IWRB FLAMINGO SPECIALIST GROUP

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SUMMARY

This newsletter covers the years 1991-1994. Details of breeding by Lesser and Greater Flamingos are given for 16 sites in 10 countries. Lesser Flamingos bred massively at Lake Natron in 1991-1992, the most important breeding site for the species in the world. Fortunately, it seems that this wetland has been spared from the ecological changes which would have taken place as a result of developments on the main inflow river planned by Kenya and from exploitation of the Soda crust (trona) envisaged by Tanzania, both projects having been shelved! In the Western Mediterranean, two new colonies of Greater Flamingos have become established in the Ebro Delta (Spain) and at Cagliari (Sardinia). An unusually small but successful breeding occurred also in Tuscany (Italy) where 26 chicks were raised in 1994. Flamingo chicks have been ringed in five colonies and a long-term study of the Greater Flamingo continues in the Western Mediterranean.

Only few observations are available on the status of South-American populations for the same period (1991-1994). There is no evidence that Chilean and Caribbean Flamingos are threatened. An expedition from the University of East Anglia (UK) to Laguna Colarada in Bolivia in 1992-1993 recorded successful breeding by Puna and Chilean Flamingos at this lake. On the other hand, the Andean Flamingos which had started incubating at the same wetland suffered complete nesting failure due to severe disturbance by egg-collectors. In addition, increasing tourism was identified as a potential future threat to this area, the only known wetland in the world where all three species ever attempted to breed. Studies on the limnology of the lake and on the breeding ecology of the three species of flamingos were conducted by this expedition.
In 1991-1992 and 1992-1993, the Grupo Phoenicopteridae sur Andina initiated a ringing programme at the Salar de Punta Negra and Salar de Surire, Chile, in order to obtain information on the movements of Chilean and the endangered Puna and Andean Flamingos.

ACKNOWLEDGEMENTS

The editor is most grateful to Sharon FAVELL, Christophe TOURENQ and Dianne WILKER for their precious assistance with the editing of this newsletter.
Vignettes cover page by University of East Anglia Bolivian Puna expedition.

INTRODUCTION

The Flamingo Research-Specialist Group was established in 1971 as a specialist group of ICBP. ICBP ceased to exist in 1994 when the organisation adopted its new name of BirdLife International and a new constitution. The leadership of the many waterbird specialist groups, which are also SSC groups under IUCN, was handed over to IWRB.
IWRB, in turn, has now integrated with the Asian Wetland Bureau (AWB) and with Wetlands for the Americas (WA) to form WETLANDS INTERNATIONAL as from January 1996. It has also been decided that groups will in the future be referred to as a specialist, rather than research groups.

Conservation of flamingos and their haunts, whether this be through research or more conservation oriented activities, is really the "raison d'être" of the Flamingo Group. It is, therefore, with great interest that I scrutinised the recently published Birds to Watch 2: The World List of Threatened Birds (BirdLife Conservation Series No 4., Collar, N.J., Crosby, M.J. & Stattersfield, A.J., BirdLife International, Cambridge, UK) and have summarised below the status of the different flamingo species.

Both the **Andean** (*Phoenicoparrus andinus*) and **Puna Flamingos** (*Phoenicoparrus jamesi*) are classified as vulnerable in Argentinia, Bolivia, Chile and Paraguay, in other words throughout much of their range (see p 52).

The **Lesser Flamingo** (*Phoenicopterus minor*) is classified as near threatened in Angola, Botswana, Burundi, Cameroon, Djibouti, Eritrea, Ethiopia, Gabon, Gambia, Guinea, Guinea-Bissau, India, Kenya, Madagascar, Malawi, Mauritania, Mozambique, Namibia, Pakistan, Senegal, Sierra Leone, South Africa, Tanzania, Uganda, Yemen, Zaïre and Zimbabwe. This list includes practically every country where the species occurs.

Neither the **Greater** (*Phoenicopterus ruber roseus*), **Caribbean** (*Phoenicopterus ruber ruber*) nor the **Chilean Flamingos** (*Phoenicopterus chilensis*) are classified as either threatened, near threatened or vulnerable.

The two South American species are included because they nest in few places and the colonies are regularly raided. The Lesser is included because its status is poorly known in many countries but in particular because it clearly breeds in only very few places. The most important site in the world, the Lake Natron in Tanzania-Kenya, recently came under threat through proposals by Kenya to use the main inflow river for land irrigation and to produce hydropower, whilst Tanzania planned to harvest the Sodium crust. Fortunately both projects have (for the moment) been shelved.

If research really is a tool for management and conservation then we must make every effort to press for more research and management where this is most urgently needed. Unfortunately, but understandably, this is in areas where there are fewest ornithologists!

It is comforting to note that there has been a big surge of interest in recent years in wildlife in general and in flamingos in particular in many parts of both Africa and South America. The African Waterfowl Census is a good example where 23 countries participated. Although there are understandably many gaps in the coverage of wetlands used by flamingos world wide, a total of over 54,000 Greater and over 1,5 million Lesser were censused in January 1994. The time seems ripe to examine these figures in the light of what is known in regard to world populations. Indeed, IWRB Publication 29 attempts to assess the strength of the populations of all species. The table below has been reproduced from this publication (Rose and Scott 1994).

Attempts were made 20 years ago to assess the world population sizes of the different species. Since no further world-wide censuses have been made, totals for the different species, extracted from articles by Kahl and Rose & Scott, are indicated below.

	Kahl (1975)	Rose & Scott (1994)
Greater Flamingo	500,000	695-700,000
Caribbean Flamingo	65,000	65-143,000
Chilean flamingo	250,000	500,000
Lesser Flamingo	4,000,000	4,665,000
Andean Flamingo	100,000	<50,000
James or Puna Flamingo	50,000	50,000

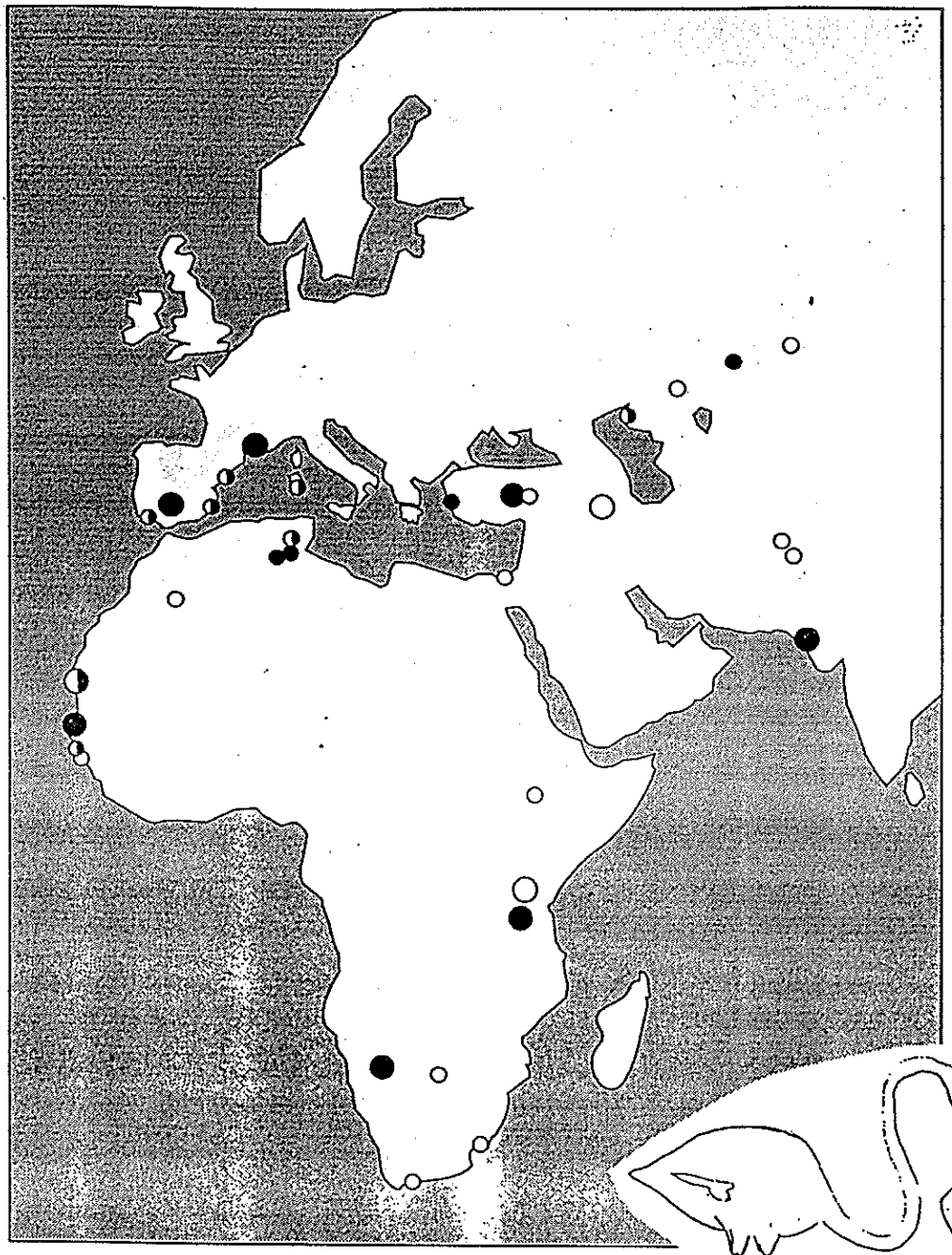
COMMENTS: the difficulties in censusing flamingos are quite obvious. The birds move around sporadically, between wetlands which are often difficult of access and they occur in such numbers (Lesser in particular) that they are difficult to assess. Most species are, and perhaps always will be, vulnerable because they breed in only a small number of sites where they are often disturbed, the colonies even raided (S. America). Even though parts, or the whole, of these wetlands may benefit from some sort of protection they may, at any time, come under serious threat and flamingos are today no longer out of danger in the most remote wetlands.

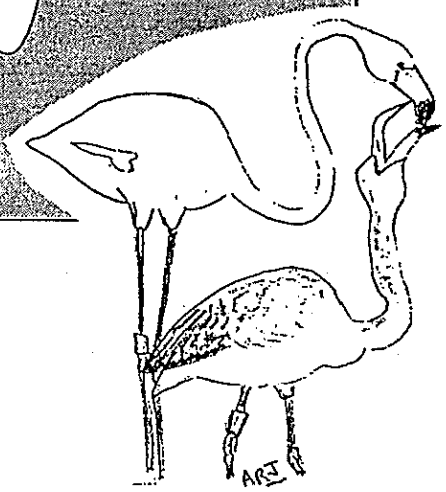
The best studied population of flamingos is certainly that of the western Mediterranean where long-term monitoring of colony size and success and three major ringing schemes are in operation. New wetlands are being colonised by flamingos, even in urban areas and another new colony was established in 1994 on mainland Italy. Crop damage in ricefields, first reported from the Camargue in 1980, has now been reported from the "neighbouring" Ebro delta in Catalunya. Clearly, the Greater Flamingo in this part of the world is enjoying some good breeding seasons. However, many wetlands where flamingos occur are known to be polluted, either by heavy metals or agro-chemicals and some reports give rise for concern over water quality.

Alan JOHNSON
November 1995

1991

BREEDING OF GREATER FLAMINGOS 1991





○ Known breeding sites not reported in 1991

● Occupied in 1991 (on regional reports)

◑ No breeding in 1991

The map above shows all known sites where the Greater Flamingo has been reported breeding in the past 50 years. The larger circles are the major sites, the smaller ones those colonised less frequently and/or by fewer birds.

NEWS FROM THE REGIONS 1991

(compiled by Alan JOHNSON)

- OLD WORLD -

EAST AFRICA

Because of plans by Kenya Power Company to develop the hydro-power potential of the Ewaso Ngiro river, Kenya, a series of visits was made in 1991-92 to some of the Rift Valley lakes and in particular to Lake Natron (Tanzania) into which the Ewaso Ngiro flows. Lake Natron is the most important wetland in the world for Lesser Flamingos, hundreds of thousands of pairs sometimes breeding there. The Group Coordinator (A. Johnson) participated in the E.I.A. which was carried out by Knight Piésold & Partners (UK). This involved a ground visit and two aerial surveys at Lake Natron as well as research into the literature relevant to the ecology of the Lesser Flamingo in Africa.

An aerial survey carried out on 6 Nov. 1991 by R. M. Watson and J. M. Nimmo allowed not only valuable data to be collected on the extent and distribution of the waterbodies at Natron but coincided with a massive breeding attempt by Lesser Flamingos. The authors calculated that there were a staggering 1,080,579 adult and juvenile birds, 171,340 chicks, 464,954 nests in use or recently used, and 661,850 long abandoned nests. Small numbers of Greater Flamingos were also on Lake Natron at the time and possibly breeding.

SOUTHERN AFRICA

The flamingos counted during the African Waterfowl Census in mid-winter 1991 (Perennou 1991) are tabulated below:

	Botswana	Madagascar	Namibia	Sth. Africa	Total
Greater Flamingo	111	-	14,536	559	15,106
Lesser Flamingo	299	-	15,667	38	16,004

NAMIBIA

There was a breeding attempt on the traditional nesting sites on Etosha Pan (April 1991) but attempts were thwarted by low rainfall. A long term conservation plan to avert these natural disasters is being planned by research staff of the Directorate of Wildlife, Conservation and Research in Namibia (inf. R. Simmons, Directorate of Wildlife, Conservation and Research, Private Bag 13306, Windhoek 9000, Namibia).

WEST AFRICA

MAURITANIA

A survey of the Mauritanian coastline was carried out by P. Gowthorpe (PNBA) in June-July 1991. His observations are summarised below.

During an aerial survey of the PNBA on 15-16 June 1991, Greater Flamingos were found breeding on the rocky island of Kiaone Est where there were crèches of 296 and 1926 chicks (counts from aerial photographs.) The chicks were aged ca.2 weeks indicating that laying had taken place towards the end April-early May. The observer estimates that ca. 2,500 pairs of

flamingos must have attempted breeding on Kiaone in 1991. There were only 500 flamingos in the Baie d'Arguin where the more frequently used nesting site was not occupied this year. Aerial and ground surveys were made on 27-29 June along the coast from Nouakchott south to the Dune de Ziré at km 232. The Chott Boul and other depressions were all dry and there were no flamingos in the area. There were no reports of Lesser Flamingos.

