WETLANDS INTERNATIONAL

IUCN - Species Survival Commission

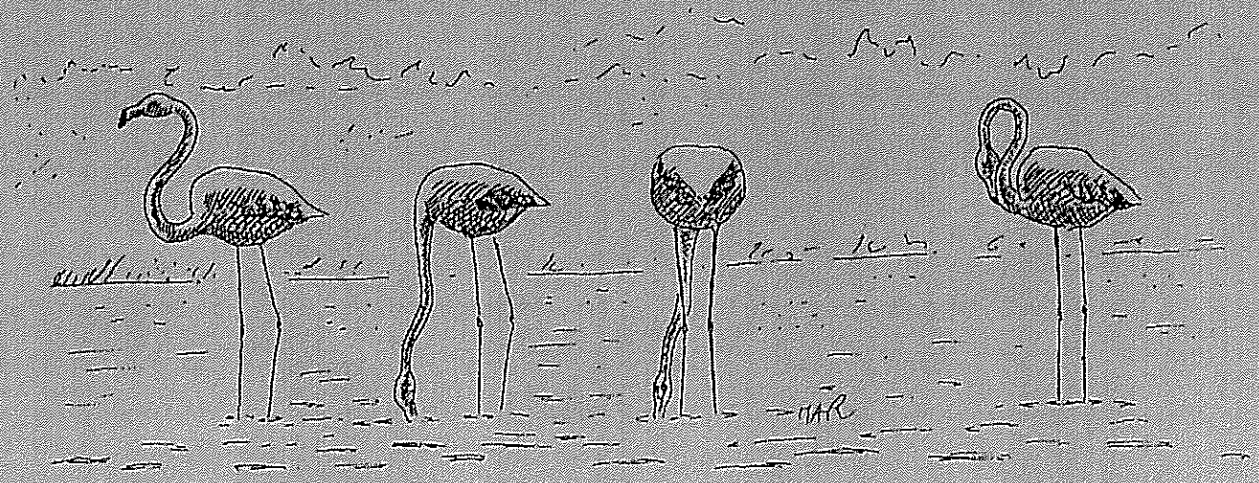
FLAMINGO SPECIALIST GROUP

Coordinator: Dr. A. R. Johnson

NEWSLETTER N° 9

ANNUAL REPORT 1997

September 1998



Station Biologique de la Tour du Valat - Le Sambuc - F-13200 ARLES (France)
Phone: 33 - (0)4 90 97 20 13 *Fax: 33 - (0)4 90 97 20 19*
e-mail: johnson@tour-du-valat.com
This newsletter can be down-loaded from the web-site :
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Contents

Summary

This newsletter covers the year 1997. Details of breeding by Lesser Flamingos *Phoenicopterus minor* and Greater Flamingos *Phoenicopterus ruber roseus* are given for 16 sites in 9 countries.
In the Western Mediterranean, a new colony of Greater Flamingos was established in Spain, at El Hondo Natural Park (Alicante).The long-term study of the Greater Flamingo continues in the Western Mediterranean with PVC ringing schemes in place in France, Spain and Italy (Sardinia).
As part of the Wetlands International monitoring scheme, flamingos have been counted, along with other waterfowl, in an increasing number of countries.In the New World, good count data have been obtained for James and Puna Flamingos, respectively *Phoenicoparrus jamesi* and *P. andinus*, in the High Andes and for Caribbean Flamingos in Mexico.
The list of references contains 42 papers, most of which were published in 1997.

Members of the Flamingo Specialist Group

National and regional contacts.
(The group lacks a coordinator for the New World)

SOUTH AMERICA

• Eliana FLORES
Casilla 499
LA PAZ, **Bolivia**

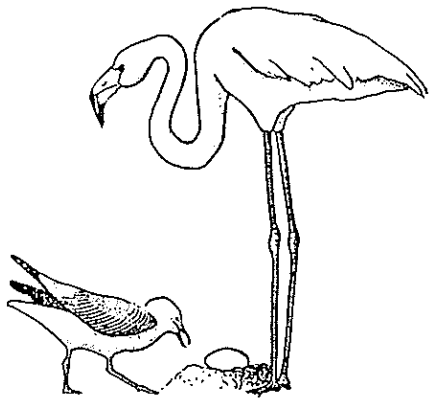
• Virginia MASCITTI
Instituto de Biologia de la Altura
Av. Bolivia 2335
4600-SAN SALVADOR DE
JUJUY, **Argentina**

• Mario PARADA
Minera Escondida Limitada,
Gerencia de Recursos Naturales
y Medio Ambiente
Avda.Angamos 721
ANTOFAGASTA, **Chile**

• Silvia UMPIERREZ
ORONO, PROBIDES
Ruta 9, km.204,
Casilla de Correos 35,
27000 ROCHA, **Uruguay**

CARIBBEAN AND CENTRAL AMERICA

• Guy BALDASARRE
(for Mexico, Cuba, Bahamas
Bonaire and Venezuela)
Environmental and Forestry
Biology
State University of New York
SYRACUSE, NY 13210, **U.S.A.**



EUROPE

• Alessia ATZENI
Via Archimede 9
09131 CAGLIARI
(Sardinia), **Italy**

• Nicola BACCETTI
I.N.F.S.
Via Ca'Fornacetta, 9
40064 OZZANO
DELL'EMILIA (Bologna), **Italy**

• Melis CHARALAMBIDES
Charalambides Dairies Ltd.
P.O. Box 8076
NICOSIA, **Cyprus**

• Joao Carlos FARINHA
Instituto da Conservacao
da Natureza
Rua da Lapa, 73
1200 LISBOA, **Portugal**

• George HANDRINOS
44, El. Venizelou Str.
166 75 GLYFADA, **Greece**

• Alan JOHNSON
Station Biologique
La Tour du Valat, Le Sambuc
13200 ARLES, **France**

• Manuel RENDON MARTOS
Director Reserva Natural
Laguna de Fuente de Piedra
Apdo. de Correos, 1
29520 FUENTE DE PIEDRA
(Málaga), **Spain**

• Cathy KING
Diergaarde Blijdorp
Royal Rotterdam Zoological and
Botanical Gardens
Van Aerseenlaan 49
3039 KE ROTTERDAM
The Netherlands

• Joop TREEP
(for feral flamingos
breeding in Germany)
De Leek 30
9411 MK BEILEN
The Netherlands

ASIA

• B. BEHROUZI-RAD
Department. of Environment
P.O. Box 15875-5181
TEHRAN, **Iran**

• G. Asli SEZER
Middle East Technical
University, Department of
Geological Engineering,
Inonu Bulvari
O6531, ANKARA, **Turkey**

• Altai ZHUMAKAN-ULY
Tours in Kazakhstan,
Akademgorogok
Institute of Zoology of Kazakh
Academy of Science
ALMATY, 480032
Kazakhstan

AFRICA

• Mohamed DAKKI
Université Mohamed V
Institut Scientifique,
Centre d'Etude des
Migrations d'Oiseaux
Avenue Ibn Battota
B.P. 703
RABAT-Agdal, **Morocco**

• Yilma DELLELEGN
EWCO
P.O.Box 386
ADDIS ABABA, **Ethiopia**

• Sharew DESTA
EWCO
Abijatta Shalla Lakes
National Park
c/o Arsi Negeli
Post Office, **Ethiopia**

• Patrick MORANT
12 Mutual Way
BERGVLIET, 7945
Western Cape, **South Africa**

• Oliver NASIRWA
Department of Ornithology
National Museums of
Kenya, P.O. Box 40658
NAIROBI, **Kenya**

• Rob. SIMMONS
Ornithology Program
Ministry of Environment and
Tourism, P/Bag 13306
Windhoek, **Namibia**

