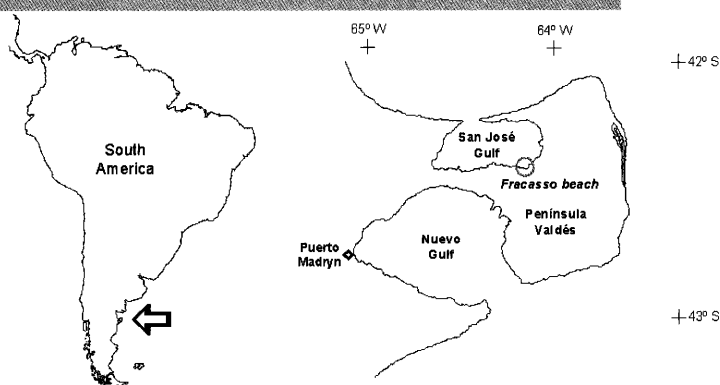


Figure 1 Study area: location of Fracasso beach, at Valdés Península.

extends over 3.5 km, being delimited by rocky cliffs. Local average tidal amplitudes over 6 metres cause an intertidal area, 1 km width at its centre, to be exposed. The presence of birds on this wetland is directly correlated to the high food supply provided by the intertidal benthic community. Prey species include the polychaetes *Laeronereis* sp., *Glicera americana* and *Travisia olens*, some species of isopods, amphipods and

Table 1 Birds recorded at Fracasso Beach on each weekly expedition in March and April 1999.

Week	Date	<i>Calidris canutus</i>	<i>Calidris fuscicollis</i>	<i>Calidris alba</i>	<i>Limosa haemastica</i>	<i>Charadrius falklandicus</i>	<i>Pluvianellus socialis</i>
1	March 3-6	800	330	30	-	200	-
2	11-12	2000	260	10	-	265	-
3	20-23	7	1280	-	-	620	-
4	25-28	3020	260	20	-	500	-
5	April 1-3	180	200	-	1	200	-
6	8-9	100	-	-	-	50	-
7	15-16	1500	-	-	-	30	-
8	23	350	-	-	-	25	-
9	30	-	-	-	1	20	4
Total		7957	2330	60	2	1910	4

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Table 2 Ringed birds: percentages and country of ring attachment.

Week	Total Red Knots	Total birds ringed	% birds ringed	Argentina	Brazil	U.S.A.	Canada	Unknown Country
2	2000	9	0.5	5	-	4	-	-
4	3020	34	1.1	11	-	20	1	2
5	180	7	3.9	4	-	3	-	-
7	1500	2	0.1	1	-	-	-	1
8	350	10	2.9	4	1	5	-	-

ostracods, the gastropods *Buccinanops globulosum* and *Olivella plata*, and the clams *Tellina petitiiana* and *Darina solenoides*. The latter species represents the favorite prey item for most shorebirds.

METHODS

During the 1999 migration season, two to four day expeditions, depending on the density of birds found on the beach, were carried out on Fracasso Beach. On every expedition, a daily count of the birds present on the wetland was performed with 15-60x telescopes. The maximum number of birds counted on each expedition is

reported here as the whole population for that census and the ringed waders observed grouped as a percentage of that population.

RESULTS

The presence of Red Knots *Calidris canutus rufa* showed three pulses, namely mid and late March, and mid April, and an overall total of 8,000 individuals (Table 1). On the basis of this number, the season can be characterized as having "low presence" based on figures from previous seasons. In the 1995 and 1997 seasons, 6,000 and 7,000 respectively were recorded, compared

Table 3 Detailed information on resighting observations.