SENEGAL

11,800 Greater and 6,156 Lesser Flamingos, of which 11,500 and 6,100 respectively were in the Djoudj National Park, were censused during the mid-winter waterfowl count (Perennou 1991).

WEST MEDITERRANEAN

SPAIN

Counts were made in January and May 1991 by the ECV (Madrid) over all the Spanish wetlands where flamingos occur and these revealed 19,058 and 22,643 birds respectively.

At the Donana National Park in Andalucia 22 flamingos were found dead between 9 and 24 March 1991. They were victims of acute lead poisoning. From 30 to 328 lead shot were found in their stomachs and liver lead concentrations ranged from 37.6 to 328 ppm. Shot ingestion occurred elsewhere as there is no hunting within the park (ICONA 1992).

At Fuente de Piedra, about 10,500 pairs of flamingos attempted breeding and raised 7000 chicks. The lagoon dried out in summer, as it normally does, before all of these were able to fly and the last 84 were captured and released in the Marismas. Continuing their marking scheme AMA-EBD captured and ringed 700 of the chicks on July 20.

PORTUGAL

January and May censuses were made by observers from CEMPA on the most important wetlands in Portugal for flamingos. Results are tabulated below along with those from previous years (communicated by J.C. Farinha).

	JANUARY CENSUS				MAY CENSUS			
Year	Tejo	Sado	Algarve	total	Tejo	Sado	Algarve	total
1978	0	0	0	0	?	?	?	?
1979	0	0	0	0	?	?	?	?
1980	?	?	?	?	0	?	?	0?
1981	225	0	33	258	101	?	?	101+
1982	46	0	?	46+	0	?	?	0?
1983	5	0	?	5+	172	?	?	172+
1984	0	0	?	0?	0	?	?	0?
1985	?	?	?	0?	?	?	?	0?
1986	33	0	0	33+	?	?	?	0?
1987	0	?	?	0?	0	?	?	0?
1988	150	0	0	150+	0	?	?	0?
1989	240	63	317	620	530	30	116	676
1990	21	52	451	524	30	0	0	30
1991	336	211	459	1,006	0	0	0	0

The Estuary of the Tejo and Castro Marim (Algarve) are the most important areas for flamingos in Portugal. Large numbers of flamingos generally occur in Portugal when there is little water in the Marismas of the Guadalquivir.

FRANCE

The IWRB mid-January census covering all the wetlands along the Mediterranean coast revealed a record wintering population of 24,318 flamingos. Breeding again took place at the Etang du Fangassier, Camargue, for the twentieth consecutive year.

Breeding started early with the first eggs being laid on March 27. About 13,000 prs. of flamingos bred and raised a record 9,050 chicks. The colony was observed during the whole of the breeding season and more than 20,000 ring sightings were recorded. These were of 2,576 different birds. 956 of these, aged from 3 to 14 years, are known to have attempted breeding. A further 21 birds bred in the Camargue which had been ringed as chicks at Fuente de Piedra, Andalucia, four or five years earlier.

ITALY

An unusually large flock of flamingos (185) was recorded at Orbetello, Tuscany, in mid-January (inf. N. Baccetti).

SARDINIA

Results of the mid-winter census are given in the table below. Regular observations were made at Sale Porcus from March through to July by Valentino Canu. There were always at least 200 flamingos present with peaks of 890 on February 9 (LIPU) and 515 on May 4.

TUNISIA

Unfortunately, because of the political situation (war in the Persian Gulf) no mid-winter count could be carried out (T. Gaultier).

In July 1991, P. Pilard and Y. Kayser (Tour du Valat) visited Tunisia to survey the possible nesting sites of flamingos. They discovered two colonies and P.P. returned in September to evaluate breeding success. Extracts from the two reports are given below.

July 1991. Eighteen wetlands were visited between 3-14 July and 30,000 flamingos were censused, over half of these on two wetlands in the south (Sebkhet Sidi Mansour and Chott Guettar). On 5 July, a colony of 4,000 prs of flamingos incubating was discovered at Sidi Mansour with a further 600-700 chicks out of the nest, the oldest being aged ca.40 days. Breeding was in full swing and there were still birds displaying and copulating. There was also a fledged juvenile present which the observers correctly believed must have originated from another colony in the south. Indeed, on 10 July they discovered a crèche of ca. 3,800 chicks on the dried salt crust of Chott Djerid, 32 km from Tozeur. Most were on the point of fledging (10 weeks), but there were also some younger chicks aged about 40 days.

Egg laying would have begun in the Djerid around March 20 and continued until the end of May. At Sidi Mansour the colony was established much later with laying from early May into July.

September 1991. Over 39,000 flamingos were counted on ten wetlands visited between September 6-20. Many sites were now drying out but there was still some water in Sidi Mansour where breeding had been successful. There was a crèche of about 3,200 chicks on the edge of the breeding island. Some were able to fly and ventured away from the island during the day, returning in the evening to be fed. At least 500 were aged 2-3 months with about 300 less than 25 days, the very youngest being only one week old.

ALGERIA

During the mid-winter waterfowl census in January 1991, Greater Flamingos were seen on only 4 wetlands with an unusually low national total of only 280 individuals (inf. B. Chalabi).

MOROCCO

The results of the mid-winter census have been published (Dakki *et al.* 1991). A total of 95 sites was visited, including all the more important ones for waterfowl, and 2,576 Greater Flamingos were censused. Rainfall was relatively abundant.

MID-WINTER AND SPRING COUNTS OF GREATER FLAMINGOS IN THE WESTERN MEDITERRANEAN:

		Number of flamingos censused	
country/region	observer/ref.	January 1991	May 1991
Sardinia	AMD, A. Atzeni LIPU	1,727	?
France	Tour du Valat, A. Tamisier, P. Orsini, R.N. Camargue	24,318	38,000
Spain	ECV Madrid	19,058	22,643
Portugal	J.C. Farinha,CEMPA	1,006	0
Algeria	B. Chalabi	280	?
Tunisia	no counts	?	?
Morocco	Dakki *et al.*	2,576	?

EAST MEDITERRANEAN

CYPRUS

Reproduced from the Cyprus Ornithological Society (1957) Bulletin N° 38:

"At Akrotiri Salt Lake numbers (of flamingos) varied from a low of 323 birds at the beginning of the year to a peak of c 2,000 by 12th March dropping thereafter to the last record of 5 birds on 3rd April. The first returning birds numbered 150 on 5th November, after that numbers rose to 2,500 on 7th December peaking at c 4,000 on 14th December, followed by a gradual decline until the end of the year.
At Larnaca Salt Lake numbers were far lower averaging c20 during January and February and peaking at 174 on 9th March which was also the last record for the first half of this year. The

first returning winter birds were 18 seen on 3rd November, from then numbers gradually built up reaching a peak of c800 in the middle of December and staying at around this figure until the end of the year."

TURKEY

At Camalti Tuzlasi (salinas near Izmir) 370 pairs of flamingos nested (egg laying from 5 May on) and raised 370-400 chicks (inf. M. Siki).
A Tour du Valat-DHKD mission visited several wetlands in western and central Anatolia, in particular to find out if Greater Flamingos still nested in Tuz Gölü. After making a short visit to the colony at Camalti Tuzlasi, near Izmir, on 11-12 June, A. Johnson and G. Magnin flew over wetlands of central Anatolia on 13 June.
Flamingos were indeed discovered breeding in the centre of the remote Tuz Gölü where the species had not been reported nesting since 1974. Aerial photographs revealed c.11,000 nests in 8 groups. Some small chicks were still incubated whilst others were creching, the oldest being aged c. 4-5 weeks, indicating egg laying from April 5 through to about May 10. It is estimated that there were at least 4,500 chicks in the nurseries or still on the nest.
At the Eregli marshes, 217 flamingo nests were counted on 1 June, 68 of them containing an egg. This late breeding attempt failed (see Kirwan 1992).

ASIA

INDIA

The first breeding record of Greater Flamingo in the Rann of Kutch for 15 years is described below. The following letter by Navin. N. Bapat has been extracted from the Newsletter for Birdwatchers (Bangalore, India, February 1991):

"The purpose of this letter is to inform you about the latest position of the Greater Flamingo, *Phoenicopterus roseus*, in the Great Rann of Kutch. Since the last few months the sighting of this species had become almost nil in spite of regular bird-watching trips by experts in the area. Hence presuming them to have congregated somewhere for breeding, I took the initiative of surveying the known breeding grounds in the Great Rann. The survey was undertaken in the 2nd week of January (8th to 10th January). I am extremely happy to inform you that I discovered an active breeding colony of the Greater Flamingo. There are about 25,000 in the compact area of c 3,000'x300' and they have one chick each. I could count 20,000 chicks in this colony. the chicks seem to be about 3 to 10 days old. There are three more similar breeding colonies of this species about 5 to 10km from the previous one. My estimate is that there are 500,000 in this area. The area is popularly known as HANJBET and is presently 3 sq.m. in extent."

The publication of the above letter was followed in April by an article on this same colony entilted "Flamingo breeding-Conservation Action needed" by S.A. Hussain, BNHS. We have reproduced here the introduction to this short note:

"The main "Flamingo city" which is situated about 12 km from the Nir Bet outpost is approached on camel back. Almost the entire distance is water-logged with an average depth of about 2 ft. The trip can be attempted only on camels having previous experience of the treacherous and slippery area, and the journey takes almost five hours each way. The "island" of HANJBET is roughly 2 km long and about 500 m wide at its widest point. About 1,000-1,500 nests (old and new) were seen of which about 300-400 were occupied by brooding birds/eggs. About 900-1,000 "mobile" chicks of various age class were also seen in the island. These were attended to by adult birds. These chicks were too small to fly or wade through deeper water. The estimated number of birds (including adults and chicks of all ages) was c.10,000. This number appeared to be far less than reported earlier in January by a local party, and we believe that the decline in numbers may be due to some disturbances."

In July 1991, some Lesser Flamingos built nests but did not lay eggs, at Porbandar, Gujarat State, in a rural area. The nests were flooded following heavy rains (inf. Lavkumar Khacher Sundarran).

IRAN

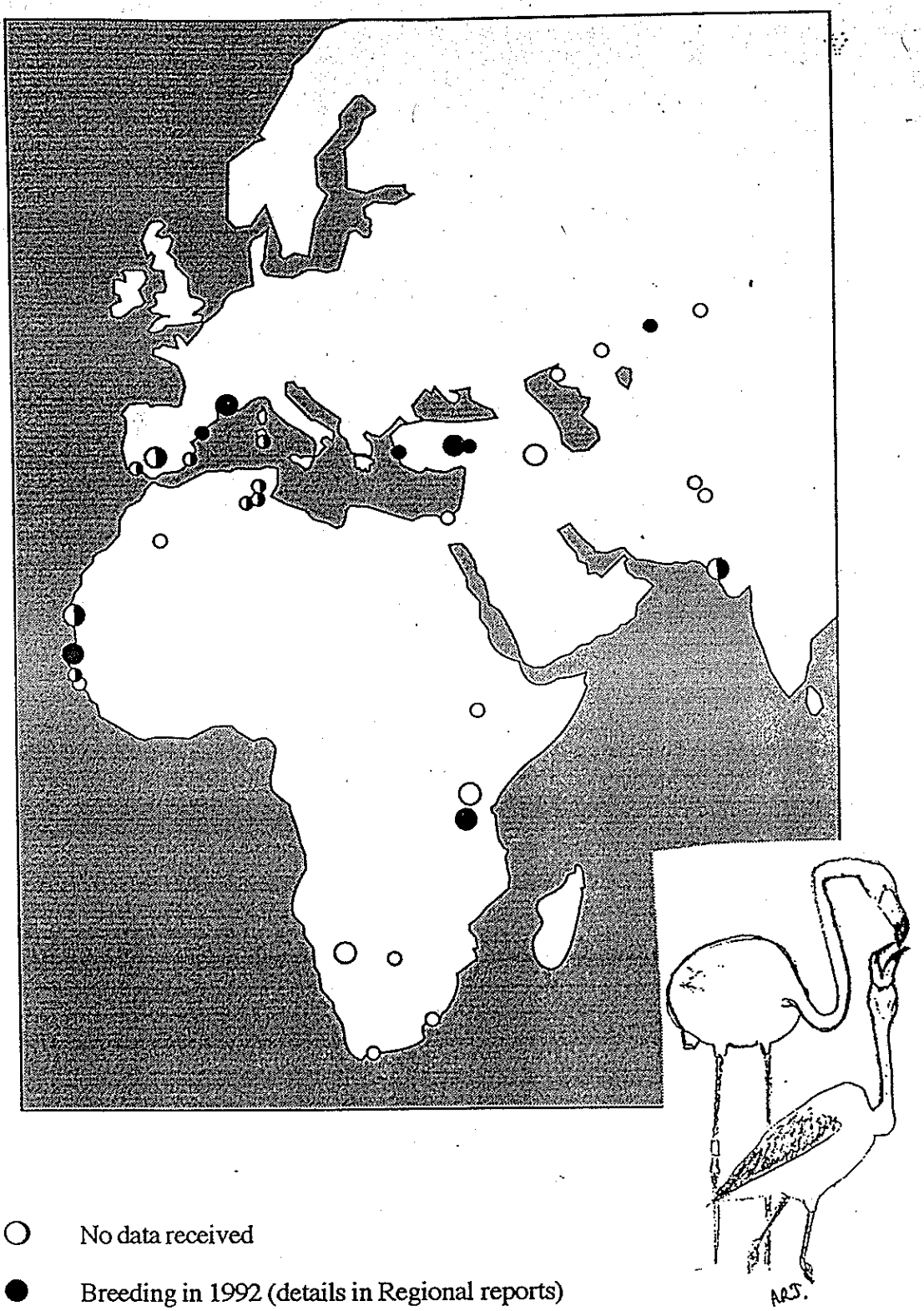
The mid-winter waterfowl census of January 1991 revealed a total of 84,421 Greater Flamingos in Iran, most being in the S.E. Caspian (51,005) and in Central Fars (32,059). In Behrouzi-Rad 1992.

KAZAKHSTAN

Six flamingo colonies were established at Lake Tengiz in 1991, with a total of 17,300 nests. A total of 2,500 chicks were raised. In the N.E. Caspian Sea 2,600 flamingos were counted in spring-summer but there was no breeding (inf. Altaï Jatkanbaiev, Kazakhstan Inst. of Zoology)

1992

BREEDING OF GREATER FLAMINGOS 1992



○ No data received

● Breeding in 1992 (details in Regional reports)

◑ Information that no breeding occurred

The map above shows all known sites where the Greater Flamingo has been reported breeding in the past 50 years. The larger circles are the major sites, the smaller ones those colonised less frequently and/or by fewer birds.