Acknowledgements

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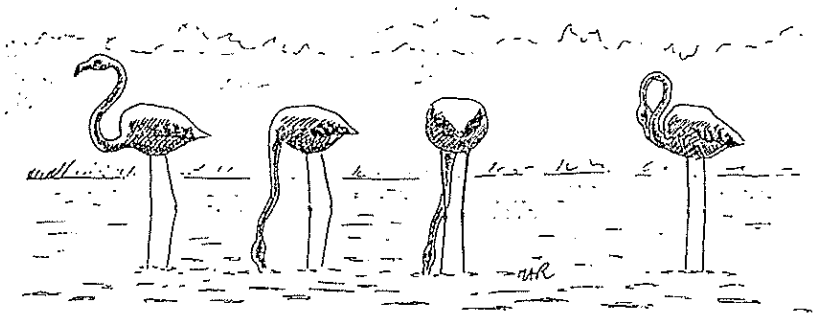
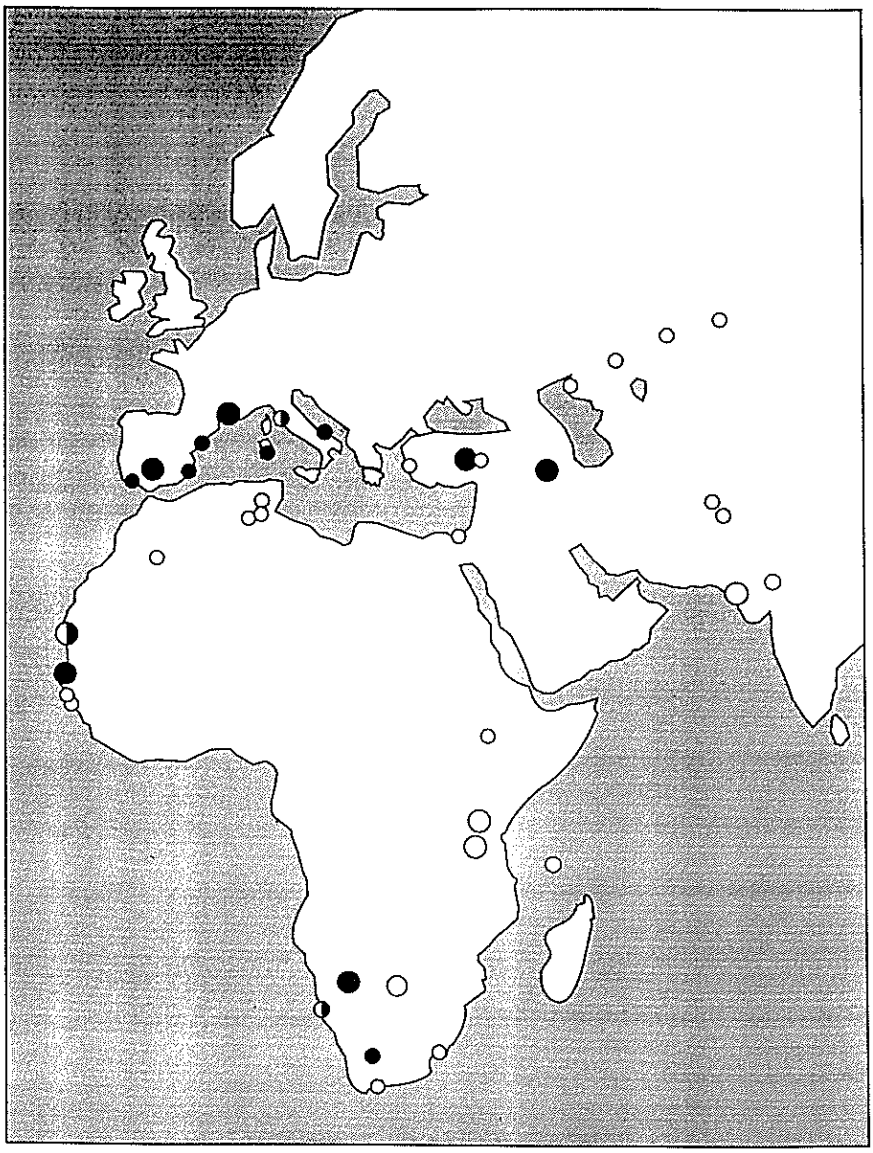
1997



BREEDING OF THE GREATER FLAMINGO IN 1997



○ Known breeding sites **not reported** in 1997

● Known breeding sites **occupied** in 1997
(details in regional report)

◑ Known breeding sites **with no reproduction** in 1997
(or unsuccessful attempts)

The map above shows all known sites where the Greater Flamingo has been reported breeding since 1940. The larger circles are the major sites, the smaller ones those colonised less frequently and/or by fewer birds.

News from the regions 1997

Compiled by Alan Johnson and Pierre-Yves Henry.

Old World

1 - EAST AFRICA

	Ethiopia	Kenya	Sudan	Tanzania	Uganda	Total
Greater Flamingo	5,473	15,454	130	600	0	21,657
Lesser Flamingo	31,952	349,981	0	17,900	12,978	412,811

Table 1: January waterfowl censuses in East Africa (Dodman *et al.* 1997).

January and July waterbird counts in East Africa revealed the numbers of flamingos presented in table 1.

ETHIOPIA

Two new localities were visited during the mid-winter census. At Lake Chitu, totals of 25,000+ Lesser and 1500 Greater Flamingos were present (Dodman *et al.* 1997). At Abijata Lake, Desta (*in* Howard 1997) estimated 87,249 Lesser and 36,321 Greater Flamingos in January 1997.

KENYA

In January, a total of 337,400 flamingos was recorded on the southern Rift Valley lakes (Nasirwa *in* Howard 1997), of which 72,595 Lesser Flamingos were counted at Lake Nakuru (Dodman *et al.* 1997). Counts on the main Rift Valley lakes of flamingos are presented in table 2.

In July, simultaneous counts revealed a total of 1,307,000 Lesser Flamingos in Kenya and Uganda (Simmons *in* Howard 1997).

SUDAN

In March, Greater Flamingos were often present at the southern end of Um Shugiora Island (Dodman *et al.* 1997).

TANZANIA

More than 10,000 flamingos were at Momela Lakes during the mid-January census (Dodman *et al.* 1997).

UGANDA

Practice nests of Lesser Flamingos were seen at Masekye crater in mid-January (Dodman *et al.* 1997).

In July, simultaneous counts revealed a total of 1,307,000 Lesser Flamingos in Uganda and Kenya (Simmons *in* Howard 1997).

	Bogoria	Elmenteita	Nakuru	Magadi
Greater Flamingo	*10,708*	*322*		*1119*
Lesser Flamingo	*182,348*	*71,197*	*69,447*	*26,909*

Table 2: Mid-January census on some of the Rift Valley lakes, in Kenya (Dodman *et al.* 1997).

2 - SOUTHERN AFRICA

	Botswana	Mozambique	Namibia	South Africa	Total
Greater Flamingo	998	546	3,704	2,888	8,136
Lesser Flamingo	50	0	3,896	2,419	6,365

Table 3: Waterbird counts in Southern Africa (Dodman *et al.* 1997).

January waterbird counts in Southern Africa revealed the numbers of flamingos presented in table 3.

SOUTH AFRICA

In July, simulatneous counts revealed a total of 3,600 Lesser Flamingos in South Africa (Simmons *in* Howard 1997).

Some Lesser Flamingos attempt breeding every year at Pearl Sewage Works but have always failed (Velasquez, Simmons *in* Howard 1997).

Greater Flamingos bred successfully at Calvinia, Northern Cape (Anderson *in prep. in* Howard 1997).

BOTSWANA

During the January census, a new site was visited: Mokobilo Pan, between Francistown and Orapa; 900 Greater Flamingos were counted there (Dodman *et al.* 1997).

Over 400,000 Lesser Flamingos were present at Sua Pan in March (Liversedge, Simmons *in* Howard 1997). This species bred successfully at this site, with at least 30,000 nests built (Liversedge, Simmons *in* Howard 1997).

In July, simultaneous counts revealed a total of 150,000 Lesser Flamingos in Botswana (Simmons *in* Howard 1997).

MOZAMBIQUE

In January 1997, only 66 Greater Flamingos remained of the groups which arrived at Bazaruto Archipelago following the rains of January 1996.

In March 1997, 413 Greaters were at Salinas Da Matola and 67 at Lakes Piti, Xingute and Munde (Dodman *et al.* 1997).

