

*Low overall numbers (less than 1,400 breeding pairs) and the vulnerability of the few known colonies tend to suggest that this largely crab-eating gull of the coast of Argentina (where it breeds) and Uruguay (where some birds winter) merits fuller protection and intensified study and monitoring.*

**DISTRIBUTION** Olrog's Gull (see Remarks 1) is endemic to the Argentinian Atlantic coast, where until recently the only known breeding sites were in Bahía San Blas in the province of Buenos Aires (Olrog 1967, Devillers 1977). However, newly discovered colonies in the province of Chubut considerably extend the known breeding range to the south (see below and Remarks 2). The species disperses north along the coast of Uruguay (Gore and Gepp 1978, Escalante 1984), accidentally in southern Brazil (Vooren and Chiaradia 1990), and south along the Patagonian coasts (Olrog 1967; see Remarks 3). Unless otherwise stated, coordinates in the following account are taken from Rand and Paynter (1981) and Paynter (1985) and records at individual localities are of single birds or small groups collected or observed.

**Brazil** The only two known records are from Rio Grande do Sul, where a bird was captured in winter 1971 near Rio Grande (Belton 1984-1985) and a juvenile was photographed in June 1989 at Cassino Beach (Vooren and Chiaradia 1991).

**Uruguay** Records (west to east) are from: (*San José*) Playa Autódromo (= Playa Penino, c.34°45'S 56°25'W), July 1959 (Zorrilla de San Martín 1959); Playa Penino, August 1960 (Vaz-Ferreira and Gerzenstein 1961), November 1960 and August 1964 (Escalante 1966), with 93 adults and 11 immatures being seen on 27 June 1970 (Gore and Gepp 1978) and an unspecified number in December 1978 (Escalante 1980); (*Montevideo*) Bahía de Montevideo, June and July 1959 (Vaz-Ferreira and Gerzenstein 1961); (*Canelones*) Arroyo Pando (34°48'S 55°52'W), June 1961 (Escalante 1970); (*Maldonado*) Playa Brava (34°58'S 54°56'W), Punta del Este, July 1964 (Escalante 1966); Barra del Arroyo Maldonado (= Arroyo Maldonado, at 34°55'S 54°51'W), July 1961, May 1963, July 1964 and July 1965, with 28 juveniles in September 1982 (Escalante 1962, 1966, 1984); Laguna José Ignacio (34°51'S 54°43'W), June 1959 (Vaz-Ferreira and Gerzenstein 1961), and July 1961 (Escalante 1962).

**Argentina** Records are organized within province from north to south, as follows:

*Buenos Aires* Isla Martín García (34°11'S 58°15'W), undated (Narosky and di Giacomo in prep.); río de la Plata, outside the Jorge Newbery Airport, January 1989 (H. G. Young *in litt.* 1989); Tigre (34°25'S 58°34'W), June 1978 (Narosky and di Giacomo in prep.); Paraná delta (34°25'S 58°35'W), May 1991 (coordinates and data from M. Babarskas *in litt.* 1991); San Fernando (34°26'S 58°34'W), Buenos Aires, July 1988 (B. M. López Lanús *in litt.* 1991); Buenos Aires harbour, September 1991 (M. Pearman *in litt.* 1991); San Isidro, undated (Narosky and di Giacomo in prep.); Ribera Norte, San Isidro, several observations during the mid- and late 1980s and in 1990 (J. C. Chebez *in litt.* 1992); Costanera Sur Reserve (34°36'S 58°27'W), currently (M. Pearman *in litt.* 1991); Capital Federal (34°38'S 58°28'W), July 1988 and July 1990 (coordinates and data from M. Babarskas *in litt.* 1992); Moreno (= Mariano Moreno, 34°39'S 58°48'W), undated (Narosky and di Giacomo in prep.); Quilmes, December 1917 and October 1918 (specimens in MACN); Punta Lara (34°49'S 57°59'W), "only in the autumn and winter months" (Klimaitis and Moschione 1987); mouth of río Salado, June 1990 (Narosky and di Giacomo in prep.); Punta Rasa (36°22'S 56°45'W), various dates from March 1971 to December 1986 (Narosky and di Giacomo in prep.), with 26 birds on 12 July 1987 and a maximum of 182 on 8 May 1988 (coordinates and data from D. Blanco *in litt.* 1991); ría de Ajó (36°20'S 56°54'W), June 1937 (specimens in UNP; also Casares 1939); Dolores, October 1924 (specimen in MACN); San Clemente del Tuyú (36°22'S 56°43'W), Cabo San Antonio and vicinity, during the summer months (November to February) and in November 1962 (Olrog 1967); General Lavalle, September 1937 (Pereyra 1938; see Remarks 4); Santa Teresita (36°32'S 56°41'W), May 1991 (Narosky and di Giacomo in prep.); Mar del Tuyú (c.15 km north of Mar de Ajó; see below) undated (Narosky and di Giacomo in prep.); Mar de Ajó (c.20 km north of Punta Sur del Cabo San Antonio), undated (Narosky and di Giacomo in prep.); Punta Médanos, 5 km north of Punta Sur del Cabo San Antonio, undated (Narosky and di Giacomo in prep.); Cariló, c.5 km south of Pinamar (37°07'S 56°50'W), January 1984 (Narosky and di Giacomo in prep.); Villa Gesell (37°15'S 56°57'W),