NEWS FROM THE REGIONS IN 1992

- OLD WORLD -

EAST AFRICA

The African Waterfowl Census 1992 (Perennou 1992) gives the following (national) figures for the two species of flamingos occurring elsewhere in East Africa.

	Ethiopia	Kenya	Tanzania	Uganda	Total
Greater Flamingo	2,756	16,492	0	0	19,248
Lesser Flamingo	15,181	1,172,247	372,760	34	1,560,188

ETHIOPIA

A survey of Lake Abijatta in the Rift Valley was carried out on 19 January 1992 by a Norwegian-Ethiopian team. The most numerous species censused were Lesser Flamingo (15,180 counted, 57,225 estimated), Greater Flamingo (2,526 counted, 15,458 estimated), Shoveler and some waders (inf. Perennou 1992).

KENYA-TANZANIA

As a follow up to the November 1991 census of Lake Natron (Kenya-Tanzania), Gioia Theler-Bilbus and E. Waiyaki (Nairobi Museum) piloted by D. Seton made another survey of this lakea on 7 January 1992. The flight was timed to coincide with the end of the flamingos' breeding season, as indeed it did. All nests were now abandoned and the chicks either in crèches, or probably from the earlier clutches, already on the wing. The report gives a total of 238,942 adult and juvenile flamingos and 134,170 chicks in nurseries, the greater majority if not all being Lesser Flamingos.

Both authors refer to 50% confidence limits in their figures but it may nevertheless be concluded that close to half a million pairs of flamingos (Lesser) bred in 1991-92 at Lake Natron, many of them successfully, and this stands as the second largest colony ever recorded at this site. The birds had nested prior to and during the normal breeding season for Lake Natron with a maximum of laying in August-November.

SOUTH AFRICA

The flamingos counted during the African Waterfowl Census in January 1992 (Perennou 1992) are summarised below:

	Botswana	Malawi	Namibia	Sth. Africa	Total
Greater Flamingo	7,515	24	14,317	17,742	12270
Lesser Flamingo	80	2	18,054	20,261	9199

BOTSWANA

The c. 8,000 Greater Flamingos of the country were concentrated at the Nata Delta where the water level was very low due to the drought (inf. Perennou 1992).

WEST AFRICA

MAURITANIA

The whole of the Mauritanian coastline was surveyed during June 1992. A maximum of c.20,000 Greater Flamingos were censused and there was a small breeding colony at one site. Observations by F. Cézilly, B. Lamarche and P. Gowthorpe are summarised below.

On 22 May 1992 B.L. reported c.10,000 flamingos seen from the air near the Chott Boul, Aftout es Saheli. A second flight over the Aftout on 18 August with F.C. revealed c.7,000 flamingos. On both visits there was very little water in the depressions of the Aftout. On 24 June the islands of the Baie and Banc d'Arguin were surveyed from the air. Greater Flamingos were found breeding on the rocky island of Grande Kiaone where there were c.1,240 chicks in two crèches. These chicks were aged between 2-4 weeks, indicating egg laying during the period April 15-30.

During the June survey a single juvenile Greater Flamingo was observed aged c.4-5 months, suggesting that a small colony was established "somewhere" in West Africa at the beginning of the year (see under Senegal). No Lesser Flamingos were seen.

SENEGAL

During his regular field trips for ring reading in the St Louis area, P-Y. Legal observed several juvenile flamingos (aged 6-9 months) in June-July 1992:
June: 1 on 6, 5 on 13, 11 on 20, 9 on 28
July: 2 on 4, 5 on 19, 5+ on 26

The single juvenile seen in Mauritania (see above) was undoubtedly from the same undocumented breeding, presumably somewhere in West Africa at the turn of the year (1991-1992).

WEST MEDITERRANEAN

SPAIN

The mid-January 1992 census carried out by ECV-Madrid revealed a total of 21,849 flamingos wintering on Spanish wetlands. The autumn-spring rainfall was rather low and no breeding took place at Fuente de Piedra (inf. M. Rendon, AMA). Elsewhere, nests were built in the salines at Santa Pola, rather late in the season and presumably by immature flamingos (see p 42). Flamingos attempted breeding in the Ebro delta (Tarragona) but the colony was abandoned after disturbance in August (see p 42).

PORTUGAL

No information for 1992.

FRANCE

The mid-January 1992 census incorporating all sites regularly used by flamingos revealed 21,151 Greater Flamingos wintering in France. (observers: P. Orsini, A. Tamisier, Tour du Valat). The May census (P. Orsini, Tour du Valat) over the same area revealed a total of 43,000 flamingos.

Breeding again took place at the Etang du Fangassier. The colony was under permanent observation throughout the breeding season by the Tour du Valat flamingo team and 622 ringed birds aged 4-15 years were confirmed breeding. 5 birds nested which had been ringed as chicks at Fuente de Piedra (Andalusia). A total number of c.12,500 pairs raised c.3,200 young. 838 of these were ringed, weighed and measured in July.

ITALY

Unusually large numbers of flamingos occurred at the Orbetello Lagoon (Tuscany) in 1992. During the mid-January census 569 were counted and in October over 500 birds were again present (inf. N. Baccetti).

In South-East Italy, 28 flamingos were observed in the Salinas de Margherita de Savoia on 18 October (inf. D. Wangeluwe)

SARDINIA

Counts of flamingos were made in December 1991, January and February 1992 when 5,065, 6,007 and 4,933 flamingos respectively were censused (info. A. Mocci Demartis, Univ. of Cagliari)

Following abundant spring rainfall unusually large numbers of flamingos (2-4,000) spent the spring-summer in the lagoons of the Oristano region, e.g. 3800 at Sale Porcus on 6 June 1992 (inf. C.Dettori, LIPU).

TUNISIA

A mission by P.Pilard and Y.Kayser visited Tunisia in May 1992, along with H. Dlensi, in order to check if flamingos were breeding again this year and to make a census. Water levels everywhere were low and there was no breeding. Thirty-one wetlands were visited and 21,921 flamingos counted (Tour du Valat mission report).

ALGERIA

During the mid-winter waterfowl census in January 1992, 6,038 Greater Flamingos were counted on 13 wetlands (B. Chalabi).

MOROCCO

The results of the mid-winter census have been published (El Agbani & Dakki 1992). A total of 86 sites was visited and 1,477 Greater Flamingos counted. Autumn-winter rainfall was low.

MID-WINTER AND SPRING COUNTS OF GREATER FLAMINGOS IN THE WESTERN MEDITERRANEAN:

country/region	observer/ref.	Number of flamingos censused	
		January 1992	May 1992
Tuscany	N. Baccetti	569	?
Sardinia	AMD, A. Atzeni, LIPU Oristano	6,007	c.4,000
France	Tour du Valat, A. Tamisier, Ph. Orsini, R.N. Camargue	21,151	42,997
Spain	ECV Madrid	21,849	11,110

MID-WINTER AND SPRING COUNTS OF GREATER FLAMINGOS IN THE WESTERN MEDITERRANEAN (CONTD.):

country/region	observer/ref.	Number of flamingos censused January 1992	May 1992
Portugal	?	?	?
Algeria	B. Chalabi	6,038	?
Tunisia	F Maamouri, Ph. Pilard, Y. Kayser	14,235	21,921
Morocco	El Agbani & Dakki	1477	?

EAST MEDITERRANEAN

GREECE

The Greater Flamingo is now really well established in Greece, most birds occurring in the north-eastern part of the country (Thrace). The species has not yet bred but nests have been built at one lagoon in the past and this year G. Handrinos reported 48 nests on 22 June, three of them with eggs. This is the first report of laying in the country.

In Thessaly, the species is reported to have occurred early in 1992 at the artificial lakes created recently at the site of the former great Lake Karla, drained in 1962 (inf. Volos Daily Newspaper 26, November 1992).

CYPRUS

A visit was made in mid-January by J-P. Taris, E. Carp and A. Johnson to the three most important wetlands for flamingos on Cyprus. It was hoped to read some rings but unfortunately this was not possible due to deep water and few flamingos. Record rains had fallen on the island in December 1991 and the flamingos were dispersed and in deep water. There were only about 3,000 birds (at Lakes Larnaca, Akrotiri, Spiros and Paralimni) as opposed to 10-15,000 usually on the island at this time of the year.

Reproduced from the Cyprus Ornithological Society (1957) Bulletin N° 39:

"Overwintering birds at Larnaka Salt Lake numbered 800-1,000 in January, 2,300 in February until mid month after that date numbers declined to 1,000. ... At Akrotiri Salt Lake numbers were in the region of 2,500 in January which had declined to c500 in mid-March. Few reports after the first week in April but up to 30 birds remained throughout June and July.

... Regular reports began again at the beginning of September with a gradual build up of numbers at both Salt Lakes. Larnaka Salt Lake held 170 on 6th December and Akrotiri Salt Lake c2,000 on 18th December."

TURKEY

The results of the 1992 mid-January waterfowl census are given in a report by the Dogal Hayati Koruma Dernegi (DHKD) Bird Section report No. 6.

A total of 20,448 flamingos were counted on 38 wetlands. In June 1992, another DHKD/Tour du Valat flamingo survey was carried out over Tuz Gölü (visited in June 1991) and Seyfe Gölü, two sites on the Anatolian Plateau.

Flamingos were again breeding at Tuz Gölü; it was the end of the nesting season and most of the young had left the vicinity of the colony and had trekked 17 km. to an inflow where some of the adults were feeding. Counts based on aerial photographs revealed about 14,000 chicks at this site, the oldest being aged about 3 weeks.

Flamingos also bred at Seyfe Gölü, a wetland where they had until now only been suspected of breeding. There were 7,000 adults present in June, some of which were feeding birds from the colony at Tuz Gölü about 100 km. to the S.W. (evening flights to Tuz). In July, members of the DHKD counted 1,947 nests built on 5 islands. They were abandoned and the chicks were in a crèche but it was not possible to estimate how many there were.

At Camalti Tuzlasi, ca. 93 pairs of flamingos attempted breeding but failed (inf. M Siki). Record numbers of flamingos were counted in December 1992 at Camalti Tuzlasi (21,300) and at the wetland complex Menderes Delta-Bafa Gölü (3,400) (inf. G. Savigül, DHKD).

MALTA

The Greater Flamingo occurs rarely and irregularly on this Mediterranean island but has been recorded more frequently in recent years. 38 birds were recorded in October 1992 (British Birds (1993) 86: 279).

EGYPT

A Lesser Flamingo, the first for Egypt, was seen at Abu Simbel on 27 November 1992 (British Birds (1993) 86: 279).

ASIA

INDIA

No breeding in the Rann of Kutch because of drought (inf. S.N. Varu).

KAZAKHSTAN

Two colonies were established in spring at Lake Tengiz, one of them having a thousand nests, the other 8,000 chicks. All the chicks from the former died (inf. Altaï Jatkanbaiev).

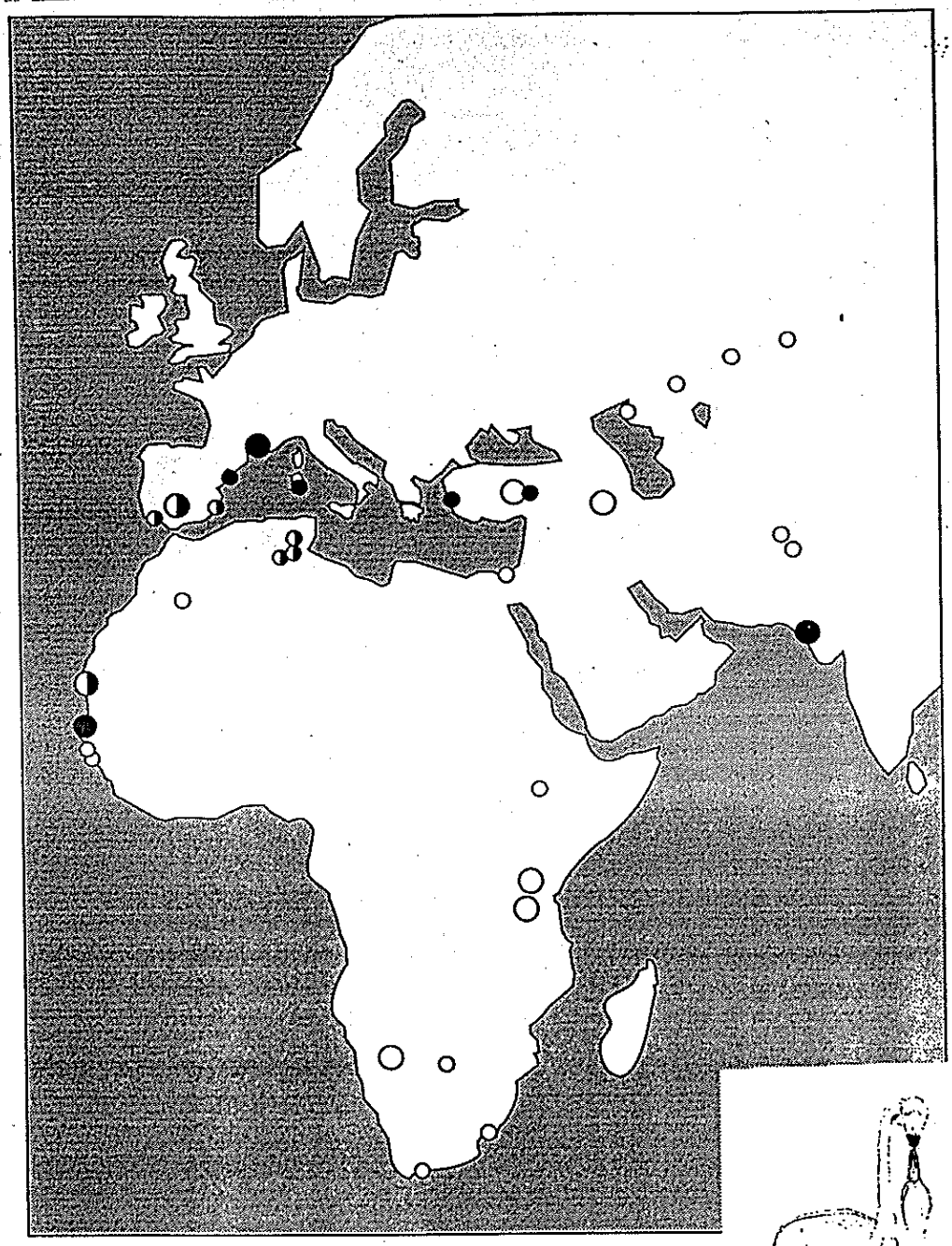
- NEW WORLD -

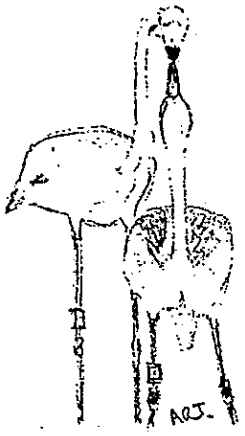
BOLIVIA

Between November 1992 and March 1993, a Bolivian-European expedition was conduced by the University of East Anglia at Laguna Colorada in southwest Bolivia. It is a high altitude saline lake in the Andes, and the only site where three species of flamingo, the Puna, the Andean and the Chilean attempted nesting (inf. Maier *et al.*, see on p 53).