NAMIBIA

Mile 4 Saltworks (4 miles north of Swakopmund) boasted the first documented breeding attempt of Greater (40 nests) and Lesser Flamingos (60 nests) on the coast. Several hundred attempted breeding (nest building and incubating behaviour) but failed because of disturbance by jackals (Simmons *in* Dodman *et al.* 1997, Braby, Tarboton, Simmons *in* Howard 1997).

Another interesting breeding event occurred this year in Namibia: thanks to the massive rains of winter 1996-97, Etosha Pan experienced an important inflow of water, allowing 15-20,000 pairs of Greater Flamingos to breed; the number of birds was estimated there in March-April (N. Brain *in* Dodman *et al.* 1997). The number of fledglings, censused in June, was the highest recorded in the last two decades.

At Walvis Bay, 3,127 Greater Flamingos were counted in January (Dodman *et al.* 1997).

In July, simultaneous counts revealed a total of 19,000 Lesser Flamingos in Namibia (Simmons *in* Howard 1997).

3 – WEST AFRICA

The mid-January waterbird census revealed 60,936 Greater and 7,544 Lesser in West Africa (Dodman *et al.* 1997).

GUINEA BISSAU
At Orango (Bijagós Archipelago), a flock of 54 Greater Flamingos was recorded in January-April (Dodman *et al.* 1997).

SENEGAL
During the mid-January census, 20,544 Greater and 4,031 Lesser Flamingos were counted at the P.N. des Oiseaux du Djoudj. At the same time, 446 Greater and 13 Lesser Flamingos were recorded in the Sine Saloum area.
Grand totals for mid-winter census are 21,276 Greater and 4,044 Lesser Flamingos (Dodman *et al.* 1997).

MAURITANIA
The Banc d'Arguin, so important for flamingos, is often not visited during the international mid-winter censuses. A WIWO-WSG project covered the whole area in Jan.-Feb. 1997 and counted a total of 35,387 Greater Flamingos; no Lessers were seen (Zwarts *et al.* 1998). This count may be an under-estimation because of unfavourable meteorological conditions (Dodman *et al.* 1997). Previous winter counts showed 65,000 in 1978-79 (Trotignon *et al.*), 70,000 in 1980 (NOME) and 27,500 in 1990-94 (Gowthorpe & Lamarche).
During the mid-winter census, 3,963 Greater Flamingos and 3,500 Lesser flamingos were counted at the Natural Park of Diawling (several thousand arriving after counting days).
Totals for the mid-winter census in Mauritania were 39,606 Greater and 3,500 Lesser Flamingos.
(Dodman *et al.* 1997).
A PNBA – FIBA-Tour du Valat project has carried out regular aerial and ground surveys of the birds breeding on the islands of the PNBA. In 1997, Greater Flamingos bred only on Grande Kiaone: c.8,000 pairs raised c.4,650 chicks (counts from aerial photographs of 23 April and 5 July respectively). Judging from the age of the chicks, laying started around 20 April, extending for one month.

4 - WESTERN MEDITERRANEAN

SPAIN
At the **Fuente de Piedra** Nature Reserve, Málaga (inf. M. Rendón Martos, A.M.A.), 16,500 pairs of flamingos bred and raised 13,272 chicks.
These figures are nearly the same as in 1996, and may be linked to the flooding of the lagoon, which was exceptional both years
On 10 August, 1,143 of the chicks were captured and ringed (c.f. p. 12).
El Hondo Natural Park: For the first time, breeding by Greater Flamingos was successful at El Hondo Natural Park (Alicante). At least 800 adult flamingos were present, and at the beginning of June the first chicks were seen. A total of 491 young fledged (Aragoneses & Echevarrías 1998).
Ebro Delta: For the fifth year in succession flamingos successfully bred in the salinas at Punta de la Banya in the Ebro Delta. The mid-January census revealed 4,929 flamingos wintering in this area. Laying started at the beginning of April. An aerial census of nests indicated that 1,273 pairs attempted breeding and raised 788 young (A. Martinez Vilalta *in litt.* - Parc Natural del Delta de l'Ebre).
Doñana: A rather late breeding attempt failed.

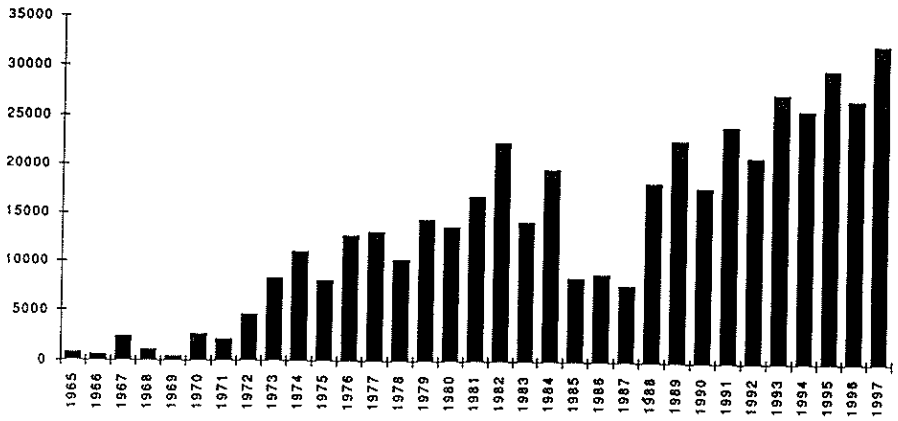


Figure 1: Mid-January census of Greater Flamingos along the Mediterranean coast of France, 1965-1997.

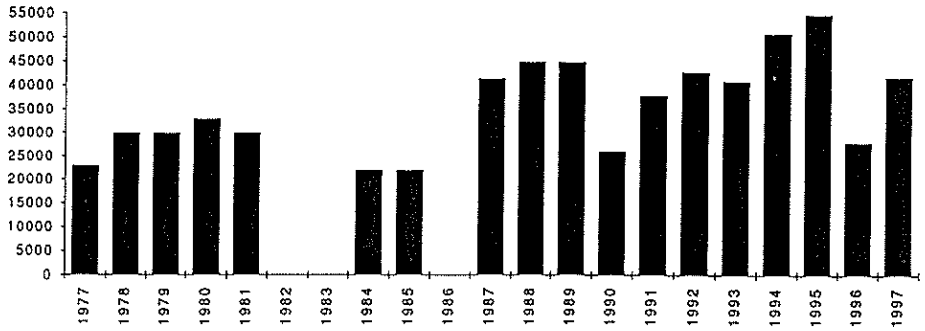


Figure 2: May-June census of Greater Flamingos along the Mediterranean coast of France, 1977-1997.

In the **Balearic Islands**, 119 flamingos were censused in January, 117 of them at Ses Salines (Ibissa) (Ramis *et al.* 1996). On 2 November, a record 213 were present on Ibissa (O. Martinez *fide* C. Requena).

PORTUGAL

Flamingo censuses were carried out during autumn and winter at Castro Marim. These revealed a steady increase in numbers from the beginning of August (250) to the beginning of December (1,186), but at the beginning of January 1998, only 632 birds remained. The first juveniles were seen in mid-August and reached a more-or-less constant number at the beginning of October (c.150). An analysis of resightings of ringed birds demonstrated that the area is more usually frequented by birds from Fuente de Piedra than those from the Camargue (Rosa & Cardoso, *unpubl.data*).

FRANCE (inf. A. R. Johnson, Tour du Valat)

The mid-January census covering the whole of the species' range in Mediterranean France showed 32,262 Greater Flamingos wintering in the country (Fig. 1). In May, 42,000 flamingos were censused (Fig. 2) (counts by CEEP, GRIVE, LPO Aude, GOR, A. Tamisier, Tour du Valat). The purpose-built flamingo island, at the Etang du Fangassier, was occupied by 13,500 breeding pairs, egg laying commencing on April 14; 6,563 young fledged in August-September and 954 of them were ringed on 30 July (c.f. p. 12).

The colony was under observation throughout the breeding season, and 756 PVC Camargue-ringed birds of 17 age classes (4-20 years) were identified breeding. In addition, 15 birds ringed as chicks at Fuente de Piedra (Málaga, Spain) also nested.