Nº	Date	Colour band	Banding Information	Observations
1	11 March 1999	-,B:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	
2	12 March 1999	-,B:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	
3		-,BR:Fo,-	ARG, San Antonio Oeste, Río Negro, 5 or 13 March 1998	
4		-,FoW:-,B	ARG, San Antonio Oeste, Río Negro, 6 October 1997	
5		-,FoW:-,B	ARG, San Antonio Oeste, Río Negro, 6 October 1997	
6		Fg,W:-,WO	USA, Slaughter beach 20 May 1998 or North Bowers beach 3 May 1998; Delaware	Individually colour banded bird having one band lost or incomplete observation
7		Fg,W:-,W	USA, Delaware, May 1997	
8		Fg,W:-,W	USA, Delaware, May 1997	
9		Fg,W:-,W	USA, Delaware, May 1997	
10	26 March 1999	-, -:Fw,WR	CAN	
11		-,FoW:-,B	ARG, San Antonio Oeste, Río Negro, 6 October 1997	
12		-,B:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	
13		-, -:Fo,-	ARG.	
14		-, -:Fo,-	ARG.	
15		-,WR:Fo,-	ARG, San Antonio Oeste, Río Negro, March 1998	Unsure observation
16		*,W:-,O	unknown (whithout flag)	
17		Fg,W:-,W	USA, Delaware, May 1997	
18		Fg,W:-,O	USA, Delaware, May 1998	
19		Fg,W:-,O	USA, Delaware, May 1998	
20		Fg,W:-,O	USA, Delaware, May 1998	
21		Fg,W:-,WOW	USA, indiv.bird band 86288718, Slaughter beach, Delaware, 20 May 1998	Corresponding flag on tibia
22		Fg,-:,-	USA	
23		Fg,W:-,WOW	USA, indiv.bird band 86288718, Slaughter beach, Delaware, 20 May 1998	same as 21
24		Fg,W:-,O	USA, Delaware, May 1998	
25		Fg,W:-,O	USA, Delaware, May 1998	
26		Fg,G:-,G	USA, New Jersey, May 1998	
27	26 March 1999	-,FbW:-,WO	not sure	
28		Fg,G:-,G	USA, New Jersey, May 1998	
29		-,B:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	



Nº	Date	Colour band	Banding Information	Observations
30		Fg,W:-,W	USA, Delaware, May 1997	
31		Fg,W:-,W	USA, Delaware, May 1997	
32		Fg,OWO:-,W	USA, indiv.bird band 86288745, Slaughter beach, Delaware, 20 May 1998	
33		Fg,G:-,G	USA, New Jersey, May 1998	
34		Fg,W:-,O	USA, Delaware, May 1998	
35		*,*:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	Only one leg
36		-,:Fo,-	ARG.	
37		?:Fo,RR	ARG, San Antonio Oeste, Río Negro, 5 March 1998. Possible m,B:Fo,RBR (band 982202418) but not sure.	Individually colour banded bird having one band lost or incomplete observation
38		Fg,W:-,O	USA, Delaware, May 1998	
39		Fg,OWO:-,W	USA, indiv.bird band 86288745, Slaughter beach, Delaware, 20 May 1998	same as 32
40		Fg,W:-,WOW	USA, indiv.bird band 86288718, Slaughter beach, Delaware, 20 May 1998	same as 21
41		-,FoW:-,B	ARG, San Antonio Oeste, Río Negro, 6 October 1997	
42		-,:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	Blue band lost or incomplete observation
43		Fg,W:-,O	USA, Delaware, May 1998	
44	1 April 1999	-,BR:Fo,-	ARG, San Antonio Oeste, Río Negro, 5 or 13 March 1998	
45		Fg,W:-,O	USA, Delaware, May 1998	
46		Fg,W:-,O	USA, Delaware, May 1998	
47	2 April 1999	-,BR:Fo,-	ARG, San Antonio Oeste, Río Negro, 5 or 13 March 1998	
48		Fg,W:-,W	USA, Delaware, May 1997	
49		-,BR:Fo,-	ARG, San Antonio Oeste, Río Negro, 5 or 13 March 1998	
50		-,BR:Fo,-	ARG, San Antonio Oeste, Río Negro, 5 or 13 March 1998	
51	15 April 1999	*,*:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	Only one leg. Same as 35?
52		*,W:-,O	unknown (whithout flag)	
53	23 April 1999	Fg,W:-,W	USA, Delaware, May 1997	
54		Fg,W:-,W	USA, Delaware, May 1997	
55	23 April 1999	Fg,W:-,W	USA, Delaware, May 1997	
56		Fg,W:-,W	USA, Delaware, May 1997	
57		-,:Fb,W	BRA, Lagoa do Peixe, Rio Grande do Sul, April 1997	
58		-,BR:Fo,-	ARG, San Antonio Oeste, Río Negro, 5 or 13 March 1998	
59		-,:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	Blue band lost or incomplete observation
60		-,:Fo,R	ARG, San Antonio Oeste, Río Negro, March 1998	Unsure observation
61		-,B:Fo,R	ARG, San Antonio Oeste, Río Negro, 16 or 20 March 1998	
62		Fg,Y:-,G	USA, New Jersey, May 1997	