1993

BREEDING OF GREATER FLAMINGOS 1993





○ No data received

● Breeding in 1993 (details in Regional reports)

◑ Information that no breeding occurred

The map above shows all known sites where the Greater Flamingo has been reported breeding in the past 50 years. The larger circles are the major sites, the smaller ones those colonised less frequently and/or by fewer birds.

- OLD WORLD -

EAST AFRICA

The flamingos counted during the African Waterfowl Census in January 1993 (Taylor 1993) are tabulated below (figures of the austral winter-July 1992 census are given in brackets):

	Ethiopia	Kenya	Sudan	Uganda	Total
Greater Flamingo	5,341	25,248	156	-	30,745
	(-)	(2,413)	(-)	(-)	(2,413)
Lesser Flamingo	21,677	1,023,734	-	3	1,045,414
	(-)	(208,261)	(-)	(-)	(208,261)

ETHIOPIA

As in 1992, the majority of both species was censused at Lake Abijatta.

KENYA

Heavy rain disrupted some of the counts. An overview of the censuses by L. Bennun published by the National Museums of Kenya entitled "Waterbirds in the Southern Kenyan Rift Valley, January 1993" is partially reproduced below (for more information, see Taylor 1993):

"... As usual Lesser Flamingos (*Phoeniconaias minor*) made up the bulk of the individual birds counted, outnumbering all other species put together by nearly thirty to one. Lesser Flamingo totals were a little over a million, similar to the total in January 1992; if around 36,000 recorded at Magadi are taken into account, the change between years is a mere 76,000. However, the distribution of Lessers was strkingly different between the two years, with the numbers at Nakuru and Bogoria being almost exactly reversed. Very few were present at Elmenteita, which instead held the bulk of the Greater Flamingo (*Phoenicopterus ruber roseus*). The Greaters made up a lsightly higher proportion of the flamingo total of this year, around 2,2% compared to 1,4% in 1992..."

SOUTHERN AFRICA

The flamingos counted during the African Waterfowl Census in January 1993 (Taylor 1993) are tabulated below (figures of the austral winter-July 1992 census are given in brakets):

	Botswana	Madagascar	Namibia	Malawi	Total
Greater Flamingo	170	121	18,098	1	18,397
	(496)	(70)	(6,827)	(?)	(7,393+)
Lesser Flamingo	601	65	7,574	(?)	8,240
	(70)	(1)	(7,940)	(?)	(8,011+)

NAMIBIA

(See note from R.E. Simmons on p 41)

WEST AFRICA

The table below summarises the numbers of flamingos counted during the African Waterfowl Census in January 1993 (Taylor 1993):

	Gambia	Mauritania	Senegal	Total
Greater Flamingo	25	1,125	4,698	5,848
Lesser Flamingo	-	260	2,833	3,093

MAURITANIA

At least 3,000 pairs of Greater Flamingos bred on Grande Kiaone Island in the Banc d'Arguin National Park. The colony was first observed from the air by B. Lamarche in April and again during an aerial survey on 8 June by Prince Bernhard of the Netherlands, L.Hoffmann and B. Lamarche. On June 13 several observers (PNBA, FIBA, Tour du Valat) admired the colony from a distance of c.800 m. from the surrounding mud-flats. Finally, J-F. Hellio and N. van Ingen visited the site on 25 May after the chicks had left their nests on the top or along the slopes of the rocky island. The latter observers reported 4-5 crèches of chicks aged one to two weeks. This indicates that laying took place during the period 10-20 April 1993.

In the vicinity of the colony there was a single flamingo in juvenile plumage, a bird seemingly about six months of age which must have taken wing from an undocumented breeding sometime during the winter 1992-1993 (just as reported one year ago).

During a visit to the Diawling National Park on the border with Senegal c.60 Lesser Flamingos were observed on 18 May 1993.

WEST MEDITERRANEAN

SPAIN

The mid-January census revealed 7 flamingos on Estanyuls de Sa Vall and 14 in the salinas d'Eivissa (Menorca) (inf. GOB).

The winter 1992-93 was exceptionally dry in Andalucia and for the second year in succession there was no breeding by Greater Flamingos at either the Fuente de Piedra Lagoon or elsewhere in Andalusia (inf. M. Rendon, AMA).

Many (c. 50) flamingos were found dead or ill in the salinas at Santa Pola in the winter 1992-1993. Many were X-rayed at the Estacion Ornitologica de l'Albufera and all were seen to be carrying lead shot, some in their bodies (shot) but most in their stomachs (ingested). Other cases of lead poisoning were reported in the past (see Wildfowl 43).

For the first time during this century, flamingos bred with success in the Ebro Delta (Tarragona). The first chick hatched on 12 June and the last on 27 July. 313 chicks were raised (see report by A. Martinez Vilalta on p 46).

PORTUGAL

Results of counts are in the table below.

FRANCE

The mid-January census revealed a record 27,600 Greater Flamingos wintering along the Mediterranean coast.

A May count revealed 40,000 Greater Flamingos on the wetlands bordering the Mediterranean. In the Camargue, c.17,000 pairs of flamingos bred at the Etang du Fangassier and raised 6,050 chicks; 875 of these were captured for ringing on 29 July and at the same time were weighed and measured. 505 ringed birds aged 4-16 years were confirmed breeding; 4 birds nested which had been ringed as chicks at Fuente de Piedra (Andalusia).

SARDINIA

A complete census of waterfowl wintering in Sardinia was carried out in January 1993. This was organized by the Associazione per il Parco del Molentargius-Saline-Poetto and the Istituto per la Valorizzazione delle Risorse Ambientali del Mediterraneo (IVRAM) under the auspices of the Assessorato della Difesa dell'Ambiente, Regione Autonoma della Sardegna. 8,126 flamingos were censused on 31 wetlands.

Greater Flamingos bred at Molentargius on the outskirts of Cagliari. It was the first breeding of the species in Italy. About 1,200 nests were built on former dykes in a saline and c.950 chicks were raised (inf. APM- Ali Notizie LIPU).

TUNISIA

H. Dlensi visited the most important wetlands for flamingos in Central and South Tunisia between 24 and 29 May 1993. Lying in arid or semi-arid areas seven of the nine playas were dry. Most flamingos were in the Salines of Sfax, a total of 1,700. Again this year some (sub-adult?) flamingos had built nests, 155 in all, but only one of them contained an egg.

A small colony of flamingos (72 nests) was established on the Chott Djerid in southern Tunisia during 1993. The nests were abandoned and it is not known when the birds attempted breeding nor how successful this small colony was (inf. H. Dlensi).

ALGERIA

The IWRB mid-winter census of January 1993 revealed a total of 1,168 flamingos on six wetlands in the Constantine region (inf. B. Chalabi).

MOROCCO

The results of the IWRB mid-winter census of January 1993 are summarised in the table below.

MID-WINTER AND SPRING COUNTS OF GREATER FLAMINGOS IN THE WESTERN MEDITERRANEAN:

country/region	observer/ref.	Number of flamingos censused	
		January 1993	May 1993
Sardinia	AMD, A. Atzeni APM. IVRAM	8,126	c.8,000
France	Tour du Valat, A. Tamisier, Ph. Orsini, R.N. Camargue	27,600	c.40,000
Spain	no counts	?	?

MID-WINTER AND SPRING COUNTS OF GREATER FLAMINGOS IN THE WESTERN MEDITERRANEAN (CONTD.):

country/region	observer/ref.	Number of flamingos censused January 1993	May 1993
Portugal	Rose and Taylor (1993)	3,998	?
Algeria	Rose and Taylor (1993)	2,660	?
Tunisia	H. Dlensi	?	1,700+
Morocco	Rose and Taylor (1993)	4,318	?

EAST MEDITERRANEAN

GREECE

During the mid-winter count, many crippled wounded or exhausted birds including *Cygnus spp.*, Ardeidae, *Phoenicopterus ruber roseus* were seen, even if no cases of illegal hunting were observed. A total number of 3,655 Greater Flamingos was censused (inf. Rose and Taylor 1993).

CYPRUS

From the Cyprus Ornithological Society (1957) Bulletin N° 40:

"At Akrotiri Salt Lake c3,000 birds were reported on 3rd January with numbers increasing to c6,000 by the end of the month; numbers then steadily reduced to c1000 by the end of March and to the last Spring record of 20 birds on 31st May. At Larnaka Salt Lake two birds were reported on the 4th January numbers then varied from a low of 5 birds to a maximum of 254 at the end of February. On 3rd March c1,000 were reported, rising to a maximum of 1,500+ on 19th thereafter numbers varied between 10 and 1,000 until the end of April, the last Spring record of 60+ birds was on the 4th May.

...The winter visitors started returning on 2nd November when 168 birds were reported at Larnaka Salt Lake, numbers here fluctuated from 0 to 1,500 birds as flocks moved on due to lack of water depth with 100 reported at the end of the year. The first autumn report at Akrotiri Salt Lake was of 43 birds on 18th November, this number increased dramatically to 2,500 birds on 24th November, thereafter numbers decreased to 100 at the end of the year mainly due to the lack of water."

TURKEY

DHKD carried out a mid-winter waterfowl census on 33 wetlands. Greater Flamingos were observed on 11 of these, a total of 22,210, mostly in Southern and Western Anatolia.
M. Siki reports c600 pairs of flamingos breeding at Camalti Tuzlasi (OSME Bulletin 31). Breeding again at Seyfe Gölü and attempted breeding by c300 pairs at Eregli marshes (see Magnin and Yarar 1994). Another site in Western Anatolia, Aci Gölü, held about 100 pairs in June (Magnin and Yarar 1994).

LIBYA

Data on waterfowl and wetlands are scarce for this part of the North African coast. A WIWO mission observed 12 immature Greater Flamingos at Ayn Zayanah (near Benghazi) on 25 July 1993. Local fishermen said that 1,000 birds or more, winter in the area (inf. WIWO Report N°46).

ASIA

The table below shows numbers of Greater Flamingos counted in South West Asia during January 1993 (see Rose and Taylor 1993):

Country	January 1993
AZERBAIJAN	990
IRAN	88,049
KUWAIT	6
OMAN	924
QATAR	424
SAUDI ARABIA	5,734
UAE	298
YEMEN	147

AFGHANISTAN

A mission funded by the International Crane Foundation and assisted by BirdLife International visited the Ab-i-Estada in Ghazni Province from 23 October to 23 November 1993. This is a site where flamingos are known to breed (2,100m). Mr Abdul Jamil undertook the mission to the lake and discovered a high water level. From his observations the following remarks are of interest with regard to flamingos:

"The lake has fluctuated in size over the past 20 years both seasonally and in its general size, due in part to droughts and floods and to the Banded Sardeh dam. These last two years the water level has been exceptionally high (covering the island where the flamingos customarily nest and it is thought that few birds laid eggs in 1993). The local population put this down to the fact that the Banded Sardeh dam sluice gates had been opened by "the government", due to exceptional snow melt, heavy rain and floods."

Flamingos are frequently shot by hunters in this country.

DUBAI

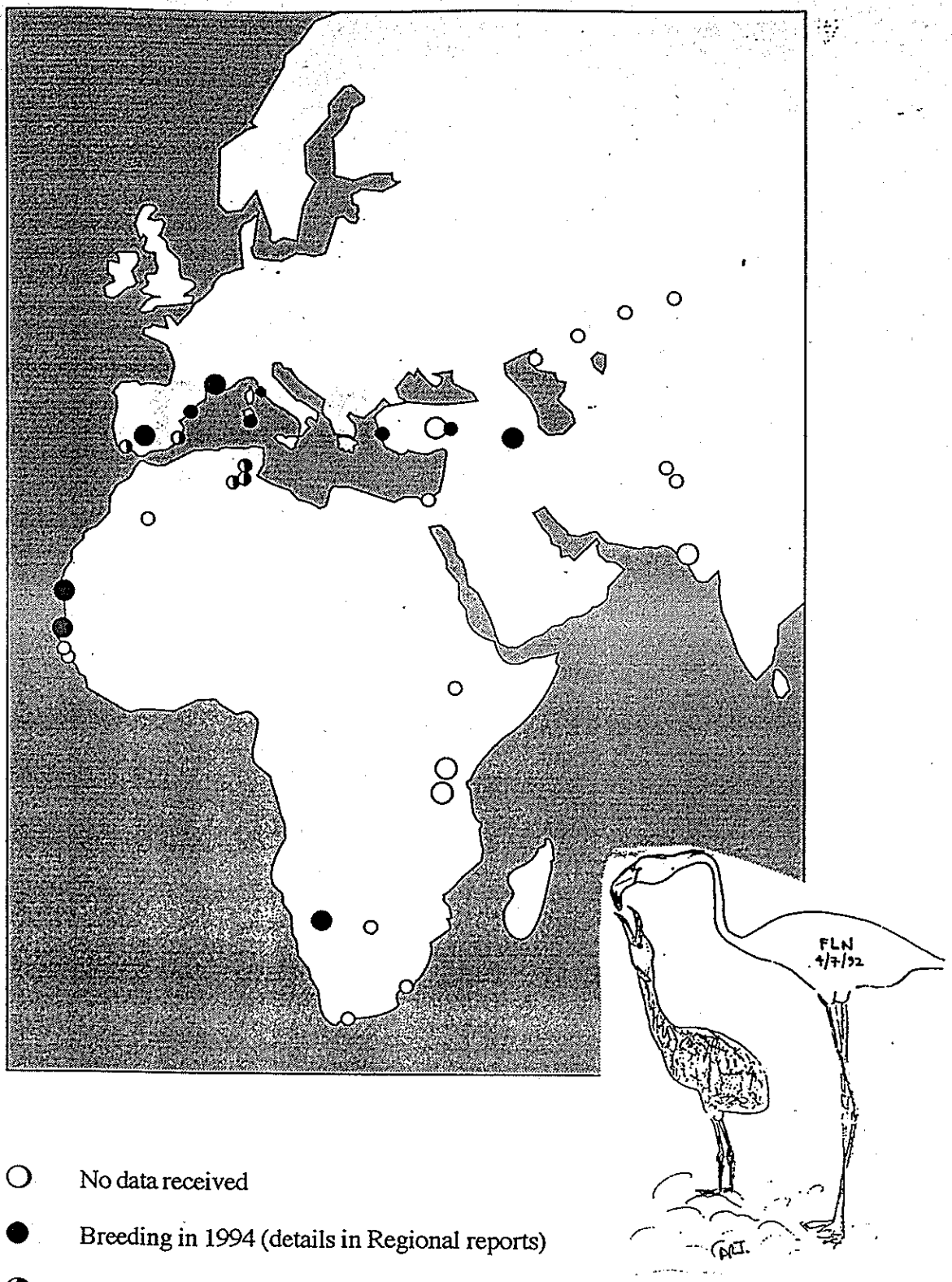
Greater Flamingos attempted breeding at the Al Ghar Lakes, 40 km east of Abu Dhabi. About 60 nests were built, or still being constructed in June-July. Unfortunately, a vandal disturbed the colony in early July when about 20 nests were occupied, 4 of them having small chicks (inf. M. Ali Reza Khan).