Flamingos are rarely seen in France away from the Mediterranean coast. On 31.08.97,

10 juveniles were observed at Saint-Martin-en-Bresse (Saône-et-Loire), c.500 km to the north of the Camargue. They stayed there four days before nine flew off. The remaining bird was picked up, being obviously too weak to undertake a long flight, and released at the Pont de Gau bird centre in the Camargue. Were these flamingos moving between the Mediterranean Sea and the feral population of the North Sea ? (inf. R. Lamouroux).

ITALY (inf. N. Baccetti, INFS Bologna).
For the second year, breeding was successful at the Salinas of Margherita di Savoia, **Apulia**, the colony being divided into four sites. A total of 160-200 pairs attempted breeding, among which were three ringed birds from the Camargue. The first chick hatched on 18 April. On 15 August, when c.10 chicks had already left the nursery, 133 fledglings were counted. At the same time, 70 adults were still incubating in another part of the colony. A third site, which had been successful earlier in the season, was reoccupied in July, but this second breeding attempt failed and the place was deserted by mid-August.
In **Sardinia**, simultaneous flamingo censuses revealed a total of 9,901 wintering birds (01.02), and 12,855 birds in spring (15.05) (coord. A. Atzeni, APM, URF Sassari, WWF Oristano).
Flamingos bred again at Molentargius Lagoon on the edge of the city of Cagliari; c.2,000 chicks were raised, of which 404 were captured and ringed on 21 July (c.f. p. 12).

ALGERIA
In January, 12,000 flamingos were counted at Chott Mérouane, Ouargla.
According to local people, flamingos breed between Melrhir and Biskra, in southern Algeria. Some persons claim to have raised chicks at home (*fide* Djalida Boukhalfa); but there is no substantiated evidence of breeding in the country.
During winter 1996-97, the 3 lakes in the southern part of the Constantine area had very low water levels, with few flamingos (H. Si Bachir).

5- EASTERN MEDITERRANEAN

CYPRUS
At least 1,000 Greater Flamingos were present on the island from January to April, with 1,200 in February. There were regular reports of up to 3,000 in December 1997 (Sadler & Sadler, 1997).

TURKEY
Flamingos probably bred in 1997 at Lake Tuz since 4,000 juveniles and 2,000 adults were observed at the mouth of the Konya channel in mid-August (G. Magnin, G. Eken, D.H.K.D.).
The Tuzlasi breeding site, occupied most years since 1980, is under threat from the proposed port at Çilazmak Dalyan, close to the Izmir Bird Sanctuary. Mehmet Siki and other environmentalists brought this threat and its possible dramatic consequences to the attention of politicians and the public. An impact study has been initiated to assess the effects of such a development on the breeding populations of birds as well as on fishing (Turkish Daily News, December 27, 1997).

SYRIA
Davidson & Kirwan (1998) reported a total of c.20,000 Greater Flamingos at Jabbul Lake on 2 December 1997, the largest number ever recorded in Syria.

6- ASIA

INDIA
Lesser and Greater Flamingos were present at Sambhar Lake (Rajasthan) throughout the year, most of them arriving in October (Tab. 4).

	May	July	November
Greater Flamingo	150+	150+	10,000
Lesser Flamingo	13,000	125	12,500

Table 4: Census at Sambhar Lake, Rajasthan, India (H. Sangha, *in litt.*).

SRI LANKA
In early May, 635 nest mounds were counted at Bundala (eastern province) by a range assistant, but they were later abandoned. Breeding had already been suspected at this site in the past, but had not been proved until now (Wickramasinghe 1997).

IRAN
Breeding was successful again at Uromiyeh Lake, where 700 chicks were ringed on the tibia. The number of breeding pairs was lower than in 1996 (inf. J. Mansoori).

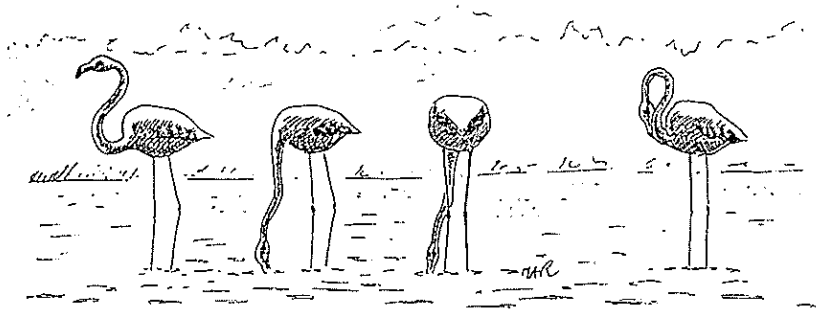
New World

Caribbean

MEXICO
In 1997, the Yucatán Peninsula population of Carribean Flamingos was estimated at 22,561 (Migoya & Garcia-Barrón *in* Arengo, c.f. p. 16).

ARGENTINA, BOLIVIA, CHILE, PERU
Abstract from Rocha & Quiroga (1997): First International Census of *Phoenicoparrus jamesi* and *Phoenicoparrus andinus* in Argentina, Bolivia, Chile and Peru, with special reference to and analysis of the situation in Bolivia.
In order to evaluate the present status of flamingo populations of *Phoenicoparrus jamesi* and *P. andinus* in South America, the First International Simultaneous Census was conducted from January 23-30, 1997, in 97 sites, comprising saline flats and high-altitude lakes (2300-4650 m). Fifty six people participated in the counts. As a result of this coordinated effort between the four countries, we now have a better knowledge about the distribution, population size, breeding sites and localities of high conservation interest for both species. The results of the census in Bolivia are particularly important because for 13 years no complete censuses were conducted for the two high Andean flamingos. According to final results of the census in the four countries, the wetlands of the Altiplano region of Bolivia host the biggest population of *P. jamesi*, with about 65% of the total number (47,619 individuals). The *P. andinus* population in Bolivia represents 30% of the individuals counted (33,927). The paper also presents information and a summary of the most important threats to these populations, with recommendations for the implementation of an effective Management Plan for the conservation of these species in Bolivia.
Editor's comment: N.B. the most recent world population estimates by Rose & Scott (1997) are of fewer than 50,000 *P. andinus* and of 50,000 *P. jamesi* in the central high Andes.

Ringing



Flamingo ringing in 1997

Old World

Phoenicopterus ruber roseus

FRANCE

Locality: Etang du Fangassier, Camargue, Bouches-du-Rhône (inf. Station Biologique, La Tour du Valat).

1997: 954 chicks were marked on the left tibia with PARIS MUSEUM stainless steel rings, and on the right tibia with yellow PVC. leg-bands engraved with a combination of four-letter codes commencing with CS--, CT--, CV--, CX-- or CZ--, on 30 July1997.

ITALY

Locality: Stagno di Molentargius, Sardinia (inf. N. Baccetti (I.N.F.S.)).

1997: 404 chicks were marked on the left tibia with INFS metal rings, and on the right tibia with red PVC leg-bands engraved in white with four-letter codes commencing with MA--, MB-- or MC--, on 21 July 1997.

SPAIN

Locality: Fuente de Piedra Reserve, Málaga (inf. M. Rendón, (A.M.A) and J. Calderón, J.J. Chans, (E.B.D)).

1997: 1,143 chicks were marked on the right tibia with ICONA metal rings, and on the left tibia with white PVC leg-bands engraved with four letters or numbers, the first, a "0", separated by a black line engraved completely around the ring, on 23 August 1997.

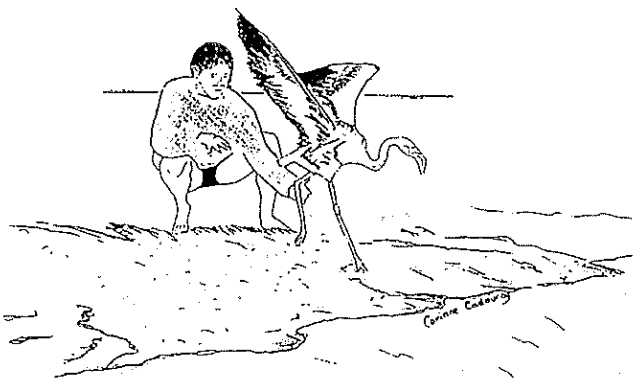
IRAN

Locality: Uromiyeh Lake (inf. J. Mansoori)

1997: 700 chicks were marked on tarsus with metal rings.

