KELP GULLS *LARUS DOMINICANUS* BREEDING ON THE ARGENTINE COAST: POPULATION STATUS AND RELATIONSHIP WITH COASTAL MANAGEMENT AND CONSERVATION

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SUMMARY

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The breeding distribution of the Kelp Gull *Larus dominicanus* in coastal Argentina ranged along over 3600 km of coastline, from Claromecó, southern Buenos Aires (38º45'S, 59°28'W) to Bahía Ushuaia, Tierra del Fuego (54°51'S, 68°16'W). A total of 105 breeding colonies was identified at 55 localities. Median colony size was 184 pairs, ranging from two to 12 260 breeding pairs. Total population size for the Argentine coast, considering only the 94 colonies for which the number of breeding pairs is available (89% of total sites), was estimated as 74 360 breeding pairs. Most colonies were on islands (81.9%). A total of 40 Kelp Gull colonies was located within coastal protected areas, representing over 60% of total population size. All Kelp Gull colonies for which we had size estimations for more than one season or for which previous information was available (n = 7) showed an increase in numbers of breeding pairs. Available information suggest that Kelp Gulls are feeding generalists taking advantage of artificial food sources resulting from human activities such as refuse tips, sewage outfalls, slaughter houses, and fisheries bycatch. As a result of their concentration close to cities, Kelp Gulls may result in hazards to aircraft and threats to human health. The opportunistic feeding habits and flexibility in nesting requirements of the Kelp Gull make this widely distributed and abundant species a probable key factor in the structuring of seabird assemblages and a problem to other coastal wildlife if populations continue to increase. Similarly, threats to human populations are likely to increase under current Kelp Gull population trends. Management and research requirements are presented.

INTRODUCTION

Kelp Gulls *Larus dominicanus* are widely distributed in the Southern Hemisphere, breeding in South America, southern Africa, Australia, New Zealand, at sub-Antarctic islands and on the Antarctic Peninsula (del Hoyo *et al.* 1996, Higgins & Davies 1996). In Argentina, Kelp Gulls breed in a wide variety of environments along the sea coast and at continental wetlands.

Available information suggests that Kelp Gulls are feeding generalists (e.g. Murphy 1936, Humphrey *et al*. 1970, Brooke & Cooper 1979, Stahl & Mougin 1986, Steele 1992) taking advantage of artificial food sources resulting from human activities such as refuse tips, sewage outfalls, slaughter houses and fisheries bycatch (Murphy 1936, Fordham 1970, Brooke & Cooper 1979, Coulson & Coulson 1993). As a result of their concentration close to cities, gulls may result in hazards to aircraft and threats to human health, as has been shown for gull species in the Northern Hemisphere (Rochard & Horton 1980, Butterfield *et al*. 1983, Burger 1985a, Blokpoel & Tessier 1986).

The use of artificial food sources has been suggested by some authors as a cause of gull population expansion in Europe and North America (e.g. Kadlec & Drury 1968, Spaans 1971). This may result in negative effects on other coastal wildlife (Thomas 1972, Furness & Monaghan 1987) and an increase in the conflicts with man. Kelp Gull populations have expanded at several localities in Argentina (Frere & Gandini 1991, Yorio *et al*. 1994, Bertellotti *et al*. 1995), and at other parts of the Southern Hemisphere (Fordham 1970, Crawford *et al*. 1982, Blakers *et al*. 1984, Powlesland & Robertson 1987, Steele & Hockey 1990, Favero & Silva 1991).

Despite being a common species in coastal Argentina and the potential conflicts due to its population expansion, no information is available on Kelp Gull breeding distribution and abundance. In addition, information on Kelp Gull conservation and management issues has often been anecdotal and difficult to find in the literature. In this paper we:
a) present data on the location and size of Kelp Gull breeding colonies along the Argentine coast and on population trends at some locations; and
b) review some of the current and potential conflicts between Kelp Gulls and human populations, and discuss conservation and management issues.