INDIA

Because of drought no breeding at the traditional site in the Rann of Kutch. However breeding was attempted near Kori-Creek in Lakhpat Taluka but hundred of juveniles were found dead after the colony had been swamped (inf. S.N. Varu).

1994

BREEDING OF GREATER FLAMINGOS 1994



○ No data received

● Breeding in 1994 (details in Regional reports)

◑ Information that no breeding occurred

The map above shows all known sites where the Greater Flamingo has been reported breeding in the past 50 years. The larger circles are the major sites, the smaller ones those colonised less frequently and/or by fewer birds.

NEWS FROM THE REGIONS 1994

- OLD WORLD -

EAST AFRICA

ETHIOPIA

The African Waterfowl Census took place for the fourth consecutive year in December 1993/January 1994. As before, it was a joint venture between the Ethiopian Wildlife Conservation Organisation (EWCO), the University of Oslo, and individuals. Emphasis was placed on surveying Lake Abijatta in the Rift Valley, as part of a monitoring programme for the Abijatta-Shala Lakes National Park.

The numbers of flamingos counted and estimated at Lake Abijatta, January 1994 (Taylor & Rose 1994):

	counted	estimated	range
Greater Flamingo	4,240	34,088	22,272-45,904
Lesser Flamingo	10,986	88,104	71,088-105,120

The African Waterfowl Census 1994 (Taylor & Rose 1994) gives the following figures for the two species of flamingos occurring elsewhere in East Africa. Comments with regard to the January 1994 census are also included for each country.

	Ethiopia	Kenya	Tanzania	Uganda	Total
Greater Flamingo	5,539	12,378	4,500	-	22,417+
Lesser Flamingo	11,714	1,462,390	26,800	99	1,501,003
Flamingo spp.	20,700	-	-	-	20,700+

KENYA

(extracted from "Waterbirds in the southern Kenyan Rift Valley, July 1993 and January 1994", Nasirwa, 0. & Bennun, L., report of Dept. of Ornithology, National Museums of Kenya).

The January counts were done at a time of drought when water levels for most sites were lower than in January 1993. Lake Magadi and the Tana River Estuary were not counted. Lesser Flamingos made up the majority of individual birds counted.

	Lake Elmenteita	Lake Nakuru	Lake Bogoria
Greater Flamingo	7,012	?	?
Lesser Flamingo	466,648	130,412	?

TANZANIA

(from Taylor and Rose 1994)

Surveys were made from 2 January through to 1 March 1994 in the Lower Moshi Irrigation Scheme, Momella Lakes in the Arusha National Park and the Manyara area.

SOUTHERN AFRICA

The flamingos counted during the African Waterfowl Census in January 1994 (Taylor & Rose 1994) are tabulated below:

	Botswana	Madagascar	Namibia	Sth. Africa	Total
Greater Flamingo	877	264	3,251	7,878	12,270
Lesser Flamingo	960	2	1,628	6,609	9,199
Flamingo spp.	-	-	500	-	500

BOTSWANA

Censuses were carried out on 17 wetlands in January 1994 (report by D. Bishop to IWRB).

NAMIBIA

(from Taylor & Rose 1994)

It is the fourth consecutive year that Namibia has attempted to count a representative portion of its wetland birds. The low figures of flamingos shown in the table above are due to the fact that the birds are elsewhere in mid-January and R. E. Simmons, the National Coordinator, organises an April count as well to coincide with the breeding season.

A breeding event with a familiar ending was recorded at Etosha this year (1994). Greater Flamingos were found breeding on Etosha Pan at Poacher's Point and Okerfontein - traditional sites. During aerial counts by Dr. Nad Brain in April, thousands of chicks were seen to be dead with an estimated 15-30,000 adults on the pan. Only about 1,000 chicks are thought to have had any chance of survival as the intense evaporation rate (2m per year) took its toll. In these cases the water disappears and with it, the food source. About 130 chicks were rounded up by Etosha staff and it is unlikely that any* young survived naturally. Many staff and volunteers, overseen by Dr. Conrad Brain, were involved in the care and feeding of the flamingo chicks, including Dr. Betsy Fox, Dr. Pauline Lindeque and volunteer Lindsey Hughes who fed them most of the time. Of those captured, 50 were sold at auction; 77 others were successfully released at Walvis Bay having been transported there and ringed in early June.

The ornithology section has tried (unsuccessfully) to convince its management colleagues that artificial islands will alleviate this recurrent problem. Co-ordinated aerial counts in the southern Africa area are a priority and would probably confirm what is already suspected - that adult populations are declining here.

*based on counts in July in their wintering grounds at Walvis Bay and Sandwich Harbour.

WEST AFRICA

MAURITANIA

In the Banc d'Arguin National Park, Mauritania, 5,560 prs. of Greater Flamingos bred on the Grande Kiaone Island and c470 on the Ilôt des Flamants in the Baie d'Arguin (Guide des Oiseaux du PNBA in press).

SENEGAL

Triplet & Yésou (1994) carried out a mid-January census of waterfowl on the wetlands along both banks of the Senegal river delta. The numbers of flamingos counted can be found in the table below (from Bulletin ONC 190 p.17).

	St. Louis lagoons (SEN.)	Parc Nat. du Djoudj (SEN.)	Gadianguer (MAURITANIA)	Total
Greater Flamingo	111	17,859	980	18,950
Lesser Flamingo	55	4,700	370	5,125

SIERRA LEONE

403 Greater Flamingos were counted in January 1994. (See AfWC pp.38 and Dowsett 1993).

WEST MEDITERRANEAN

SPAIN

The total number of Greater Flamingos counted in January 1994 was 5,236 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p. 91).

Flamingos bred at two sites in Spain in 1994, at the AMA wetland reserve of Fuente de Piedra in Andalusia and at the Ebro delta in Catalunya. Details of the colonies are summarised below.

Fuente de Piedra (Málaga). (From M. Rendon Martos, Conservator of the Reserve): El año 1994 ha sido un año seco, si bien las precipitaciones registradas al comienzo del año hidrológico han permitido que la laguna alcanzara un nivel de agua suficiente para que una pequeña colonia de flamencos formada por 2083 parejas se instalase para criar. El número total de pollos contabilizados asciende a 478. Tanto el bajo número de parejas como el de pollos está en relación con las escasas precipitaciones registradas en Andalucía durante el año hidrológico 1993-94, lo que ha determinado que las zonas húmedas temporales (marismas y lagunas) se mantuviesen secas casi todo el año, reduciendose las zonas de alimentación de los flamencos a las salinas y zonas de acuicultura. Este año se puede destacar el hecho de que por primera vez se han anillado a la totalidad de los pollos nacidos en la colonia de Fuente de Piedra. El anillamiento se realizó el día 2 de julio, siendo organizado por la Agencia de Medio Ambiente (AMA) y la Estación Biologica de Doñana.
SUMMARY: Because of low water levels only a small colony of flamingos was established this year at Fuente de Piedra (2,083 pairs) with poor breeding success (478 chicks raised). All of the chicks were ringed, weighed and measured on 2 July 1994 (AMA, Donana).

Ebro delta (Tarragona) (From A. Martinez Vilalta & D. Oro, Parc Natural del Delta de l'Ebre): Por segundo año el Flamenco ha criado con éxito en el Delta del Ebro. La colonia se ha situado exactamente en el mismo lugar que en 1993, y la cría se ha desarrollado de manera parecida al año pasado. El número de aves presentes a principio de junio, ha sido de 3.054 aves adultas; las puestas han empezado a mediados de mayo y los primeros pollos han nacido a mediados de junio. A diferencia del año pasado, en 1994, las puestas y por tanto las eclosiones han sido muy sincrónicas, por lo que el día del censo (12 de agosto), todos los pollos tenían una edad similar. El censo de los pollos se efectuo sobrevolando la guardería a 650 m de altura y el número de pollos contados ha sido de 306.
SUMMARY: For the second year in succession, flamingos bred successfully in the Ebro delta, at exactly the same site as in 1993. Egg-laying began in mid-May, however, the number of breeding pairs is not known (3,054 adults in early June) but aerial photographs of 12 August revealed 306 chicks in the crèche.

PORTUGAL

3,980 Greater Flamingos were counted in January 1994 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p. 90.)

FRANCE

(from A.R. Johnson, Tour du Valat)

The mid-January 1994 census over the wetlands of the Mediterranean coast revealed a wintering population of 25,983 Greater Flamingos. The French wintering population has exceeded 20,000 birds in six out of the past seven winters and is now tending to level off after a massive increase in the 1970s-1980s.

Breeding again took place at the Etang du Fangassier (Camargue). About 17,000 pairs of flamingos raised 6,050 chicks. The colony was under permanent observation throughout the breeding season by the Tour du Valat flamingo team and 748 ringed birds aged 4-17 years were confirmed breeding. 10 birds nested which had been ringed as chicks at Fuente de Piedra (Andalusia). 875 chicks (14.5% of the crèche) were ringed, weighed and measured on 20 July 1994.

There were again reports of flamingos feeding in ricefields in early spring. A study and scaring campaign was carried out using "Very" pistols and gas-fired bird scarers. In a report to the Camargue Regional Park (PNRC) farmers claim that damage was caused to 174 ha. of ricefields with 86 ha. being lost. (see Patel 1994).

ITALY (see also SARDINIA)

Flamingos only occur irregularly on wetlands bordering the Adriatic Sea. On 21 January, L. Serra and M. Zenatello counted 74 Greater Flamingos in the 3,871 ha complex of salines near Margherita di Savoia (Puglia). There are now several sites on mainland Italy where small groups of flamingos are of regular occurrence (info. N. Baccetti).

For the first time flamingos bred on mainland Italy at the Orbetello Lagoon in Tuscany. Twenty-six chicks were raised and they were captured and ringed with blue PVC leg bands engraved with white alpha-numerical codes (see article from N. Baccetti on p 48).

SARDINIA

(from Assoc.per il Parco Molentargius Salines de Poetto and LIPU - Delegazione di Cagliari, reported in Ali Notizie 29: 12 (1994).

For the second consecutive year Greater Flamingos bred on the outskirts of the town of Cagliari in the Molentargius Lagoon. About 1,500 pairs of flamingos attempted nesting; some birds (620 nests) at the same site as in 1993, the others on an island about 2 km distant. In spite of the proximity of the town, breeding was successful and about 900 chicks fledged.
At least 17 birds (aged 4-14 yrs.) ringed as chicks in the Camargue, 600 km to the north-west, were confirmed breeding and 11 more were probably breeding.

TUNISIA

H. Dlensi visited many of the more important wetlands for flamingos in the centre and south of Tunisia on 6-8 February. Only the Sebkhet El Djem held a small amount of water (15% filled), all other playas being dry. In the salines at Sfax, there were 4,252 flamingos.

M. Smart reported a first-year juvenile flamingo at Radès on 22 August, ringed as a chick in Camargue on 20 July 1994.

ALGERIA

6,126 Greater Flamingos were counted in January 1994 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p. 90.)

MOROCCO

3,612 Greater Flamingos were counted in January 1994 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p. 90.)

EAST MEDITERRANEAN

GREECE

5,553 Greater Flamingos were counted in January 1994 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p.90). 2,500 were present in Northern Greece in June (inf. H. Jerrentrup).

CYPRUS

Large numbers of flamingos move through or over Cyprus on migration and several thousands usually winter on the island. Larnaca Lake was visited by M. Thauront from 5 to 8 April 1994 when 550-634 Greater Flamingos of all age groups were censused.

From the Cyprus Ornithological Society (1957) Bulletin N° 41:

"At Akrotiri Salt Lake between 2,000 and 3,300 birds were seen in January and at Larnaka Salt Lake up to 31 birds reported throughout the month. Numbers increased in February with from 4,000 to 5,000 birds being seen at Akrotiri and between 9 and 550 at Larnaka. In March there were c1,000 birds there until the 17th when numbers reduced to 3 birds seen.

... The first autumn reports were on the 16th October when 70+ birds were seen. ... Winter visitors started returning on 7th November when 40 birds were reported at Akrotiri Salt Lake, numbers increased here from c 600 on the 15th to c4,500 by the end of the month; at Larnaka Salt Lake numbers fluctuated between 52 on 21st, a maximum of c500 on the 24th dwindling to 150 on the 26th. During December a maximum of 7,000+ birds were recorded at Akrotiri and up to 2,000 adults and 1,000 immatures at Larnaka."