undated (Narosky and di Giacomo in prep.); Mar Chiquita (= Laguna Mar Chiquita, 37°37'S 57°24'W), "winter visitor" and February 1977 (Narosky and di Giacomo in prep.), with 20 birds in January 1991 (M. Nores *in litt.* 1992) and the species reported common in winter 1991 (J. C. Chebez *in litt.* 1992); Mar del Plata, August 1926 (specimen in MACN), also reportedly abundant on the beaches in September 1956 (Olrog 1958a) and common in July 1982, July 1986 (several adults) and June 1988 (M. Babarskas *in litt.* 1992, B. M. López Lanús *in litt.* 1992); main pier of Mar del Plata, where c.200 birds were observed on 21 June 1989 (M. Pearman *in litt.* 1991); Mar del Sur, May 1960 (specimen in MACN); San Cayetano (38°25'S 59°40'W), undated (Narosky and di Giacomo in prep.); Necochea, where c.20 birds were recorded in June 1989, and 40-100 birds followed a trawler on a pelagic trip from Necochea in June 1989, and on another such trip (to c.25 km offshore) more than 10 birds were observed in June 1991 (M. Pearman *in litt.* 1991); Quequén Harbour (just east of Necochea), where more than 15 birds were observed in June 1991 (M. Pearman *in litt.* 1991); Costa Bonita (c.12 km east of Necochea), January 1969 (T. Narosky *in litt.* 1992), between 1983-1985 (Narosky and Fiameni 1987), January 1986 (M. Nores *in litt.* 1992), December 1986, June 1987 (T. Narosky *in litt.* 1992), with more than 40 birds in June 1991 (M. Pearman *in litt.* 1991); Quequén (38°32'S 58°42'W) and Costa Bonita, where 10 birds were observed in June 1988 (B. M. López Lanús *in litt.* 1991); Orense (38°40'S 59°47'W), undated (Narosky and di Giacomo in prep.); Cuatros (38°42'S 62°24'W), December 1990 (Narosky and di Giacomo in prep.); General Daniel Cerri (38°44'S 62°24'W), July 1991 (data and coordinates from T. Narosky *in litt.* 1992); Puerto Ingeniero White, December 1938 (Casares 1939); Puerto Belgrano, December 1952 and January 1953 (Olrog 1958b), reportedly common there (12 birds taken) in June 1971 (Jehl and Rumboll 1976) and reportedly very common in dumps in autumn 1981 (J. C. Chebez *in litt.* 1992); Isla Brightman (= Caleta Brightman, 39°24'S 62°10'W in OG 1968), nesting in November 1990 (P. Yorio *in litt.* 1992; see Population); Riacho Azul, Bahía Unión, undated (Narosky and di Giacomo in prep.); Bahía San Blas, nesting on several small islands in the bay (Daguerre 1933, Olrog 1967, Devillers 1977; see Population, Remarks 4), this including breeding colonies in November 1990 at Isla Puestos (c.12 km north-west of Isla de los Riachos), Isla Gama and Isla Jabalí (40°36'S 62°12'W in OG 1968) (P. Yorio *in litt.* 1992; see Population); Faro Segunda Barraca (c.40°46'S 62°16'W), April 1931 (Steullet and Deautier 1935-1946);

*Río Negro* San Antonio Oeste, January 1973 (Contreras 1978); Canal del Indio, San Antonio Oeste, March to June between 1989 and 1991 (P. González *in litt.* 1991); Balneario Las Grutas (40°48'S 65°05'W; read from map provided by P. González *in litt.* 1991), January 1989 (M. Pearman *in litt.* 1991); Balneario El Cóndor (río Negro mouth), Punta Bermeja and Punta Mejillón, Caleta de los Loros (c.41°00'S 64°00'W), present in small numbers throughout the year (D. Paz *in litt.* 1991); Reserva Provincial "Área Complejo Islote Lobos" (41°26'S 65°28'W), November (year not given) (coordinates and data from D. Paz *in litt.* 1991); El Horno (c.41°56'S 65°03'W), January 1974 (Contreras 1978);