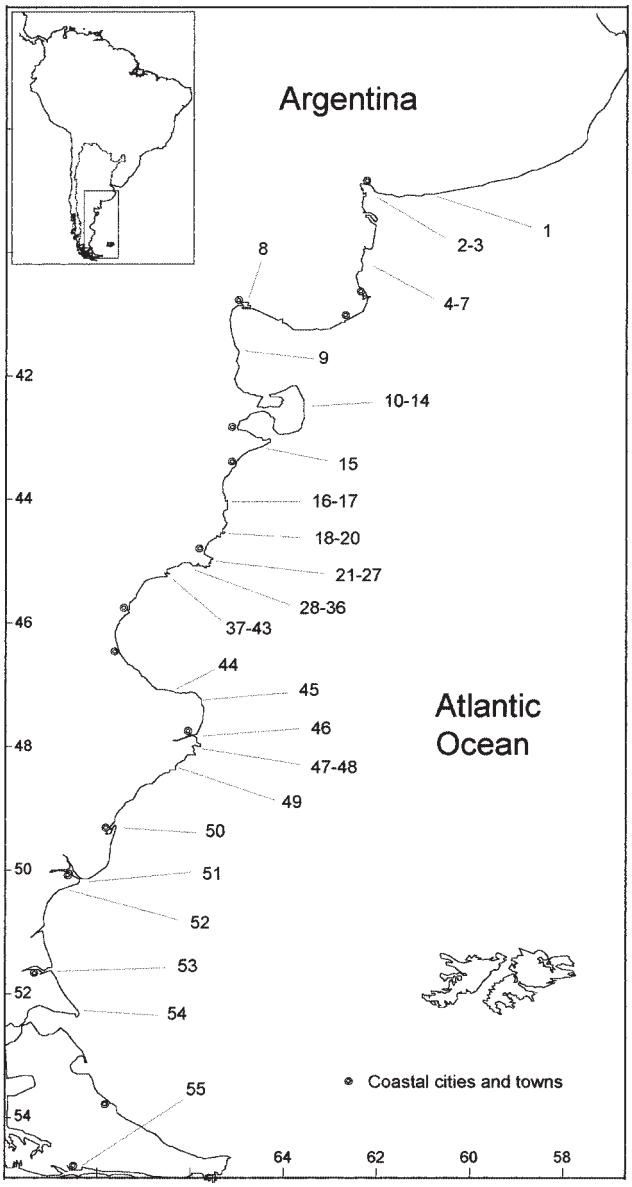

Fig. 1. *Distribution of Kelp Gull colonies along the Argentine coast. Numbers correspond to sites in Table 1.*

METHODS

Between 1993 and 1995 we visited all breeding sites identified during an aerial survey of the coast between Bahía Blanca (39°06'S, 62°09'W) and Strait of Magellan (52°24'S, 68°26'W) conducted during November 1990 (Yorio & Harris 1997). In addition, during seabird population evaluations conducted between 1993 and 1995 as part of the Patagonian Coastal Zone Management Plan, we surveyed by aeroplane and boat sections of the Provinces of Río Negro, Chubut and Santa Cruz, counting nests at all new Kelp Gull colonies encountered. We made all surveys and colony size estimations during incubation and early chick stage (late October to early December, depending on the locality).

We obtained colony sizes using full nest counts and nest estimates using circular plots, depending on habitat characteristics (Bibby *et al.* 1992). Additionally, we obtained from the literature information on breeding colonies that were not visited during this project. To identify population trends, we used information obtained from the literature and from annual estimations of colony sizes made throughout this project. We considered all colonies separated by less than two kilometres as belonging to the same geographical site.

BREEDING DISTRIBUTION AND COLONY SIZES

Breeding distribution in coastal Argentina ranged along over 3600 km of coastline, from Claromecó, southern Buenos Aires (38°45'S, 59°28'W) to Bahía Ushuaia, Tierra del Fuego (54°51'S, 68°16'W) (Table 1, Fig. 1). A total of 105 breeding colonies was identified at 55 localities. Median colony size was 184 (n = 94), ranging from 2 to 12 260 breeding pairs (Table 1). Total population size for the Argentine coast, considering only the 94 colonies for which number of breeding pairs is available (89% of total sites), was estimated as at least 74 360 breeding pairs.

Most colonies were on islands (81.9%, n = 105), located between a few dozen metres and 21 km from the mainland. Of the remaining colonies, 9.5% were located on the mainland and 8.6% on islands or rocks connected to the mainland during low tide. A total of 40 Kelp Gull colonies was located within coastal protected areas, representing over 60% of the total estimated breeding population.