TURKEY

(from G. Magnin, DHKD)

Greater Flamingos bred at at least two sites in Turkey in 1994:
Seyfe Gölü: M. Yarar and G. Magnin counted a total of 9,600 adults on this lake and 240 chicks on 11 June 1994. The water level was low and the birds nested on different islands from those occupied in 1992 and 1993.
Camalti Tuzlasi (Izmir): Flamingos again nested in the saltpans at Camalti Tuzlasi. Egg-laying began on 9 April 1994. A nest count revealed 1,752 mounds and 750-800 chicks were raised (inf. M. Siki).
Evening flights of flamingos departing from Seyfe Gölü in the direction of Tuz Gölü suggested that a colony might have been established at this latter site again in 1994.

On 23 October 1994, 59,150 flamingos were counted at the Sultan marshes (inf. DHKD).

SYRIA

510 Greater Flamingos were counted in January 1994 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p. 91.)

ISRAEL

14 Greater Flamingos were counted in January 1994 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p.90).

We have no precise information of the numbers of flamingos in this region for 1994. For information, results of the mid-winter waterfowl census for South Asia are given below for the 1991-1993 period (from Mundkur and Taylor 1993):

	GREATER FLAMINGO			LESSER FLAMINGO		
	January 1991	January 1992	January 1993	January 1991	January 1992	January 1993
India	52,916	9,285	6,537	2,154	19,284	30,781
Pakistan	50,159	30,300	52,673	4,500	4,552	8,246
Sri Lanka	0	1,397	250	0	0	0

IRAN

In August 1994, B. Behrouzi-Rad ringed 1,500 Greater Flamingo chicks at Lake Uromiyeh.

PAKISTAN

No information on flamingo censuses in 1994. Numbers of Greater Flamingos during the mid-winter 1993 census were up to their 1991 level after a drop in 1992 whereas Lesser Flamingo numbers doubled. Details of last censuses are given in the table below (from Mundkur and Taylor 1993):

	January 1991	January 1992	January 1993
Greater Flamingo	50,159	30,300	52,673
Lesser Flamingo	4,500	4,552	8,246

GULF

The table below shows numbers of Greater Flamingos counted in the Persian Gulf during January 1994 (see Western Palearctic and South-West Asia Waterfowl Census 1994, p. 112):

Country	January 1994
BAHRAIN	291
IRAN	116,031
KUWAIT	684
OMAN	1,287
QATAR	550
SAUDI ARABIA	7,652
UAE	1,349
YEMEN	405

FLAMINGO RINGING IN 1991-1994

- OLD WORLD -

All of the following reports concern Greater Flamingos only.

FRANCE

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

1991: 518 chicks were marked on the left tibia with PARIS MUSEUM stainless steel rings, and on the right tibia with yellow P.V.C. leg-bands engraved with a combination of four-letter codes commencing with BD--, BF-- or BH-- on 31 July 1991.

1992: 839 chicks were marked on the left tibia with PARIS MUSEUM stainless steel rings, and on the right tibia with yellow P.V.C. leg-bands engraved with a combination of four-letter codes commencing with BJ--, BK--, BL- or BN-- on 29 July 1992.

1993: 875 chicks were marked on the left tibia with PARIS MUSEUM stainless steel rings, and on the right tibia with yellow P.V.C. leg-bands engraved with a combination of four-letter codes commencing with BP--, BS--, BT- or BV-- on 29 July 1993.

1994: 850 chicks were marked on the left tibia with PARIS MUSEUM stainless steel rings, and on the right tibia with yellow P.V.C. leg-bands engraved with a combination of four-letter codes commencing with BX--, BZ--, CA-- or CB-- on 20 July 1994.

SPAIN

Fuente de Piedra Reserve (Malaga) (inf. M. Rendon, (A.M.A) and J. Calderon, J.J. Chans, (E.B.D).

1991: 700 chicks were marked on the right tibia with ICONA metal rings, and on the left tibia with orange P.V.C. leg-bands engraved with three letters or numbers, the first two separated by a black line engraved completely around the ring, on 20 July 1991.

1994: 478 chicks were marked on the right tibia with ICONA metal rings, and on the left tibia with orange P.V.C. leg-bands engraved with three letters or numbers, the first two separated by a black line engraved completely around the ring, on 2 July 1994.

ITALY

Laguna di Orbetello, Tuscany, (Grosseto) (inf. N. Baccetti, INFS - Bologna)

On 16 August 1994, 26 chicks were marked on the right tibia with BOLOGNA metal rings, and on the left tibia with blue P.V.C. leg-bands engraved with a combination of three-letter codes commencing with IA-- or IB--.

IRAN

Lake Uromiyeh. (inf. B.Behrouzi-Rad, Dept. of the Environment, Teheran).
No ringing in Iran 1992-1993 but 1,500 chicks ringed in August 1994.

NAMIBIA

Etosha Pan (inf. Rob Simmons, Head of Ornithology, Research Section, Minstry of the Environment and Tourism)

76 out of about 130 fledglings which were captured at Etosha when the pan dried were ringed (stainless steel and yellow PVC rings on left tibia) and released in July at Walvis Bay Salt Works.

- NEW WORLD -

The GRUPO PHOENICOPTERIDAE SUR ANDINA (Flamingo Group of the Southern Andes) produced its Bulletin No.7 in March 1994 (in Spanish). This group's main aim is to protect the flamingo populations of South America and the Caribbean.
In the north of CHILE flamingo chicks were captured and ringed at the Salar de Punta Negra and at Salar de Surire in 1991-92 and 1992-93. At the former site 1,382 Andean (or Puna) Flamingo chicks were ringed and at the latter 1,212 Chilean.

REQUEST FOR SIGHTINGS OF RINGED FLAMINGOS

Since 1977, over 15,000 Greater Flamingo (*Phoenicopterus ruber roseus*) chicks have been ringed in the western Mediterranean with coded plastic leg bands. These are engraved in black 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) 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 on the bird's life history.
All recoveries should be addressed to:

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

Juan CALDERON
Estacion Biologica de Donana
Pabellon del Peru
Avenida Maria Luisa s/n
41013 SEVILLA (Spain)

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

ARTICLES

WORKSHOP ON LESSER FLAMINGOS, NAKURU, KENYA, NOVEMBER 1993

(from JOHNSON, A. and BENNUN L. 1994. IWRB News 11: 10-11)

Because of concern by conservationists over the future of Lake Natron, IUCN-The World Conservation Union and the Global Environment Facility (GEF) organised a one-day workshop on the Lesser Flamingo as part of a regional East African meeting on wetland biodiversity, held at Nakuru, Kenya on 8-10 November 1993. A small group of 15 persons drew up a series of recommandations which were agreed by all 50 participants at the meeting:

1. Tanzania should develop a programme of coordinated flamingo research, including surveys.
2. There should be coordinated counts of flamingos in the eastern Rift Valley as soon as possible- especially in Kenya and Tanzania.
3. The Kenya Wetlands Working Group should attempt to calibrate their counts to develop a simple, repeatable census method for waterfowl monitoring.
4. There is need to urgently coordinate a simultaneous monitoring programme for Lesser Flamingos in Kenya, Tanzania, Uganda and Ethiopia: and to extend this programme to include key sites in Southern Africa, especially Botswana and Namibia.
5. There should be monitoring of other parameters during the flamingos counts, including at least water level measurements.
6. Funds should be sought (e.g. from GEF), to carry out a coordinated aerial survey of the entire Eastern Rift Valley.
7. Countries in Eastern Africa should join the Ramsar Convention and designate key sites (e.g Lake Natron).
8. Countries in Eastern Africa should join the Bonn Convention.
9. There should be further development of the proposed agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) under the Bonn Convention.
10. The Kenya Wetlands Working Group should find a mechanism for Eastern African participation in the joint IWRB/BirdLife International/IUCN Flamingo Specialist Group as a first step in drawing up the Action Plan for the Lesser Flamingo, to be implemented under the proposed Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) under the Bonn Convention.
11. The relevant Tanzanian authorities should be urged to promote and carry out detailed ecological studies of Lake Natron, in order to obtain a better understanding of the lake system and its likely response to any development.
12. The Tanzanian Government should urgently make available the details of the proposed soda extraction plant and factory at Lake Natron and carry out a full and independent EIA before any development plans are approved. The EIA should take into account the unique importance of Lake Natron as a breeding site for Lesser Flamingo and should be circulated widely to concerned parties in Tanzania, Kenya and internationally.
13. Regarding the hydrological development on the Southern Ewaso Ngiro River in Kenya, there is a need:
    a. to support mitigation and monitoring measures as proposed in the stage III Flamingo Ecology Report of the EIA, and to incorporate these in any future development;
    b. to strongly urge that an independent controlling authority (including representatives from both Kenya and Tanzania) be set up to ensure that the water release decisions are in line with the proposed mitigating measures and hence with the conservation of the Lesser Flamingo.

IWRB COUNTS AND DECLINING POPULATION TRENDS FOR FLAMINGOS IN NAMIBIA

(From a note by R.E. SIMMONS. *In:* Taylor, V. (1993). African Waterfowl Census 1993. Les Dénombrements Internationaux d'oiseaux d'eau en Afrique, 1993. IWRB: 90-91).

"... Flamingo population estimates in the mid 1970s and early 1980s put the Southern African population at about 60,000 Greater and 55,000 Lesser Flamingos (Cooper & Hockey 1981, Williams 1987). From the IWRB counts in Southern Africa for July 1991 the flamingo population was a mere 56,000 individuals of the two species combined! Since birds may have been elsewhere, the new January (1992) count was a better estimate and showed that 78,000 birds occured in Southern Africa (Perennou 1992). For this January (1993), combining Tony William's Walvis Bay counts with ours shows that Namibia had no more than 60,000 birds. Thus our counts have already shown up an alarming decrease in flamingos from about 115,000 birds in the early 1980s to about 70,000 birds presently - a 40% decline.

Why is this? Without going into too many details, I have analysed flamingo breeding on Etosha Pan for the last 35 years (Simmons in press) and found that the birds are not replacing themselves: indeed each pair has to breed for somewhere between 36 and 49 years to bring just two young into the world. this assumes that all young reared survive. Since flamingos are not that long-lived, I believe this is the reason that our birds are declining. Plans are afoot to alleviate this but they are grinding along very slowly because of resistance from management officials in Etosha; they may never come to fruition. This would be sad for both flamingos and Namibian conservation efforts.

We have decided to conduct Namibian's second count in April rather than July in an attempt to monitor the maximum number of birds when our wetlands are at their wettest and rivers at their highest...."

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Simmons, R.E. in press. Is Etosha Pan a viable breeding area for flamingos: a reassessment and a solution. Madoqua.

Williams, A.J. 1987. Conservation management of the Walvis Bay wetland with particular references to coastal bird numbers and their conservation significance. Assoc. Round Tables N°35. Walvis Bay.

EAST AFRICAN FLAMINGOS SURVEYED

(Extracted from G. HOWARD, Wetlands Coordinator for Eastern Africa, IUCN Wetlands Programme Newsletter 10 (November 1994): 5).

"In 1990, IWRB organised a workshop in Uganda which led to the initiation of regular counts of waterbirds in both Uganda and Kenya as part of the African Waterfowl Census. Four years later, and after three twice-yearly counts of waterbirds in Kenya, an East African regional wetlands biodiversity workshop in Nakuru, Kenya (see last Wetlands Programme Newsletter, #9, p. 4), resolved that there should be a survey of the Lesser Flamingo on its major feeding sites in East Africa - namely on the soda lakes of Kenya and Tanzania. This was felt necessary because the various counts of flamingos in January and July each year had shown great fluctuations, especially when one looked at the results of any one wetland. The group in Nakuru felt that it was necessary to survey all the likely feeding sites at one time in order to get some idea of the order of magnitude of the total East African population of Lesser Flamingos and to begin to assess the importance of various soda lakes as feeding resources for future conservation action and planning.

Accordingly, a combined effort was planned for the month of July (1994), to coincide with the regular census activities of the Kenya Wetlands Working Group, the Uganda Wetlands Working Group and the wetland bird counters in Tanzania. The main activity was an aerial survey conducted by the Tanzania Wildlife Monitoring team from Serengeti on the Tanzanian side of the eastern Rift Valley and an attempt at a similar survey on the Kenyan side. The Tanzanian survey went well and at least two million flamingos were estimated to be present on their soda lakes. The Kenyan ground counts occurred as planned, but some aircraft and weather problems delayed the aerial survey, so it was several weeks before all the major lakes had been visited. Ground estimates in Uganda and northern Tanzania added more information to the overall picture.

Not all the results have been collated and checked, but it is safe to say that there were around FOUR MILLION flamingos present on the Rift Valley lakes during July 1994. The majority of these were Lesser Flamingos with Greaters occurring at the 1 or 2% level (or less) in major lakes, but being present in other wetlands as well. The major sites of flamingos during this survey were Lake Bogoria in Kenya (over 1.5 million), Lakes Natron and Embagai in Tanzania (around one million each) and Lake Nakuru with about a quarter of a million. Lakes Manyara (Tanzania), Elmenteita and Magadi (Kenya) had tens of thousands while some other important Tanzanian lakes were dry. Smaller numbers in the thousands were recorded from several lakes in the Western Rift Valley (Uganda) and in soda lakes around Arusha and in Ngorongoro (Tanzania).

This first attempt at a coordinated survey (involving both non-governmental organisations (NGOs) and government environment agencies) has given us the order of magnitude both of the Lesser Flamingo population and of the task of surveying birds over dozens of lakes and hundreds of kilometres. The groups concerned hope to meet soon to discuss strategies and techniques, and coordination, as well as the need to communicate with the International Waterfowl Census that involves Lesser Flamingos in other parts of Africa. Lesser Flamingos move from lake to lake in what is presently an unpredictable way. As I write (1 October) the birds at Lake Bogoria are moving away in their hundreds of thousands - presumably to a more suitable feeding site or to breed at Lake Natron almost 300 km away. It is hoped that the coordinated survey can be improved and enhanced so that we can trace the concentrations of flamingos, establish the importance of various feeding sites, monitor the breeding site and work towards a plan for the conservation of this unusual and large population of striking wetland birds - and their wetland habitats."

SPANISH PILOTS FORCE FLAMINGOS TO FLEE

(The text below has been reproduced from an article by Anthony LUKE, Madrid, in the 5 September, 1992 issue of NEW SCIENTIST.)

"Pilots working for Spain's government-run nature conservation organisation have been blamed for the deaths of hundreds of flamingo chicks in the Ebro Delta nature park in the northeast of the country. The chicks were due to hatch last week but their parents were scared off their nests by firefighting planes on a training exercise for ICONA, the National Institute for the Conservation of Nature.