A noteworthy recovery

Paris CD 4224 ringed as chick on 28.07.1957 near Salin de Giraud (43°21'N 04°42'E) (Camargue), France (inf. Tour du Valat) found freshly dead on 20.08.1997 at Molentargius, near Cagliari (39°14'N 09°08'E), Sardinia, Italy (inf. A. Atzeni).
This bird died at age 40 years 23 days, this being the oldest-known ringed wild flamingo ever recovered (ed.).



Request for sightings of ringed flamingos

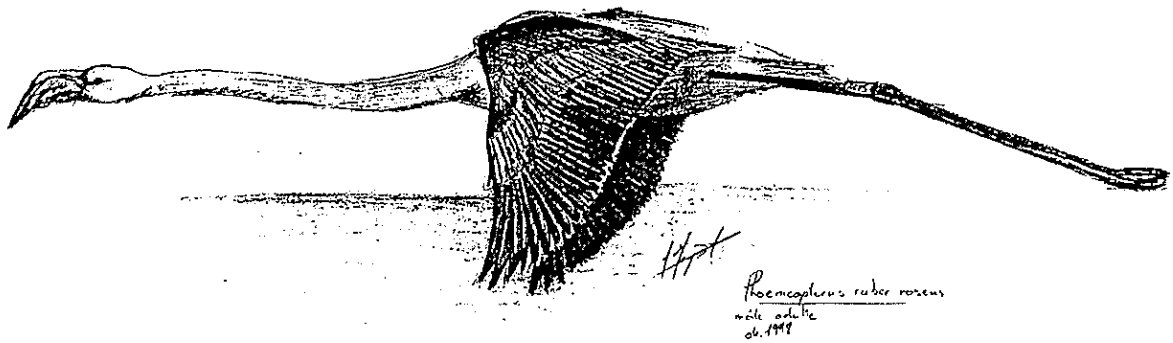
Since 1977, over 20,000 Greater Flamingo (*Phoenicopterus ruber roseus*) chicks have been ringed in the western Mediterranean with coded plastic leg bands. These are engraved in black or white with alpha-numerical codes of 3 or 4 digits. French rings (yellow or white) from the Camargue are placed on the right tibia, Spanish (orange) rings from Fuente de Piedra (Malaga) on the left tibia and Italian (blue or red) on the left tibia. The black line engraved between the first two digits of the Spanish rings must be recorded to avoid confusion with other codes. These birds may be encountered in all Mediterranean countries, in Western Asia and in West Africa. All sightings will be acknowledged with a report of the bird's life history.
Recoveries and resightings should be addressed to:

Alan R. JOHNSON
Station Biologique
La Tour du Valat
Le Sambuc
13200 ARLES (France)

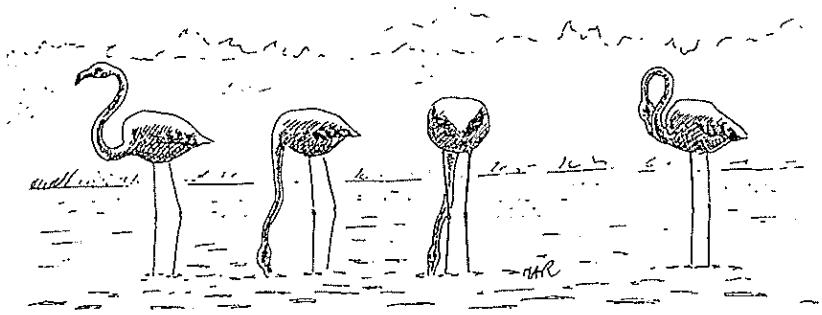
Anillamiento
Estación Biológica de Doñana
Pabellón del Perú
Avenida Maria Luisa s/n
41013 SEVILLA (Spain)

Nicola BACCETTI
INFS
Via Ca' Fornacetta 9
40064 OZZANO
DELL' EMILIA (Italy)

E-mails France: johnson@tour-du-valat.com
Spain: charina@cica.es
Italy: infszumi@iperbole.bologna.it



Articles



Recent population estimates and nesting activity of American Flamingos (*Phoenicopterus ruber ruber*) in Yucatan, Mexico.

Compiled by **Felicity Arengo**
Wildlife Conservation Society, 2300 Southern Blvd., Bronx, New York 10460, U.S.A.
E-mail: farengo@wsc.org.

(received April 1998)

American flamingos on the Yucatán Peninsula can be found in the coastal wetlands extending from north of Campeche in the east to Cabo Catoche in the west. Occasional sightings in the Sian Ka'an Biosphere Reserve (G. Merediz, Amigos de Sian Ka'an, personal communication) and Cozumel Island have also been reported (Allen 1956). The numbers of American flamingos in Yucatán have increased from an estimated 6,057 in 1954 (Allen 1956) to 25,000 in 1995 (Tab. 1). However, earlier counts were conducted on land and did not include all areas used by flamingos.

Two reserves were established in 1979, specifically to protect flamingos : the 55,350-ha Ría Lagartos Reserve and the 60,000-ha Ría Celestún Reserve. Additionally, hunting of the birds and egg collection was prohibited. A government monitoring program initiated in the 1970s has led to periodic population estimates carried out by governmental and non-governmental organizations. The increase in population size since the 1970s is believed to be due in part to these protection efforts.

Censuses immediately following Hurricane Gilbert in 1988 counted a population of 16,000 (Correa-Sandoval and García-Barrón 1992), but by 1992 numbers were as high as 25,888 (Durán *et al.* 1992). Because a large number of flamingo carcasses were not observed during the census following the

Year	Number	Source
1954	6,057	Allen 1956
1971	12,110	Sprunt 1975
1975	11,500	Hernández & Garcia-Barrón 1992
1984	26,000	Ogilvie & Ogilvie 1986
1987	25,000	J.J. Durán, CIRNAC, pers. comm.
1988	16,000	Correa-Sandoval & Garcia-Barrón 1992
1989	17,250	Correa-Sandoval & Batllori 1990
1990	18,000	Correa-Sandoval & Garcia-Barrón 1992
1992 (March)	19,334	Durán 1992
1992 (December)	25,888	Durán et al. 1992
1995	25,000	R. Migoya, Pronatura, pers. comm.
1997	22,561	Migoya & Garcia-Barrón 1998

Table 1: Flamingo estimates on the Yucatán Peninsula, Mexico.

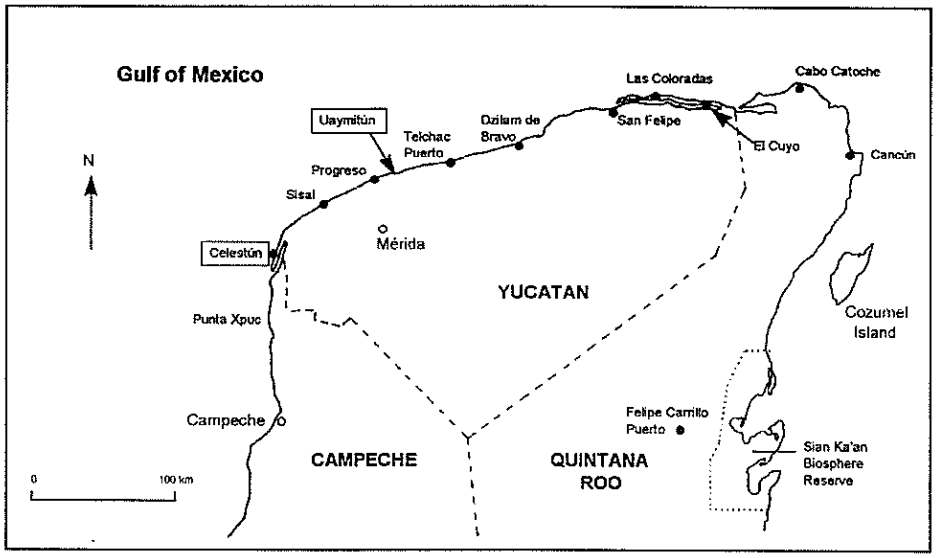


Figure 1: Map of the Yucatán Peninsula with Reserve areas highlighted.

hurricane, local biologists believe that the birds may have sought refuge during the storm on neighboring islands.