All Kelp Gull colonies for which we had size estimations for more than one season or for which previous information was available (n = 7) showed an increase in breeding pairs. Colonies at Península Valdés have been increasing in size in the last two decades. For example, the colony at Islote Notable grew from 1920 breeding pairs in 1979 to 3440 in 1989 (Pagnoni *et al.* 1993), and to 5400 in 1994. At Caleta Valdés the number of breeding pairs grew from 50 in 1992 to 757 in 1995, with the colonization of a new island in 1994. At Punta Pirámide, 335 and 357 breeding pairs were counted in 1994 and 1995, respectively. Kelp Gulls at Punta León have increased from 3664 pairs in 1982 (Malacalza 1987) to 6500 in 1995. At Punta Tombo, Kelp Gulls increased from 50 pairs in 1876 (Durnford 1878) to 5550 in 1994. At Ría Deseado, the colony located on Isla Quiroga increased from 67 pairs in 1985 (Frere & Gandini 1991) to 406 in 1994. The colony at Cabo Vírgenes showed a large increase in the last decade, from 100 pairs in 1986 to 555 in 1989, and to 781 in 1990 (Frere 1993), followed by a decrease to 540 in 1991 and an abrupt decline in 1993, when only 50 nests were found. This decline was probably the result of human disturbance, including egging. The only colony known to have disappeared was located at Ría Coig in 1990.

KELP GULL POPULATIONS, COASTAL MANAGEMENT AND CONSERVATION

Population status and trends

The surveys conducted during recent years show that Kelp Gulls in coastal Argentina are abundant and have a wide breeding distribution. Colony sizes are variable and, compared to other parts of its breeding range (e.g. Crawford *et al.* 1982, Croxall *et al.* 1984, Duffy *et al.* 1984, Jouventin *et al.* 1984, Williams 1984, Steele & Hockey 1990, Escalante 1991, Zuquim Antas 1991), Kelp Gulls in coastal Argentina breed in larger colonies.

Kelp Gull populations are expanding and, at some localities, numbers showed a significant increase during the last decades.

TABLE 1

Locality and size (numbers of breeding pairs) of Kelp Gull colonies along the Argentine coast