*Chubut* Puerto Lobos, January 1973 and January 1974 (Contreras 1978); Punta Norte and Puerto Pirámides (Península de Valdés), January 1973 (Contreras 1978); Puerto Pirámides, January 1989 (H. G. Young *in litt.* 1989); 2 km east of Puerto Pirámides, January 1989 (M. Pearman *in litt.* 1990); Islote Galfrascoli (45°02'S 65°52'W in OG 1968) and Islas Vernaci (45°11'S 66°30'W), nesting in November 1990 (P. Yorio *in litt.* 1992; see Population); Comodoro Rivadavia, where c.80 birds were recorded in January 1989 (M. Pearman *in litt.* 1990);

*Santa Cruz* Puerto Deseado, January 1940 (Olrog 1948);

*Tierra del Fuego* Río Grande, 24 January 1989, and Ushuaia, 29 January 1989 (M. Pearman *in litt.* 1990).

**POPULATION** The overall population of Olrog's Gull was believed to be very small (Devillers 1977), and until November 1990 the species was only known to breed in a few small colonies in the Bahía San Blas, Buenos Aires province, where Olrog (1967) found 12 nests in November 1963 and Devillers (1977) located two colonies occupied by some 400 individuals in November 1975. Current studies at breeding colonies (including those in Chubut) conducted in November 1990 have resulted in an estimated total population of 1,239±127 breeding pairs, with numbers at individual localities as follows (brackets indicate the number of estimated pairs): Isla Brightman (315±35); Isla Puestos (363±36); Isla Gama (309±30); Isla Jabalí (163±16); Islote Galfrascoli (19); Islas Vernaci (70±10) (P. Yorio *in litt.* 1992; see Remarks 2). Outside the breeding season Escalante (1984) noted that between 1966 and 1968 the number of individuals in a flock along the coast between San José and Maldonado departments, Uruguay, never exceeded 55 birds, although Gore and Gepp (1978) reported the species as a "fairly common" wintering visitor to the

country's coasts, with a maximum of 104 birds recorded at Playa Penino on 27 June 1970. In Argentina, it was reported to be abundant (commoner than Kelp Gulls *Larus dominicanus*) on the beaches of Mar del Plata and at sea, as far as 10 miles from the coast, in September 1956 (Olrog 1958a), and it was "common" in the Mar del Plata harbour on July 1982 (B. M. López Lanús *in litt.* 1991). Jehl and Rumboll (1976) found it common in the vicinity of Puerto Belgrano, where more than 200 birds (no more than four subadults and one juvenile) were present in the area from 25 to 28 June 1971. Narosky and Fiameni (1987) found it "abundant" at Costa Bonita between 1983 and 1985, and D. Blanco (*in litt.* 1991) observed 115 and 182 birds respectively at Punta Rasa on 7 and 8 May 1988, although Klimaitis and Moschione (1987) reported it scarce and only found during autumn and winter. Observations at Comodoro Rivadavia gave numbers of c.80 birds on 22 January 1989 and it was found common on a pelagic trip from Necochea in the same year (see Distribution); c.200 birds were present at Mar del Plata pier on 21 June 1989, and at Costanera Sur several observations during 1990 and 1991 included 18 birds on 3 August 1991, c.30 (a majority of second-year birds) on 7 September 1991 and 20 (including many second-year birds) on 8 September 1991 (M. Pearman *in litt.* 1991). In Río Negro province it appears frequently (Contreras 1978), with small numbers (no more than 17) present throughout the year (D. Paz *in litt.* 1991).

**ECOLOGY** Olrog's Gull occurs along the coasts on beaches, rocky coasts, harbours (see Remarks 5), coastal and brackish lagoons and, notably, estuaries (Olrog 1958a, Gore and Gepp 1978, Escalante 1984, M. Nores *in litt.* 1992).

Its diet is fairly specialized and consists mainly of crabs *Chasmagnathus granulatus*, *Cyrtograpsus* sp. and *Uca* sp., as well as mussels, the former being obtained from mudbanks at low tide and the latter from rocky coasts (Escalante 1970, 1984, Devillers 1977). The stomach and gullet contents of eight specimens taken on mudflats consisted of: *Chasmagnathus granulatus* (six birds), *Chasmagnathus* sp. and several mussels (one bird) and *Cyrtograpsus* sp. (one bird) (Escalante 1966; also Daguerre 1933). More rarely, Olrog's Gull has been reported feeding on waste from boats (Jehl and Rumboll 1976, Escalante 1984, Klimaitis and Moschione 1987) and scavenging inside a sea-lion colony (H. G. Young *in litt.* 1989). Further details of its feeding behaviour are in Escalante (1966).