Flamingos have not nested in the delta since the 16th century. But this year part of the 2000-strong colony that nests in the southern province of Malaga flew up the coast to the delta, after finding their traditional nesting grounds in the Fuente de Piedra lake had dried up after a prolonged drought.

"We were delighted when they arrived," says Tony Curco of the regional conservation agency which administers the park. "We have witnessed several attempts by flamingos from breeding grounds in Malaga and the Camargue to nest there since the 1970s, but they have never laid eggs before." Guards were posted to protect the birds from disturbance, while biologists monitored the birds from hides.

On 11 August, the 251 chimneystack-like nests were abandoned. "We waited to see if the birds would return, but by then it was too late," says Curco. Gulls had already attacked the eggs. All the park's staff could find were pieces of shell and dead embryos.

The agency's director, Josep Santacana, blames ICONA's pilots for the incident. The biologists monitoring the nests saw one of the seaplanes, based at the nearby airport of Reus, carry out at least two low-flying sweeps over the nesting area as the pilots tested their skills, scooping up water from the delta. The noise of the engines as the planes carry out this manoeuvre can be deafening.

"Flamingos are extremely shy and will abandon their nests if they feel the slightest bit unsettled," says Curco. "We think the pilots were deliberately buzzing the colony to see the birds take to the air."

ICONA has apologised for the incident, but says the nature park, which makes up 25 per cent of the delta area, was not marked as a restricted area on their maps. Joan Estrada, spokesman for the Natural Heritage Defence League, DEPANA, said the death of the flamingo chicks "represented yet another example of the negligence of ICONA, highlighting the lack of coordination between public environmental organisations which are supposed to be working towards the same end."

COMMENTS (A. Johnson): This breeding attempt occurred late in the season and the chances of any chicks surviving would have been low.

NOTAS SOBRE EL INTENTO DE REPRODUCCION DEL FLAMENCO ROSA (*Phoenicopterus ruber*) EN LAS SALINAS DE SANTA POLA (ALICANTE), ESPAÑA, ANO 1992.

J. HUERTAS PEDRERO & P. PROSPER CANDEL, Estacio Ornitologica L'Albufera.
Avenida Los Pinares 106, 46012 El Saler (Valencia), ESPAÑA

Las citas conocidas acerca de la posible reproducción del Flamenco rosa en le Comunidad Valenciana corresponden únicamente a dos zonas húmedas del sur de la provincia de Alicante: El Hondo y Las Salinas de Santa Pola.

La primera referencia fué de Martorell en 1966(1), en donde nos habla de bandos de unos 200 ejemplares que se establecían en la parte Norte del embalse de Poniente, llegando incluso a construir nidos que posteriormente y debido a la inestabilidad del nivel del agua que se utiliza para el riego, estas aves no llegaban a hacer puestas o bien se les estropeaban prematuramente.

La segunda cita corresponde al año 1973(2), en la que se verifica en las Salinas de Santa Pola, la existencia de un mínimo de 25 nidos en diverso estado de conservación el 8/10/73, sin embargo, los comentarios del guarda de las salinas señalaban la existencia de dos pequeñas colonias de 25 y 30 nidos, asi como de 20 a 30 pollos.

Los resultados mas recientes de los censos de Flamenco efectuados en las Salinas de Santa Pola se reflejan en la Tabla 1, siendo la mayoría de ellos incompletos, debido a la prohibición de paso a las Salinas de Bras del Port. Esta zona acoge más del 60% de la población existente en Santa Pola.

Los problemas existentes entre la Administración y los diversos propietarios de las Salinas, motivaron que a partir de su declaración como Paraje Natural en diciembre de 1988, se prohibiera el acceso a cualquier persona ajena.

En las Salinas de Bras del Port y concretamente en la zona denominada La Seca-Aguas Saladas II (que se corresponde casi con seguridad con la zona citada en 1973), se observaron el día 10/05/92, un mínimo de 30 nidos de Flamenco, no llegando a contabilizarlos en su totalidad por evitar posibles molestias.

Para confirmar el intento de nidificación de la especie, se realizó otra visita el día 25/05/92, censandose de 1000 a 1200 ejemplares entre adultos y subadultos. Effectivamente, algunos de ellos estaban construyendo nidos y al menos 5 ejemplares se observaron posados en ellos.

Las reiteradas prohibiciones del propietario de este enclave, condujo a la realización de un vuelo aéreo con helicoptero el día 12/06/92, realizandose durante el recorrido varias fotos que reflejan tanto el número como la distribución de los nidos.

Pese a la difícil accesibilidad, por los motivos anteriormente citados, se entró a pié en la colonia el día 22/06/92, contabilizandose un total de 99 nidos, distribuidos en dos núcleos principales con nidos más concentrados y un tercer núcleo que abarcaba nidos dispersos, no observandose ni huevos ni pollos en la colonia. En esta visita, había en las proximidades de la misma unos 800 ejemplares que eran en su mayoría adultos.

Por último, el día 14/07/92 se volvió a acceder a pié a la colonia, contabilizandose un mayor número de nidos en los tres núcleos antes citados, además de encontrar un cuarto núcleo con 12 nidos, que pudo pasar desapercibido en la visita anterior debido a encontrarse más separada del resto de la colonia. Este día se contaron en total 142 nidos, estando todos ellos marcados con huellas, descartando además algunos monticulos más pequeños que no presentaban huellas. También en la zona próxima a la colonia se censaron un total de 908 ejemplares entre adultos y subadultos.

La zona en que se ubica la colonia, se corresponde con la parte más colmatada por sedimentos de un charca utilizada como concentradora de salinidad, que suele mantener durante la temporada de cría el mismo nivel de agua. Una gran parte de los nidos están asentados sobre una antigua barra de piedras que sobresale del agua. La profundidad del agua en la zona no excede los 10 cm.

Se puede considerar esta area como una de las más tranquilas y con mejores condiciones físicas para la reproducción del Flamenco en todo el Paraje Natural. De cualquier manera este enclave no esta libre de impactos tan perjudiciales como el vuelo frecuente de avionetas particulares sobre la zona.

Tabla 1: Ultimos censos de Flamenco realizados en las Salinas de Santa Pola (datos de J. Huertas).

Fecha	N° de ejemplares	Fecha	N° de ejemplares
13/10/91	1,599	6/4/92	+1.057*
22/11/91	1,125	25/5/92	+1.200*
16/12/91	1,296	22/6/92	+800*
22/1/92	768	14/7/92	+1.500*
17/2/92	704	11/8/92	+2.100
13/3/92	+1,262		

Nota: el (*) indica que es un censo incompleto, ya que no abarca toda la superficie de las Salinas de Santa Pola.

(1) Martorell, M. 1966 - Nota sobre la avifauna de la laguna del Hondo, en Elche. Ardeola, 11: 129-136.
(2) Varios autores, (Asociación de Naturalistas del Sureste). 1974 - Primer dato de reproducción de Flamenco (Phoenicopterus ruber) en Alicante. Ardeola, 20: 328-330.

SUMMARY: Flamingos nest-building in the Salinas of Santa Pola (Alicante), Spain, in 1992.
In the Spring of 1992 flamingos built nests in the Salines of Santa Pola (Alicante). It is only the third time that the species has been reported nesting in this area. The former records refer to nest-building in El Hondo in 1966, and a second, seemingly successful breeding attempt, at the same spot as the presently reported case of nest-building (1992).
During several visits to the area between October 1991 and August 1992, observers counted between 768 flamingos (January) and 2100 (August). More than 60% of the birds were to be found in a part of the salines to which access is restricted. Aerial photographs revealed the existence of nests, and two subsequent ground counts confirmed a total of 142 mounds, many built on an old dike, and a few in a previously unrecorded location. However, no eggs were found, despite this area's apparently ideal conditions for flamingo reproduction.

LA NIDIFICACION DEL FLAMENCO, *Phoenicopterus ruber roseus* , EN EL DELTA DEL EBRO, TARRAGONA, ESPAÑA, DURANTE 1993

A. MARTINEZ VILALTA, Parc Natural del Delta del Ebro, Deltebre, ESPAÑA.

El Flamenco es una especie marcadamente gregaria que cría tan solo en unas pocas decenas de localidades en todo el mundo. En la Península Ibérica existe una única colonia relativamente estable, la Laguna de Fuente de Piedra en Málaga, si bien ha nidificado esporadicamente en las Marismas del Guadalquivir (Huelva) en siete ocasiones desde 1977 y en las salinas de Santa Pola (Alicante) en 1973 (Johnson 1991).

En el delta del Ebro no se conocen reproducciones durante este siglo, tan solo existe un dato antiguo de nidificación del siglo XVI (Despuig 1557); de todas formas, durante los últimos 25 años en diversas ocasiones los flamencos han efectuado intentos de nidificación con construcción de nidos e incluso puesta de huevos. Hasta la fecha se han documentado intentos de cría en los años 1973, 1974, 1978, 1983, 1984, 1989, 1990 y 1992 (Martinez Vilalta 1991). Durante los años setenta y la primera mitad de los ochenta, los intentos eran realizados por pequeños grupos de tan solo decenas o algun centenar escaso de aves. A partir de 1989 grupos más importantes de flamencos se instalaron en la zona: hasta 4,000 aves y 189 nidos en 1989, 2,000 aves y 149 nidos en 1990, 2,000 aves y 251 nidos en 1992 (Anónimo 1989, 1990, Estrada y col. 1991). Hasta la fecha todos los intentos se han realizado en una misma isleta ("tora dels conills") de 0,83 ha, situada en la superficie de evaporación de las salinas de la Trinitat (Resserva Natural Parcial de la Punta de la Banya).

Durante todo el invierno y la primavera, la población de flamencos se mantuvo muy alta, con una cifra record de 4,000 aves durante el censo de Enero. Durante los meses de Abril y Mayo, se instalaron 2,500 flamencos en el islote de nidificación y comenzaron a construir nidos. Las aves ocuparon dos nucleos, uno mayor y más tardiamente otro menor. Teniendo en cuenta la fecha de las eclosiones, las puestas se iniciaron a mediados de Mayo y se prolongaron hasta finales de junio.

La colonia se censo al final de la cría (18/08/93), contandose un total de 503 nidos.

Los datos obtenidos sobre la fenologia de las eclosiones se resumen a continuación:
- 12 de Junio, nace el primer pollo
- 22 de Junio, al menos 10 pollos de menos 10 dias
- 29 de Junio, decenas de pollos
- 7 de Julio, en el primer núcleo ya no quedan adultos incubando
- 15 de Julio, ya han nacido pollos en el segundo núcleo
- 27 de Julio, ya han eclosionado todos los pollos

El número de pollos volanderos se estimó realizando fotografías aéreas de la guardería el 18 de Agosto; el total de pollos contado fue de 313.

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SUMMARY: Breeding of the Greater Flamingo, *Phoenicopterus ruber roseus*, in the Ebro Delta (Tarragona, Spain) in 1993.

The only regular breeding colony of flamingos in Spain is at the Laguna de Fuente de Piedra (Malaga), with occasional breeding in the Marismas del Guadalquivir (Huelva) and salines of Santa Pola (Alicante, see article of Huertas Pedrero & Prosper Candel, pp. 44-45 of this Newsletter). In the Ebro Delta successful breeding by Greater Flamingos had not been reported since the XVI century!

Several attempts at nesting by small groups (10-100 birds) were made in the seventies and early eighties. Since 1989, larger groups (ranging from 4,000 in 1989, to 2,000 in 1990 and 1992) have been visiting the same small nesting island of 0,83 ha in the Salinas de la Trinitat (Natural Reserve of the Punta de la Banya). Nests have been built and eggs laid but until now breeding had been unsuccessful.

In the spring of 1993, 2,500 flamingos in two groups occupied the site and in mid-May, egg-laying began lasting up to end of June. The first chick hatched on 12 June and on 27 July all the chicks were born.

A visit to the island after the breeding season revealed a total number of 503 nests, and 313 chicks were censused by an aerial survey of the crèche on 18 August.

FIRST RECORDED BREEDING BY FLAMINGOS ON MAINLAND ITALY

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The number of flamingos occurring on coastal wetlands on mainland Italy has increased in recent years and in 1993 some birds at the Orbetello Lagoon in Tuscany even built nests, but did not lay eggs. Some adults were again present in June 1994 on the same island which I approached whilst censusing egrets.

To my complete surprise, I noticed as the flamingos stirred at my approach that there were not only nests containing eggs (19) but that there were also five small chicks. I retreated very quickly and kept news of this breeding quiet until the chicks were all in the nursery. Observations allowed us to establish that the first chicks hatched on 15 June 1994, the last on 18 July 1994, indicating that egg-laying was spread from 17 May to 19 June 1994.

In July, it was noticed that the chicks left the vicinity of the colony in the evening and swam/walked 2 km to the nearest favourable feeding area, returning to the colony early the following morning. Observations also revealed that at least three of the breeding birds were of Camargue origin having been ringed in 1989 or 1990.

On 16 August 1994 all 26 chicks were captured and ringed, respecting of the Mediterranean protocol on ring colour and codes (Blue PVC leg bands engraved with 3-letter codes, the first letter being I for Italy). They were also weighed and measured.

MORE ABOUT BASEL'S VETERAN FLAMINGOS

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Of the six Greater Flamingos imported by Basel Zoo in 1932 and/or 1938 and still alive in 1989 (Newsletter 6: 54) two were killed by a fox in January 1991, one of them being blind in one eye. The four still alive bred in both 1989 and 1990, a male raising one young in both years and a female raising one young in 1989. In 1991 the flamingos were moved to a new enclosure in May and did not breed and in 1992 breeding failed because of disturbance by a fox. These four birds were at least 54 years old in 1992!

THE STATUS OF FLAMINGOS IN DENMARK

Records of flamingos in Denmark are presented in a paper by CHRISTENSEN, R. (1992): FLAMINGOERNES FOREKOMST I DANMARK in Dansk Orn. Foren. Tidsskr. 86: 123-127. The summary of this paper is reproduced below:

Since the first record in 1924 and until 1989, some 200 records of more than 400 flamingos have been reported in Denmark. More than two thirds of the birds were seen in northern and western Jutland. The annual occurrence builds up in April and May, and few birds remain after October. A few birds pass through Denmark on their way north from the Dutch/German Waddensea to the other Scandinavian countries.