	Breeding site		Size	Year	Census method	Source
1	Arroyo Zabala	38°45'S, 59°28'W	55	1986	FNC	1
2	Islote oeste del Canal del Embudo *	38°58'S, 62°19'W	NC	1995		2
3	Isla Trinidad					
	Islote Norte *	39°08'S, 61°53'W	NC	1995		3
	Islote Bastón *	39°08'S, 61°53'W	NC	1995		3
	Islote Redondo *	39°08'S, 61°53'W	NC	1995		3
	Islote Sur *	39°08'S, 61°53'W	NC	1995		3
4	Islote norte de Isla Morro de Indio	39°56'S, 62°09'W	NC	1995		3
5	Isla Puestos	39°58'S, 62°15'W	NC	1995		3
6	Banco Nordeste *	40°32'S, 62°09'W	1250	1990		4
7	Isla del Jabalí					
	Isla Arroyo Jabalí Este	40°33'S, 62°16'W	NC	1995		2
	Isla Arroyo Jabalí Oeste	40°33'S, 62°16'W	NC	1995		3
8	Bahía de San Antonio					
	Isla Novaro *	40°45'S, 64°50'W	66	1994	FNC	5
	Islotes del Canal Escondido *	40°47'S, 64°47'W	351	1994	FNC	5
9	Complejo Islote Lobos					
	Islote La Pastosa *	41°25'S, 65°02'W	1140	1995	FNC	5
	Islote Redondo *	41°26'S, 65°01'W	854	1995	FNC	5
	Islote de los Pájaros *	41°27'S, 65°02'W	540	1995	FNC	5
10	Islote Notable *	42°25'S, 64°31'W	5397	1994	CP	5
11	Islas de la Caleta Valdés					
	Isla Primera *	42°21'S, 63°37'W	556	1994	FNC	5
	Isla Gaviota *	42°17'S, 63°39'W	201	1994	FNC	5
12	Punta Delgada *	42°43'S, 63°38'W	75	1993	FNC	5
13	Playa La Pastosa *	42°50'S, 63°59'W	NC	1994		5
14	Punta Pirámide *	42°35'S, 64°17'W	357	1994	FNC	5
15	Punta León *	43°04'S, 64°29'W	6500	1995	FNC	5
16	Punta Clara	43°58'S, 65°15'W	39	1995	FNC	5
17	Punta Tombo *	44°02'S, 65°11'W	5423	1994	FNC	5
18	Punta Gutierrez	44°24'S, 65°16'W	347	1995	FNC	5
19	Península Betbeder					
	Cabo San José	44°31'S, 65°17'W	108	1995	FNC	5
	Isla Sur Cabo San José	44°31'S, 65°18'W	684	1995	FNC	5
	Isla Acertada	44°32'S, 65°19'W	94	1995	FNC	5
20	Isla Cumbre	44°35'S, 65°22'W	1195	1994	FNC	5
21	Islas Blancas					
	Isla Blanca Mayor	44°46'S, 65°38'W	1035	1994	FNC	5
	Isla Blanca Menor Oeste	44°46'S, 65°39'W	278	1995	FNC	5
	Isla Blanca Menor Este	44°46'S, 65°38'W	15	1995	FNC	5
22	Isla Moreno *	44°54'S, 65°32'W	189	1994	FNC	5
23	Isla Sola	44°58'S, 65°33'W	754	1995	FNC	5
24	Isla Aguilón del Norte	45°00'S, 65°34'W	22	1995	FNC	5
25	Isla Arce	45°00'S, 65°29'W	1028	1995	FNC	5
26	Isla Rasa	45°06'S, 65°23'W	NC	1994		5
27	Islas Leones					
	Península Lanaud	45°03'S, 65°35'W	437	1995	FNC	5
	Isla Buque	45°03'S, 65°37'W	918	1994	FNC	5
28	Isla Pan de Azucar	45°04'S, 65°49'W	1648	1995	FNC	5
29	Islotes Arellano	45°03'S, 65°51'W	40	1995	FNC	5
30	Islotes Massa	45°02'S, 65°51'W	160	1995	FNC	5
31	Islas Laguna					
	Islote Laguna	45°02'S, 65°53'W	481	1995	FNC	5
	Islote Galfráscoli	45°02'S, 65°51'W	5	1995	FNC	5
	Islote Luisoni	45°02'S, 65°51'W	30	1995	FNC	5