As recently as 1950, little definite information was available as to the exact distribution and general habits of the Yucatán flamingos (Allen 1956). From the 1950s to the 1970s, flamingos were known to breed in the Ría Lagartos Lagoon near El Cuyo and to disperse after the breeding season to the Celestún lagoon. However, increased monitoring efforts since the 1970s have increased knowledge of habitat use and flamingos are known to feed and breed in areas other than those previously considered. However, the Celestún Lagoon and Ría Lagartos continue to be important flamingo areas, sometimes containing more than 75 % of the population at a given time. Six important feeding areas, where flamingos have been observed in large numbers, have been identified based on information gathered in the past 20 years: the Celestún Lagoon , wetlands near Sisal, Chuburná, between Progreso and Telchac Puerto, Dzilam de Bravo, and the Ría Lagartos Lagoon (Fig. 1). However, flamingos have been observed feeding in small groups in many other areas along the peninsula. Use patterns appear to have changed since Hurricane Gilbert passed through the peninsula in 1988, a major natural perturbation, which appears to have influenced habitat availability (Correa-Sandoval and Batllori 1990, Schmitz and Baldassarre 1992).

Patterns of intermittent breeding and shifting nesting locations are common in flamingos around the world. In Yucatán, there are records of flamingos nesting at four sites within the Ría Lagartos Lagoon in the early 1950s (Allen 1956), and anecdotal reports of nesting attempts in Celestún. Few confirmed nesting records existed until the 1970s, when government agencies initiated a monitoring program, although 3,000 nests mounds were counted in 1961 in El Cuyo (Sprunt 1975). In 1975, 4,120 active nests were counted in El Cuyo (Hernández and García-Barrón 1979). During the 1970s and 1980s, sites near El Cuyo were used intermittently, with between 300 and 4,000 young reared each year. Floods destroyed all nests in 1982 and 1983, but 5,000 pairs nested successfully in 1984 (Ogilvie and Ogilvie 1986).

During the 1990s, use of "non-traditional" sites along the coast has been reported. A colony of 1,000 nests was established in Uaymitún in 1989. This was re-used but failed in 1991, and in 1992 2,000 nests were counted there (J.J. Durán, CIRNAC, personal communication). In 1993, the 2,600 nests counted in El Cuyo were lost when the colony was abandoned because of jaguar predation of

adult birds. In 1994, 600 nests were lost to flooding in Sisal (J.J. Durán, CIRNAC, personal communication), and 500 apparently successful nests were counted near Punta Xpuc, north of Campeche (Correa-Sandoval *et al.* 1994). No nests were reported in 1995. In 1996, 660 nests were counted in Celestún, although they were apparently abandoned. The same year, 4,000 successful nests were reported from El Cuyo (Yalmakan).

In Yucatán, it will be necessary to focus conservation strategies on preserving the habitat conditions that create pulses of available food and nesting habitat at a landscape level. Maintaining the natural hydrodynamics of the area is critical to ensure the conservation of the coastal wetland complex on the Yucatán Peninsula and its fauna, and a regional planning approach will be necessary.

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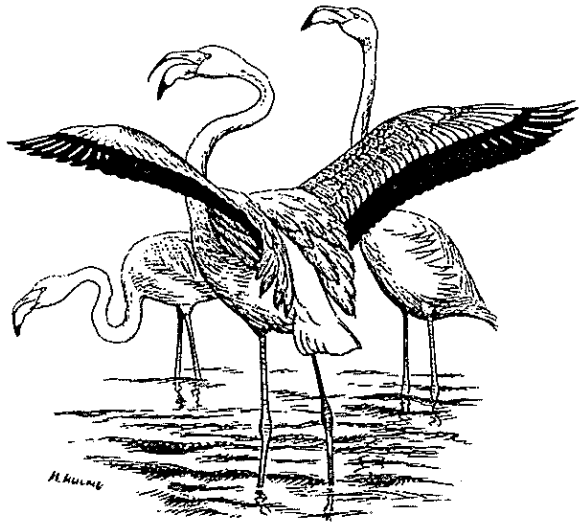
Flamingo population estimates.

From **Rose, P.M. and Scott, D.A. (1997)**

The changes since the first edition (Rose & Scott 1994) are indicated by darker grey shading of the table cell. The revision to populations estimates are:

- Greater Flamingo from 50,000 to 35,000 in Eastern Africa, and from a range of 25-100,000 to 50,000 in Southern Africa
- Carribean Flamingo from 16,000 to 20,000 Bonaire / Venezuela
- Lesser Flamingo from 3,500,000 to 4,000,000 in Eastern Africa; and from 1,000,000 to <1,000,000 in southern Africa.



Greater Flamingo
Phoenicopterus ruber

Species or subspecies	Population	Ramsar Region						Population				1% level for use in Ramsar Crit. 3C	Type
								Size		Status			
		Africa	W Europe	E Europe	Asia	Oceania	Neotropics	N America	Estimate	Source	Trend	Source		
Phoenicopterus ruber roseus	Western Africa	•							40000	CS			400	2
P. ruber roseus	Eastern Africa	•							35000	KA	DEC	BW	350	1
P. ruber roseus	Southern Africa	•							50000	SG	DEC	SG	500	2
P. ruber roseus	Western Mediterranean	•	•						80000	HS	INC	HS	800	1
P. ruber roseus	Eastern Med/SW&S Asia	•		•	•				500000	PE	STA	PE	5000	2
P. ruber ruber	Galapagos Islands						•		400-500	BO			5	1
P. ruber ruber	Bonaire/Venzuela						•		20000	SG	INC	SG	200	2
P. ruber ruber	Mexico							•	26000	SC			260	2
P. ruber ruber	Bahamas/Cuba						•		C	KD				1
Phoenicopterus chilensis	South America						•		500000	KD	DEC	SH	5000	1
Phoenicopterus minor	Western Africa	•							15000	P1	STA	BW	150	2
P. minor	Eastern Africa	•							4000000	SG	STA	BW	20000[1]	2
P. minor	Southern Africa	•							<1000000	SG	DEC	SG	10000	2
P. minor	Southern Asia				•				150000	PE	INC	PE	1500	2
**Phoenicopterus andinus*	Central high Andes						•		<50000	SC	DEC	SH	500	2
**Phoenicopterus jamesi*	Central high Andes						•		50000	KD	DEC	SH	500	1

1 For populations over 2 million birds, Ramsar criterion 3a (20,000 or more waterbirds) applies.

Conservation of the Lesser Flamingo in Eastern Africa and Beyond.

From **G.W. Howard** (ed.) (1997)

Following the first workshop on the Lesser Flamingo which took place at Nakuru, Kenya in November 1993 (c.f. Howard 1994; I.W.R.B. News 11: 10-11), another was held at nearby Lake Bogoria from 26-29 August 1997. Both meetings were held under the auspices of the I.U.C.N. Eastern Africa Programme. The workshop was attended by 27 participants from seven countries including the Wetlands International African Programme Development Officer.

RECOMMENDATIONS AND ACTIONS.

I. Communication and awareness

A. International and regional

1. An **African Flamingo Group** should be established under the aegis of the Flamingo Specialist Group which would consider both species of flamingos (and would include the Asian population of Lesser Flamingo).
Wetlands International could facilitate this group but the selection of representatives would be done in and by Africa. A regional (Eastern Africa) group should be formed as a sub-set of the African Group, and would be facilitated by I.U.C.N. in the region.
These two groups (and other relevant people) should communicate and interact to form a **Lesser Flamingo Network** – of biologists, conservationists and managers.

2. Existing (and planned) databases containing relevant information about flamingos and their sites in Africa should be identified and adapted to the needs of the Groups (above) and the research required (see below).

B. Local and site levels

3. The specialist groups (above) should appoint "site guardians" for key feeding and breeding sites of flamingos. These would be local volunteers with local access and local knowledge.
The specialist groups should work out terms of reference for developing and working in the key sites.