Most common are the Chilean Flamingo (*Phoenicopterus chilensis*) with 70 records (cf. the existence of a colony in Germany) and the Old World Greater Flamingo (*Phoenicopterus ruber roseus*) with 35 records. The latter is seen in singles or twos, the former in flocks of up till 15. The Lesser Flamingo (*Phoenicopterus minor*) (4 records, 3 since 1989) and the Caribbean Greater Flamingo (*Phoenicopterus ruber ruber*) (3 records) are much rarer. Except for a record of a possibly wild second-year bird in 1933, when an invasion occurred in Switzerland, all birds are believed to be escapes. No invasions in Europe are known since 1935.

FERAL FLAMINGOS IN GERMANY AND THE NETHERLANDS

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For the past ten years a small group of Chilean Flamingos (*Phoenicopterus chilensis*) has been breeding at Zwillbrocker Venn, a nature reserve near the Dutch/German border between Groenlo and Vreden. Their presence makes this the northernmost known breeding site of flamingos in the wild. Each year a few chicks are successfully raised, and the overall number of birds has increased steadily each year, from six adults in 1983 to 32 in 1992.

Origin Unknown

It is not known for certain where these birds originated. Flamingos have been observed in Dutch waters since the late seventies: in 1979 twenty-nine flamingos were counted in De Grevelingen, a brackish dammed river-mouth near the North Sea, and in the mid-eighties more than forty birds were seen. Most flamingos in the area are Chilean, but there are also small numbers of Greater (*Phoenicopterus ruber roseus*) and the occasional Lesser (*Phoenicopterus minor*).

It seems unusual that such numbers of unmarked flamingos could have escaped from captivity but no other explanation presents itself. None of the birds are ringed except for those born at Zwillbrocker.

Zwillbrocker Venn

This nature reserve has been protected since the late thirties. In the preceding centuries the area was used for peat-cutting. After the reserve was established the peat-cutting was discontinued and many drainage channels were filled in. The ground-water level rose and where peat had been removed a shallow marsh, the Zwillbrocker Venn, formed.

The area was quickly colonised by Black-headed Gulls (*Larus ridibundus*), and their great success -- 15,000 breeding pairs today -- now threatens the surrounding heathland and marshes. Severe eutrophication, caused by the immense quantities of excrement in the water, could not be stopped by the construction of a sand dike. Measures taken to reduce the number of gulls were unsuccessful, and on hot summer days the bacteria level in the water causes a heavy decrease of oxygen. Although this precludes fish living in the Venn, micro-organisms exist in the water, i.e. large amounts of water fleas (Daphnia).

Flamingos in the Venn

Although the first flamingos were observed in the Venn in the early eighties, no data was collected for some years, since their presence was assumed to be temporary. When it became apparent that their numbers were increasing and they were breeding, more detailed observations began. Breeding takes place on small islands in the middle of the Venn. They are largely inaccessible to men, foxes and other predators, and the flamingos are not disturbed by the gulls.

The flamingos arrive in March-April and nest-building begins almost immediately. The low nest mounds are made of mud and plant material. By the time the eggs hatch, at the end of May, adult non-breeding flamingos are already leaving, and by the end of August only a few adults remain. Young birds which are not able to fly by mid-September, when the last birds leave, may be left behind. On several occasions weakened or wounded juveniles have been picked up and taken to zoos in Frankfurt and Münster.

The numbers of chicks raised have been fairly constant in the last few years: there were 4 in 1987, 5 in 1988, 5 in 1989, 3 in 1990 and 7 in 1991. In 1992 there were two breeding sites with a total of nine mounds. Only four young were found for ringing, and one broken egg was

found. At least one chick during these years was the result of a mating between a Chilean and a Greater flamingo. It is not yet known what the flamingos feed on during this season, except for their probable consumption of Daphnia.

Winter

When the flamingos leave after breeding they fly to the West and it seems probable that they spend the winter on the Dutch coast. There are reports of wintering flamingos in several places along the coast: De Lauwersmeer/Isle of Schiermonnikoog, de Oostvaardersplassen, the banks of the river IJssel, the shores of the IJsselmeer in SW Friesland, and particularly De Grevelingen. In Chile the flamingos winter on the coast after breeding on the mountain lakes.

In 1988 a ringing programme was begun at Zwillbrocker Venn when the young were ringed with yellow plastic, in 1989 with green, and in 1991-92 aluminium rings were used. The only ring recovered so far was on a dead bird found on the banks of the Ijssel.

Conclusion

It is unlikely that the increase in numbers of flamingos at Zwillbrocker Venn is due entirely to the breeding success of the original group, which suggests that other adults are joining (and leaving) the group from year to year.

Without knowing more about the birds' diet in the nature reserve it is impossible to speculate whether the apparently slow fledging rate of some chicks is the result of inadequate nourishment.

STATUS OF TWO SOUTH-AMERICAN FLAMINGO SPECIES

The text reproduced below is from COLLAR *et al.* (1994). Birds to watch 2: the Worldlist of threatened birds. BirdLife International, Cambridge: 46).

Andean Flamingo, *Phoenicoparrus andinus*, occurs on high mountain lakes in the puna zone of south-western Peru, northern Chile, south-western Bolivia and north-western Argentina, at altitudes which are mainly between 2,300 and 4,000 m, breeding having been recorded at only a few localities: Laguna Vilama (Argentina), Laguna Colorada (Bolivia: 1,000 breeding pairs in 1992-1993, although human predation of eggs caused 100% failure) and five sites in Chile, of which Salar de Atacama is the bird's main and perhaps only regular breeding location, with a total population judged well under 50,000 birds (Blake 1977, Hurlbert and Keith 1979, Scott and Carbonell 1986. Maier and Kelly 1994). Egg-harvesting and mining activities may be to blame for consistently low breeding success (Johnson 1965, Glade 1988, Maier and Kelly 1994, J. Fjeldsa in litt. 1986) and the species may in any case be nomadic in search of temporally patchy food, rendering it particularly susceptible to man-induced perturbations to its natural cycle (see Bucher 1992). VULNERABLE: A2b,c.

Puna Flamingo, *Phoenicoparrus jamesi*, occurs at a large number of scattered brackish and salty lakes in the high mountains of the puna zone of south-western Peru, northern Chile, south-western Bolivia and north-western Argentina, at altitudes mainly between 2,300 and 4,500 m. with most (and the only regular) breeding taking place at Laguna Colorada (Bolivia), where up to 30,000 birds (including 9,000 breeding pairs) have been present, although a second colony has flourished under protection at Salar de Tara (Chile) (Blake 1977. Hurlbert and Keith 1979, Scott and Carbonell 1986, Glade 1988, Maier and Kelly 1994); egg-collecting and disturbance cause considerable problems (Flores 1988, Maier and Kelly 1994), and the species may in any case be nomadic in search of temporally patchy food, rendering it particularly susceptible to man-induced perturbations to its natural cycle (see Bucher 1992). VULNERABLE: A2b,c.

BREEDING OF THREE SPECIES OF FLAMINGOS IN BOLIVIA, NOVEMBER 1992-MARCH 1993.

Summary of the expedition report by Ruth T. MAIER, Andrea KELLY and Katherine B. ROBINSON, School of Environmental Science, University of East Anglia, Norwich NR4 7TJ - U.K.

"Laguna Colorada is a high altitude saline lake in the Andes in southwest Bolivia. It is an important site for three species of flamingo, the Puna *Phoenicoparrus jamesi*, the Andean *Phoenicoparrus andinus* and the Chilean *Phoenicopterus chilensis*, and the only site in the world where all three species have attempted nesting. No information was available on breeding success of colonies established in this location but it was thought that there was disturbance by egg collectors in particular.

The University of East Anglia Bolivian Puna Expedition spent four months at Laguna Colorada between November 1992 and March 1993, to collect information about the breeding biology and ecology of all three flamingo species and their habitat.

Limnological fieldwork was also carried out and consisted of sampling bacteria, algae, zooplankton and macroinvertebrates, comparing diversity and density of species in different micro-habitats within Laguna Colorada. A basic physiochemical analysis of sampling sites in the lake was also carried out.

Whole-lake flamingo censuses were carried out regularly and the distribution of all three species within the lake investigated. The number of *P. jamesi* was much higher than the other two species. The distribution of all three species within the lake differed with *P. andinus* and *P. chilensis* using different areas than *P. jamesi*.

The breeding biology of all three flamingo species was studied. The total number of breeding pairs was estimated regularly throughout the study period. Data were collected on display behaviour, particularly on pair displays and a chick nursery was watched for two months from mid-January to mid-March. The timing of the breeding season for all three species was found to differ with *P. jamesi* starting to incubate earlier than the other two species.

The breeding success of *P. jamesi* (crèche of 9,400 chicks) and *P. chilensis* was high but *P. andinus* failed to breed during this season. This failure was probably due to disturbance by egg-collectors. Egg-collecting was found to be the only threat to flamingos during the 1992/93 breeding season. Other mortality was low. Disturbance by tourists was not found to be a problem in the 1992/93 season but this may change as the number of tourists increases.

The flamingo breeding colonies at the Laguna Colorada will need to be protected from egg-collectors. Local people should be employed as guards. This has been done in the past and funding for this purpose seems also to be available for the current breeding season."

POPULATION AND CONSERVATION STATUS OF FLAMINGOS IN MAR CHIQUITA, CORDOBA, ARGENTINA.

Abstract of a paper wroten by E. H. BUCHER in Colonial Waterbirds (1994) 15(2): 179-184.

"This paper presents the results of a 19-year (1969-1987) aerial survey of flamingos carried out in Mar Chiquita, an extensive salt lake of more than 2,000 km^2 located in central Argentina. The Chilean Flamingo *Phoenicopterus chilensis* was the more abundant species, reaching a peak of 66,366 birds counted in February 1975. Breeding was recorded in several years, with a maximum productivity of 29,227 young in 1977. The Andean Flamingo *Phoenicoparrus andinus* is a winter visitor with a population of around 1000 birds. A few James Flamingos *Phoenicopparus jamesi* were detected. Breeding ceased after 1977 because of the flooding of all breeding habitats, and the adult population decreased sharply. Although flamingos are not seriously endangered at present, I detected several potential threats, including illegal capture for zoos, tourism development, and water pollution. The unpredictable nature of the salt lakes environment and the adaptations developed by the flamingos require long-term research. Habitat preservation is needed at the regional level to ensure the existence of alternative sites for feeding and breeding under varying water level-rainfall conditions."

BREEDING OF THE "GREATER" FLAMINGO IN WESTERN VENEZUELA

The text reproduced below is from CASLER *et al.* (1994, Colonial Waterbirds 17: 28-34) who report an unknown mainland breeding of the Caribbean Flamingo at the Ciénaga de Los Olivitos, located in the Lake Maracaibo Basin (Zulia State), Western Venezuela.

"Breeding was first observed on 20 May 1987, and again in 1988 and 1989. The highest production of young was in 1987, with 4,015 nests, or about 8,000 breeding birds and 3,000+ pullets. In all, a minimum of 5,000 birds probably fledged between 1987 and 1989. Within the Lake Maracaibo Basin, flamingos are restricted to the Northern estuarine area, where Los Olivitos is the most important feeding and nesting site with up to 4,000-5,000 birds. Reports of breeding at Los Olivitos date from 1834. Flamingos have not been known to nest in Venezuela since 1952."

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WETLANDS INTERNATIONAL

A NEW GLOBAL FORCE FOR WETLAND CONSERVATION

A new global force for wetland conservation was created in October 1995, by the decision of three existing international "wetland" organisations to integrate. The new organisation will be called WETLANDS INTERNATIONAL. The founder organisations are the Asian Wetland Bureau (AWB, with operational headquarters in Malaysia), the International Waterfowl and Wetlands Research Bureau (IWRB, with operational headquarters in the United Kingdom), and Wetlands for the Americas (WA, with operational headquarters in North America and Argentina).

This integration has been planned for several years, in recognition of the need for new initiatives and stronger partnerships to address the continuing loss and degradation of wetlands, worldwide. The final decision to integrate occurred during joint governing body meetings attended by more than 200 representatives of governmental and non-governmental organisations, as well as wetland specialists and observers. The meetings took place during the International Conference on Wetlands and Development that was held in Malaysia in October 1995. The Conference was inaugurated by the Prime Minister of Malaysia, YAB Dato' Seri Dr. Mahathir Mohamad, who also announced the creation of WETLANDS INTERNATIONAL.

Combined strengths

The integration of AWB, IWRB and WA to form WETLANDS INTERNATIONAL draws together, and builds upon, the strengths and achievements of the three founding organisations, which date back more than 40 years. These achievements have included a key role in the development and technical support of the Ramsar Convention on Wetlands, major regional assessments of the status of wetlands and wetland species, research and conservation measures for migratory waterbirds, support to regional and national action plans for the conservation of wetlands and wetland species, training programmes in wetland management, and dissemination of information and awareness materials.

Mission

The Mission of WETLANDS INTERNATIONAL is "To sustain and restore wetlands, their resources and biodiversity for future generations through research, information exchange and conservation activities, worldwide."

Structure

WETLANDS INTERNATIONAL has non-profit/charitable status, and is governed by a global Board, comprising representatives of member countries, international organisations and wetland specialists. The regional operations for Asia/Pacific, Africa/Europe/Middle East, and the Americas are governed by separate regional Councils. Overall coordination is provided by a small International Coordination Unit, initially co-located with the headquarters for the Africa/Europe/Middle East region.

The catalytic work programme of WETLANDS INTERNATIONAL will build on the combined activities of the founding organisations which have 14 regional or project offices on five continents and ongoing activities with local partners in over 100 countries. The programme benefits from the input of national delegates, specialist groups, partner agencies and networks of thousands of wetland experts. Long-standing partnerships with the secretariats of international conventions (notably Ramsar and Bonn) and other international organisations (particularly BirdLife International, IUCN and WWF) will be strengthened. A short-term goal of WETLANDS INTERNATIONAL is to enhance its global membership particularly in developing countries.

Resources

Core support for WETLANDS INTERNATIONAL comes from an increasing number of member countries (currently 48) and sustaining donors. Global and regional programmes are supported by over 120 government agencies, national NGOs, foundations, development agencies, and private sector groups.

Launch

WETLANDS INTERNATIONAL will become fully operational and will be launched early in 1996. Until that time, the three founding organisations (AWB, IWRB, WA) will continue to operate under their current legal structures and corporate identity. Extensive consultations will be undertaken in each region with members, governments and partner agencies to ensure that cooperation agreements and programme arrangements continue strongly. For further information on the programme of WETLANDS INTERNATIONAL, or on how you can become involved, please contact any of the following offices of the founding organisations:

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