	Breeding site		Size	Year	Census method	Source
32	Punta Castillos					
	Isla Patria	45°03'S, 65°51'W	307	1995	FNC	5
	Islote frente a Patria	45°02'S, 65°51'W	10	1995	FNC	5
33	Isla Blanca	45°03'S, 65°58'W	9	1995	FNC	5
34	Complejo Tova-Tovita					
	Isla Tova	45°06'S, 66°00'W	772	1995	FNC	5
	Isla Tovita	45°07'S, 65°57'W	153	1995	FNC	5
	Isla Gaviota	45°06'S, 65°58'W	1433	1995	FNC	5
	Isla Este	45°07'S, 65°56'W	724	1995	FNC	5
	Isla Sur	45°07'S, 65°59'W	132	1995	FNC	5
	Islotes Goëland	45°05'S, 66°03'W	825	1995	FNC	5
35	Isla Pequeño Robredo	45°07'S, 66°06'W	311	1995	FNC	5
36	Isla Gran Robredo	45°08'S, 66°03'W	395	1995	FNC	5
37	Islas Lobos					
	Isla Lobos Oeste	45°05'S, 66°18'W	1	1993	FNC	5
	Isla Felipe	45°04'S, 66°19'W	571	1993	FNC	5
38	Islas Galiano					
	Isla Galiano Norte	45°05'S, 66°24'W	66	1993	FNC	5
	Isla Galiano Central	45°06'S, 66°25'W	49	1993	FNC	5
	Isla Galiano Sur	45°06'S, 66°25'W	20	1993	FNC	5
39	Islas Isabel					
	Isla Isabel Norte	45°07'S, 66°30'W	85	1993	FNC	5
	Isla Isabel Sur	45°07'S, 66°30'W	63	1993	FNC	5
40	Isla Ceballos	45°09'S, 66°22'W	968	1993	FNC	5
41	Islas Vernaci					
	Isla Vernaci Este	45°11'S, 66°29'W	661	1993	FNC	5
	Isla Vernaci Norte 1	45°11'S, 66°30'W	56	1993	FNC	5
	Isla Vernaci Norte 2	45°11'S, 66°30'W	3	1993	FNC	5
	Isla Vernaci Sudoeste	45°11'S, 66°31'W	6359	1995	FNC	5
	Isla Vernaci Oeste	45°11'S, 66°31'W	53	1993	FNC	5
	Isla Vernaci Noroeste	45°10'S, 66°31'W	56	1993	FNC	5
42	Isla Viana Mayor	45°11'S, 66°24'W	438	1993	FNC	5
43	Isla Quintano	45°15'S, 66°42'W	1777	1995	FNC	5
44	Monte Loayza *	47°05'S, 66°09'W	30	1995	FNC	5
45	Cabo Blanco *	47°12'S, 65°45'W	27	1993	FNC	5
46	Ría Deseado					
	Punta Guanaco	47°48'S, 65°52'W	24	1993	FNC	5
	Isla Chaffers *	47°46'S, 65°52'W	3270	1992	CP	5
	Isla Larga *	47°45'S, 65°56'W	208	1994	FNC	5
	Isla Quiroga *	47°45'S, 65°56'W	400	1994	FNC	5
	Islote Burlotti *	47°46'S, 65°57'W	297	1993	FNC	5
	Isla de los Pájaros *	47°45'S, 65°58'W	110	1995	FNC	5
	Islote Cañadón del Puerto *	47°45'S, 66°00'W	128	1994	FNC	5
	Isla del Rey *	47°46'S, 66°03'W	178	1993	FNC	5
47	Isla Pingüino *	47°54'S, 65°43'W	200	1994	FNC	5
48	Punta Buque					
	Isla Schwarz	48°04'S, 65°54'W	50	1994	FNC	5
	Isla Liebres	48°06'S, 65°54'W	210	1994	FNC	5
49	Bahía Laura					
	Islote del Bajío *	48°21'S, 66°21'W	100	1994	FNC	5
	Isla Rasa Chica *	48°22'S, 66°20'W	75	1995	FNC	5
	Islote Sin Nombre *	48°22'S, 66°21'W	190	1994	FNC	5
50	Bahía San Julián					
	Banco Cormorán *	49°16'S, 67°40'W	6978	1993	CP	5
	Banco Justicia I *	49°17'S, 67°41'W	20	1994	FNC	5
	Banco Justicia II *	49°17'S, 67°41'W	14	1994	FNC	5
51	Isla Leones *	50°04'S, 68°26'W	200	1994	FNC	5
52	Isla de Monte León *	50°20'S, 68°53'W	85	1995	FNC	5
53	Isla Deseada *	51°34'S, 69°02'W	12 260	1995	CP	5

	Breeding site		Size	Year	Census method	Source
54	Cabo Vírgenes *	52°22'S, 68°24'W	50	1993	FNC	5
55	Bahía Ushuaia					
	Islote norte de Islote Lucas Este	54°52'S, 68°12'W	3	1993	FNC	6
	Isla Willie Mayor	54°52'S, 68°10'W	12	1993	FNC	6
	Isla H	54°53'S, 68°15'W	2	1993	FNC	7
	Isla Bridges	54°53'S, 68°15'W	101	1993	FNC	6
	Isla Reynolds	54°52'S, 68°16'W	10	1993	FNC	6
	Isla Leelom	54°52'S, 68°15'W	25	1993	FNC	6
	Isla Mary Ann	54°52'S, 68°15'W	12	1992	FNC	6
	Isla Chata	54°51'S, 68°16'W	33	1992	FNC	6
	Isla Conejo	54°51'S, 68°16'W	490	1992	FNC	6
Total			**74 361**			

***** Colonies within protected areas; **NC** nests were not counted.
Census method: **FNC** full nest-count; **CP** circular plots.
Source: **1** G. Francia pers. comm.; **2** D. Rábano pers. comm.; **3** Yorio *et al*. 1997; **4** Yorio & Harris 1997; **5** this study; **6** Schiavini & Yorio 1995; **7** A. Schiavini unpubl. data.