II. Community participation

4. All stakeholders in flamingo conservation (conservation agencies, local authorities, local communities, NGOs and interested parties) should, as far as possible, be involved in a revised approach to Lesser Flamingo populations and habitats which involves all and which puts the species and its feeding and breeding sites into the context of the environment in general.

5. Site Guardians should work with and through local communities, local authorities and local institutions to develop models of flamingo and site conservation while addressing local conservation issues.

III. Network of key flamingo sites

6. The main Lesser Flamingo sites in eastern Africa and in other parts of Africa and Asia should be considered the "key sites" for flamingo conservation in future – while still recognizing that all sites are important.

7. A **Network of Key Sites for Flamingos** should be established, based on their importance for the birds. There should be exchange of current information between the sites which, ideally, would be sites for the African Waterfowl Census. Flamingo updates and reports from the network of sites will (in future) be published with the Annual Report of the African Waterfowl Census.

8.In these Key Sites (in particular, but not exclusively) there should be inventories of limnology, hydrology and activities within the site catchments.

IV. Necessary Research

A. Breeding and Movement are the two crucial aspects of Lesser Flamingo biology and behaviour that are still not understood

enough to be used in conservation and management of the birds and their sites. Consequently there is need for research into:

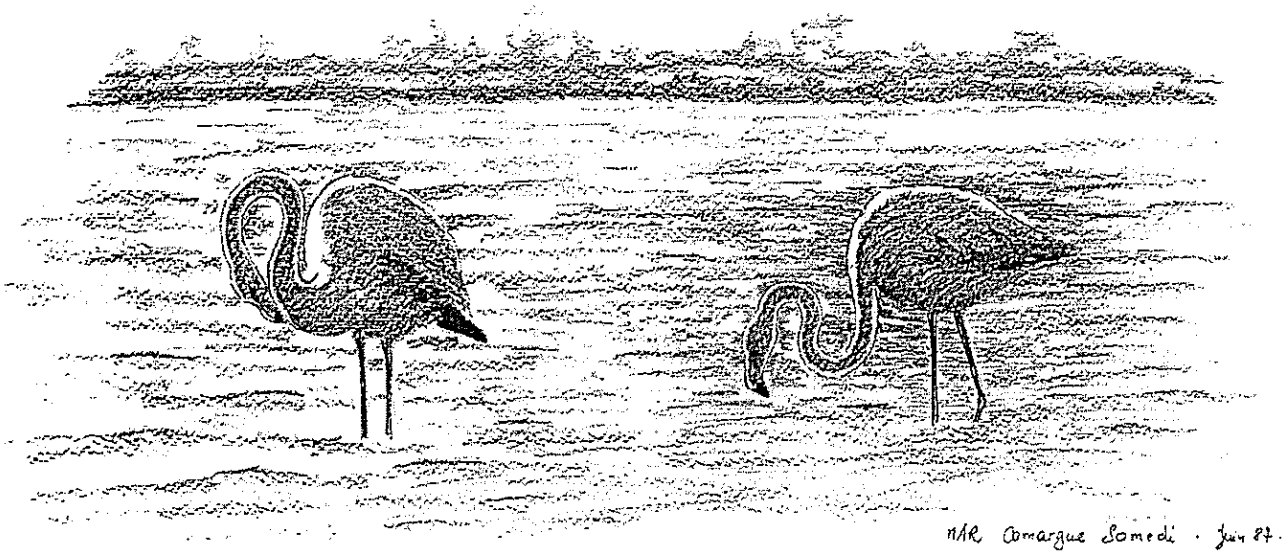
9. **Breeding of birds**: nesting and survival of chicks and other aspects of basic breeding biology at the major site of Lake Natron – involving regular monitoring, rapid response to the (probable) movement of birds from feeding sites in the Rift Valleys to Natron and basic advanced research into breeding phenomena in general.

10. **Movement of birds:** radio tagging, synchronised and coordinated site counts throughout the distribution, use of satellite imagery at major sites and use of any innovative techniques to establish the movements (patterns?) among and between the main populations areas in Africa – but especially between the Rift Valleys and Southern Africa.

B. ***Water influences at major sites*** are still not well understood for the purposes of conservation and management of flamingo habitats.

11. Water balance studies and research on water quality, depth, etc. in relation to supply and food quality need to be established at major sites to begin to predict their attractiveness and importance in feeding, etc.

12. Other research of importance would include studies on siltation and its impact on water and flamingos in their major sites; the impact of the (expanding) soda extraction industry; the impact of other users of the main flamingo sites – tourists, fisher folk, hunters, pastoralists, etc.



A research proposal for a study on the Flamingo population of the Makgadikgadi Pans, Botswana.

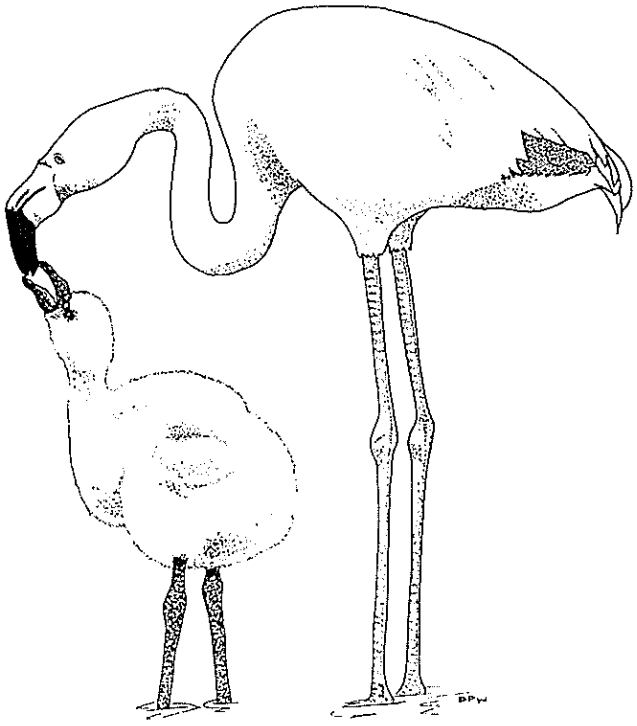
From **Graham McCulloch (*in litt.*)**

Makgadikgadi Flamingo Research, P.O. Box 173, Francistown, Botswana.

The Makgadikgadi Salt Pans, Botswana, are one of the most important breeding sites for flamingos in Africa. During periods of flooding large areas of shallow saline water provide excellent feeding conditions that attract large numbers of Greater and Lesser flamingos. Sua Pan, one of the two large pans that make up the Makgadikgadi , is one of only two sites in southern Africa that provide conditions suitable for large breeding colonies that number tens of thousands of birds, and is thought to be used by flamingos from as far as East Africa. The suitability of the Makgadikgadi as a breeding site for flamingos is, however, under increasing pressure from a variety of human-related activities. These include pressures associated with the increased local human population of Sua Town, increased local activity in ecotourism, the presence of veterinary cordon fences, a soda ash and salt extraction factory with related infrastructure of the power line, roads and railway and an increased number of low flying aircraft. A limited knowledge of the flamingos' feeding and breeding ecology and of the controlling physical factors of the Makgadikgadi that govern the presence and onset of breeding in particular, hinders good management and conservation of the population, and appropriate utilisation and protection of one of Botswana's major natural wetland resources.

The main objectives of this study are to:

1. quantify food availability to the flamingos on the Sua Pan in relation to water levels and salinity and identify the proximate factors that govern the presence and onset of breeding at Sua Pan.
2. establish a protocol to determine the population size, the frequency at which breeding occurs, the breeding numbers and the success rate of the breeding, and monitor both in relation to controlling factors like water levels and food availability,
3. monitor possible effects on flamingo breeding success of increased human-related activities and recommend strategies to reduce any harmful affects,
4. monitor flamingo movements and identify both intra- and inter-regional migrations through ringing and satellite telemetry and work towards the establishment of a monitoring network between south and east Africa.



D.N.A studies of Greater Flamingos.

Guillaume Bertault.

Station biologique de la Tour du Valat, Le Sambuc, 13200 Arles, France;
Laboratoire Génétique et Environnement, I.S.E.M., Université Montpellier II,
Cc065 Place E. Bataillon, 34095 Montpellier, France.