with the 1994 and 1996 seasons when 13,000 and 16,000 birds were recorded (Bala & Pagnoni, unpublished data). The low presence of Red Knots during the 1999 stopover can be correlated to the poor availability of *Darina solenoides*, their main prey item in Fracasso Beach. The clams were found at densities of only 19.7 individuals m⁻², a low value if compared with the 1994 and 1996 density estimations of 52.1 and 89.7 individuals m⁻² respectively. On the other hand, White-rumped Sandpipers *Calidris fuscicollis*, a species regularly present in the wetland from October to early April (Pagnoni 1997) showed an overall total of 2,300 individuals. In general terms, the flocks' sizes were homogeneous (200 to 300 individuals), with an outstanding peak of 1,300 individuals at the end of March, prior to the mass departure to the breeding

grounds. Another species with low presence relative to previous seasons was the Sanderling *Calidris alba*, from which flocks of only a few tens were observed. These records are considerably lower than the average values of 300-500 individuals cited for this locality in late March-early April (Pagnoni, 1997).

The presence of Two-banded Plovers *Charadrius falklandicus* did not significantly differ from records of previous seasons, maximum flock peaks of 500-600 individuals being observed at the end of March. Finally, the presence of Hudsonian Godwit *Limosa haemastica* and Magellanic Plover *Pluvianellus socialis* was occasional, and did not differ from the historical average values for this wetland.



RINGED BIRDS

All the 62 resighting observations were red knots. Twenty-five were from Argentina (San Antonio Oeste, 1997-98), 1 from Brazil (Lagoa do Peixe, 1997), 32 from USA (New Jersey and Delaware, 1997-98) and 1 from Canada (Table 2). The flags of three individuals could not be identified. From the total birds identified, 30% were ringed in 1997 and 70% in 1998. Details of all resightings are given in Table 3.

The percentage of ringed birds relative to the total varied between 0.1 and 3.9%, these values being higher when flocks were small (200 to 400 birds). The number of ringed birds observed at Fracasso Beach increased annually; 7 birds were identified in 1994, 8 birds in 1995, and 29 birds in 1996 (Pagnoni 1997). According to these values, the proportion of ringed individuals relative to the total recorded progressively increased: 0.05% (1994), 0.13% (1995), 0.18% (1996) and 0.76% (1999). This trend results from the systematic ringing campaigns accomplished during the recent past years. As an example, on different coastal sites of Argentina and Brazil, a total of 396 knots have been colour-banded in Argentina during 1995 (Baker *et al.* 1996) and 498 in Argentina and Brazil in 1997 (Baker *et al.* 1999).

It deserves special mention that during the 1995 and 1996 seasons, up to 97% of the birds identified at Fracasso Beach were individuals ringed on Rio Grande (Tierra del Fuego, Argentina) in February 1995. During 1999, no individuals were identified from there; indeed, none of the observed *Calidris canutus rufa* specimens was ringed before 1997.

A last consideration concerns the ringed specimens identified with the numbers 35 and 51 (Table 3), observed on March 26th and April 15th 1999 respectively. These birds had lost their left leg and corresponding combinations *,*: Fo,R and were ringed on San Antonio Oeste (Argentina) on March 16th or 20th 1998. Based on the time period of 20 days between observations, it is possible that the lack of a leg hindered its feeding activities so as to require a longer stay in the same locality (P. Gonzalez, pers. comm).

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