Nesting starts in September/October, as fairly well-grown chicks have been found in early November (Devillers 1977, also Olrog 1967; see Remarks 6). Nesting colonies are established on flat sandy islands just above water level (they may be partly inundated at high tide), where grasses and halophytic plants (i.e. *Salicornia*, *Suaeda*, etc.) are scarce (Olrog 1967, Devillers 1977, Escalante 1984). The nests may be placed in grass tussocks (Olrog 1967), and Devillers (1977) described them as elevated platforms of twigs, grass stems, pieces of *Salicornia*, or as scrapes lined with the same materials. Colonies were situated 500 m (Olrog 1967) and 100 m (Devillers 1977) from the high-tide line, and were reported to be remarkably compressed, some nest platforms touching each other. Devillers (1977) reported two colonies on two islands, one formed by 70 individuals and the other being divided into two subcolonies located 50 m from each other, with 70 and 160 adults c.60 and 20 m respectively from the nearest Kelp Gull colony; five additional pairs bred elsewhere at the periphery of another Kelp Gull colony (Devillers 1977).

The species's seasonal movements are insufficiently studied, but birds are commonly found along Uruguayan coasts in the autumn, winter and spring months, i.e. April/May to October/November (Gore and Gepp 1978, Escalante 1980), as well as along the Buenos Aires province coast (see Distribution). D. Blanco (*in litt.* 1991) noted that at Punta Rasa birds arrive in May. Records suggest that southward displacements are less frequent, and are more likely to occur during the austral summer, after breeding (five records from southern Chubut, Santa Cruz and Tierra del Fuego are all from January: see Distribution).

**THREATS** The chief cause of concern in this species is its extreme vulnerability in the breeding season: the number of known breeding sites is very small. At those in Buenos Aires province, egg-collecting for food already occurs regularly (Olrog 1967); moreover, there is a permanent danger from the possible development of tourism, increase in fishing traffic, petroleum exploitation and other activities (Devillers 1977, Escalante 1984). Diseases and man-induced changes in its habitat (e.g. contamination of feeding areas) could cause a shortage of prey items.

**MEASURES TAKEN** The species occurs in several provincial reserves, namely Ribera Norte, Costanera Sur, Rincón de Ajó, Campos del Teyú, Mar Chiquita (J. C. Chebez *in litt.* 1992). Some islands in Bahía San Blas, Bahía Anegada and Bahía Blanca, and most in Bahía Samborombón, have also been protected as provincial reserves, although in practice these islands are by no means effectively protected (T. Narosky *in litt.* 1992). Further south reserves include: Punta Bermeja, Caleta Los Loros and Islote Lobos in Río Negro, Punta Pirámides in Chubut and ría de Puerto Deseado in Santa Cruz, some of which periodically hold great concentrations of the species, although again protection of the sites is not adequately enforced (J. C. Chebez *in litt.* 1992).

**MEASURES PROPOSED** Existing colonies should immediately be afforded rigorous protection, involving the exclusion (at least during the breeding season) of both unauthorized persons and potential domestic predators (i.e. dogs, cats, etc.). A study should be conducted to locate the most important resting and feeding areas year-round (Escalante 1984), as well as other possible unreported breeding colonies. Detailed studies of the species's feeding requirements as well as of the conservation status of its main staples should be conducted to detect and prevent possible threats and food shortages (Escalante 1984).

**REMARKS** (1) Olrog's Gull's taxonomic status has been uncertain owing to its affinities with the Band-tailed Gull *Larus belcheri*, but the view that it represents a good species (see Olrog 1958a, Devillers 1977, Escalante 1970, 1984) is accepted here. (2) Data on these newly found colonies was provided by P. Yorio (*in litt.* 1992) based on Harris and Yorio (*in press*) (unseen at the time of going to press). (3) A record of this species from the island of South Georgia has now been proved to refer to the Kelp Gull (Escalante 1980). (4) Magno (1971) referred in vague terms to nests found together with those of the Brown-hooded Gull *L. maculipennis* at General Lavalle but surprisingly does not mention the colonies previously reported by Olrog (1967) at Bahía San Blas. (5) Although it can be found in man-modified environments, the species is apparently less adaptive than other gulls of the region (e.g. Kelp and Brown-hooded), as indicated by Escalante (1966) and by its feeding habits (see further under Ecology). (6) Colonies at Bahía San Blas are apparently regularly egged, thus timing of breeding can vary somewhat from year to year (Devillers 1977).