Since 1991, blood was sampled from chicks ringed at the crèche in the Camargue (30 samples in 1991, 200 in 1995, 125 in 1996 and 400 in 1997 and 1998) and in the Spanish colony of Fuente de Piedra (119 in 1996).
The first aim of this sampling is to assess the sex of the individuals through molecular techniques (Bertault *et al.*, in prep.). This enables demographic analyses to take this very important factor into account, as many life history traits (such as survival, dispersal or recruitment) are potentially sex-dependent. An evolutionary approach is also intended, in order to describe the sex distribution of the crèche in relation to, among others, the chronology of the breeding season, some variable environmental resources, life history of the parents and body condition of the chicks.
Secondly, it is planned to describe the spatial structure of the genetic diversity at the scale of the whole species' range. Microsatellite markers will make it possible to quantify the degree of isolation of the different presumed subgroups of the species (West-Mediterranean, Middle-East and Africa), i. e. the importance of fluxes of individuals from one place to another will be assessed through the importance of gene fluxes.

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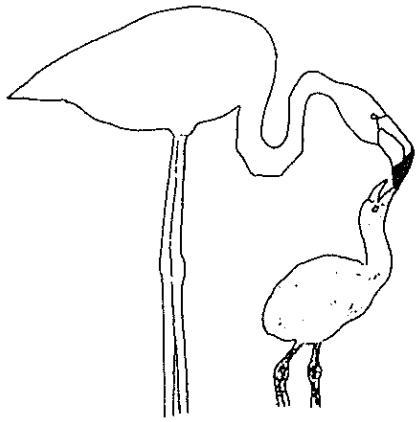
Feral Flamingos in the Netherlands 1995-1997.

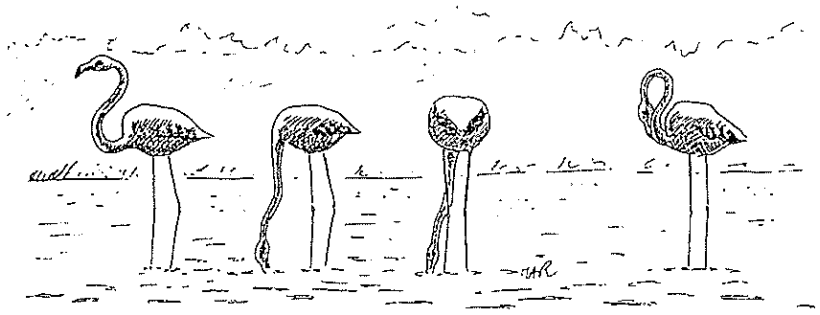
From **Joop Treep** (*in litt.*)

De Leek 30, 9411 MK BEILEN, The Netherlands

A feral population of Greater, Caribbean and Chilean Flamingos (*Phoenicopterus ruber roseus, P. ruber ruber, P. chilensis*) has prospered in the Netherlands and Germany for several years now. About one thousand kilometres to the north of the normal range of the Greater Flamingo, the birds experience every cold spells some winters, as indeed they did these past two years, and on occasion birds were seen to have ice on their feathers. No birds bred in 1996 or in 1997 at the Zwillbrocker Venn (Germany), their usual nesting site.

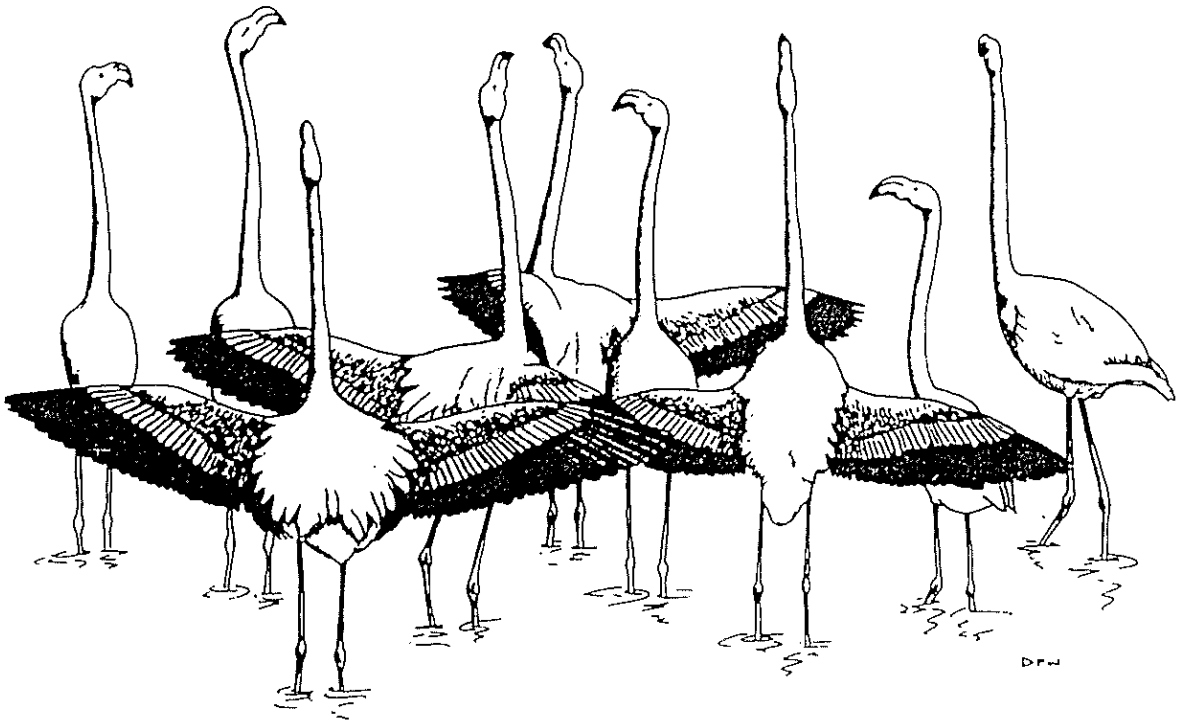


Announcements

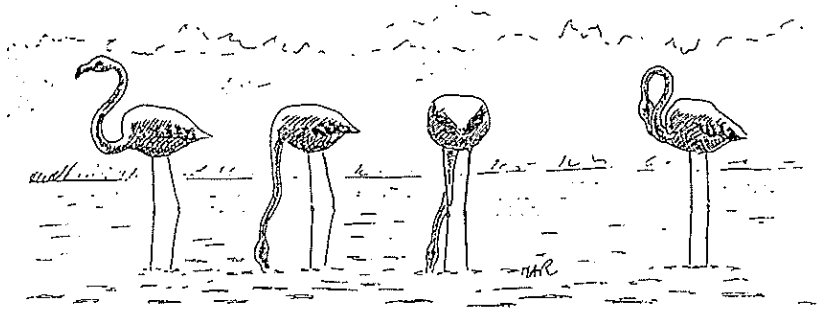


Announcements

A Ph.D. on American Flamingos
Felicity Arengo defended her Ph.D. thesis on "Habitat Use and Conservation of American Flamingos (*Phoenicopterus ruber ruber*) in Yucatan, Mexico", at the State University of New York, College of Environmental Science and Forestry in Syracuse, New York, U.S.A., in September 1997 (see p. 16).



Some recent literature on Flamingos and their environment



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Wetlands International Regional Headquarters

the Americas	Africa, Europe, Middle East	Asia Pacific
7 Hinton Avenue North Suite 200 Ottawa, Ontario K1Y 4P1 Canada	Marijkeweg 11 P.O. Box 7002 6700 CA Wageningen The Netherlands	Institute of Postgraduate Studies and Research University of Malaya 50603 Kuala Lumpur Malaysia
Tel: + 603.722.2090 Fax: + 603.722.3318	Tel: + 31.317.474711 Fax: +31.317.474712	Tel: + 60.3.756.6624 Fax: + 60.3.757.1225
E-mail: davidson@igs.net	E-mail: post@wetlands.agro.nl http//www.wetlands.agro.nl	E-mail: wiap@wiap.nasionet.net http://ngo.asiapac.net/wetlands