Little is known about the factors that could be responsible for these changes, although the use of artificial food sources might be contributing to the observed population expansion.

Kelp Gulls and artificial food sources

Kelp Gulls have been reported to feed on artificial food sources throughout their range (Murphy 1936, Fordham 1970, Parmelee *et al*. 1977, Brooke & Cooper 1979, Merilees 1984, Powlesland & Robertson 1987, Steele 1992, Coulson & Coulson 1993). At coastal Argentina, Kelp Gulls feed throughout the year on refuse tips at most of coastal cities and towns (Humphrey *et al*. 1970, Schiavini & Yorio 1995, Yorio *et al*. 1996, Giaccardi *et al*. 1997). Numbers of gulls feeding on dumps may vary between a few to more than 9000 individuals (Giaccardi *et al*. 1997) and are specially high at refuse tips that are also used to dispose fishery waste (Yorio *et al*. 1996). A significant number of gulls breeds close to urban areas and preliminary data show that individuals breeding at expanding colonies feed on garbage and fishery waste, e.g. Islote Notable, Punta Pirámide, Punta León and Ría Deseada (M. Bertellotti & P. Yorio unpubl. data, E. Frere & P. Gandini unpubl. data). Regurgitated pellets including garbage were regularly found at nests, and Kelp Gulls from these colonies were regularly seen flying to and from their nesting sites in the direction of nearby refuse tips (M. Bertellotti pers. obs., E. Frere & P. Gandini pers. obs.).

Kelp Gulls in coastal Argentina also feed at slaughter houses (Humphrey *et al*. 1970, Yorio *et al*. 1996), sewage (Giaccardi *et al*. 1997, E. Frere & P. Gandini unpubl. data), and bycatch at all coastal fisheries in Patagonia (P. Yorio & G. Caille unpubl. data). Available information suggests that a large percentage of the coastal population is regularly using human-related food sources. This could have a significant effect on Kelp Gull population dynamics and be partly responsible for the observed expansion. Besides having a potential effect on Kelp Gull population dynamics, the use of artificial food sources by gulls could result in conflicts with human populations.

Conflicts with human populations

In many cases, gull population expansion and their increased activities close to cities have resulted in conflicts with humans. Gulls have become a threat to human health, a public nuisance, and a hazard to aircraft (Furness & Monaghan 1987). In some cases, the use of refuse tips and sewage outfalls can result in the infection of gulls with pathogens (Furness & Monaghan 1987). Preliminary results from Rawson, Chubut (Giaccardi 1993) and Puerto Deseado, Santa Cruz (P. Gandini & E. Frere unpubl. data) show that Kelp Gulls may be vectors of enterobacteria, some of which are potentially pathogenic. At the Rawson refuse tip, gulls attracted to an abundant food source such as garbage and fishery waste, are apparently infected through the use of sewage that is also disposed in the area (Giaccardi 1993).

The increase in Kelp Gulls near cities might also represent a threat to aircraft, as has been observed at other regions in the Northern Hemisphere (Rochard & Horton 1980, Burger 1985a, Blokpoel & Tessier 1986). Although this is not currently a significant problem in coastal Argentina, there have been several reports of Kelp Gulls affecting airport traffic at Trelew, Comodoro Rivadavia and San Antonio Oeste.

Effects on other coastal species

Gull population expansion in the Northern Hemisphere has been shown to have, among other things, negative effects on other species (Furness & Monaghan 1987). This is most visible in mixed-species assemblages, where breeding gulls can play a major role in species interactions. Studies have shown that breeding success of many birds can be adversely affected by gull predation (Thomas 1972) and kleptoparasitism (Furness 1987). Similarly, gulls have been reported to take over former breeding sites of other species, particularly terns (Thomas 1972, Burger & Shisler 1978, Burger 1985b).

Kelp Gulls breed close to other seabirds at almost all localities in coastal Argentina, and are the most abundant breeding species at many mixed-species colonies (P. Yorio & G. Harris unpubl. data, E. Frere & P. Gandini unpubl. data). In Argentina, Kelp Gulls have been reported to prey on Magellanic Penguin *Spheniscus magellanicus* eggs and young (Conway 1971, Scolaro 1985, Frere *et al*. 1992, Yorio & Boersma 1994), Imperial Cormorant *Phalacrocorax atriceps* eggs and young (Malacalza 1987, Quintana & Yorio 1998, G. Punta

pers. comm.), Royal *Sterna maxima* and Cayenne *S. eurygnatha* Tern eggs (Yorio & Quintana 1997), and Black Oystercatcher *Haematopus ater* eggs (Punta *et al*. 1995). Kelp Gulls also take advantage of nest contents exposed due to human disturbance. They have been observed preying on exposed eggs and chicks of cormorants (Punta & Herrera 1995, Yorio & Quintana 1996,), terns (Yorio & Quintana 1996), Magellanic Penguins (Boswall 1973, Gochfeld 1980, Frere *et al*. 1992, Yorio & Boersma 1994), and Southern Giant Petrels *Macronectes giganteus* (P. Yorio pers. obs.). This is particularly important due to the current growth of tourist and recreational activities along the Argentine coast.

Kelp Gulls nest in a wide variety of habitats (Burger & Gochfeld 1981, Bo *et al*. 1995). Their flexibility in habitat and nest site requirements and their seasonally early breeding at many localities make them good competitors for nesting space. Breeding Kelp Gulls interfere with Royal and Cayenne Tern settlement (Quintana 1995) and have been observed to take over Magellanic Penguin (Frere & Gandini 1991) and Olivaceous Cormorant *P. olivaceus* nests (Yorio *et al*. 1992). Kleptoparasitism on some species, such as Royal and Cayenne Terns, Magellanic Penguins and Imperial Cormorants, has also been recorded in Patagonia (Quintana 1995, P. Yorio unpubl. data).

The effects on coastal wildlife are not only confined to seabirds and shorebirds. Thomas (1988) has reported Kelp Gulls feeding on flesh of live Southern Right Whales *Eubalaena australis* breeding at Península Valdés. Behavioural observations suggest that the whales are harmed (Rowntree *et al*. 1998, Thomas 1988). This has led some researchers to suggest that spatial distribution of breeding whales might be altered due to this interaction and, as a result, the whale-watching industry might be affected (Rowntree *et al*. 1998).

Kelp Gull conservation and management

A large proportion of the Kelp Gull population breeds within coastal protected areas, although effective protection of many of these colonies is not adequately enforced. Egging occurs at some localities in Patagonia, both within and outside protected areas, such as Bahía San Blas, San Antonio Oeste, and Cabo Vírgenes. Ecotourism growth in Patagonia has also resulted in a higher visitation rate to breeding colonies, with the associated costs on Kelp Gull breeding success when visitors are not adequately managed (pers. obs.).

In some regions in Argentina, Kelp Gulls are considered to be a 'problem' species, causing damage to cattle-raising activities, and are subject to persecution by humans (Humphrey *et al*. 1970, Vila & Bertonatti 1993). In addition, their presence in cities and the negative effects on some species, especially Southern Right Whales and penguins, have made them a public nuisance, leading to proposals for the implementation of population controls. However, no Kelp Gull colony is currently under any kind of management.

Given their wide distribution and abundance, the population increase observed at some localities and the high number of birds breeding within protected areas, Kelp Gull populations are unlikely to have conservation problems in the near future, despite the threats they are currently facing along the Argentine coast.

CONCLUSIONS

The Kelp Gull is an abundant and widely distributed species in coastal Argentina and appears to be a potential threat to humans and coastal wildlife. The opportunistic feeding habits and flexibility in breeding requirements of the Kelp Gull make this species a probable key factor in the structuring of seabird assemblages and a problem to other coastal wildlife if populations continue to increase. Similarly, threats to human populations are likely to increase with current Kelp Gull population trends. Management and research requirements needed to be implemented in the short term include

1) monitoring of key colonies along the coast, especially those close to urban areas and within protected areas;
2) the incineration or covering of garbage at refuse tips;
3) the reduction in the amount of fisheries bycatch discarded at sea during fishing operations;
4) the treatment or correct disposal of sewage;
5) the careful selection of refuse tip locations in relation to airports;
6) the evaluation of the role of Kelp Gulls as pathogen carriers; and
7) the evaluation of the effects of Kelp Gulls on vulnerable coastal species.

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