

# Results of a survey for waterbirds in the lower Yangtze floodplain, China, in January–February 2004

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A total of 515,896 waterbirds of 82 species was counted during a comprehensive, simultaneous count in the lower Yangtze River floodplain, conducted during late January to early February 2004. Most of the important wetlands between the Three Gorges Dam and the Yangtze estuary, a distance of 1,850 km, were visited. Ducks, geese and swans were most abundant, comprising 66% of waterbirds counted, followed by shorebirds (17%), gulls (7%), and egrets and herons (5%). The ten commonest species were Bean Goose *Anser fabalis* (79,758 individuals), Swan Goose *Anser cygnoides* (60,886), Dunlin *Calidris alpina* (40,709), Common Teal *Anas crecca* (36,483), Black-headed Gull *Larus ridibundus* (32,114), Tundra Swan *Cygnus columbianus* (30,925), Greater White-fronted Goose *Anser albifrons* (25,241), Spot-billed Duck *Anas poecilorhyncha* (22,562), Falcated Duck *Anas falcata* (18,364) and Lesser White-fronted Goose *Anser erythropus* (16,937). These ten species comprised 70% of the total waterbird count. Twenty-three species were found in internationally important numbers at one or more sites. Very high proportions of the estimated world populations of six globally threatened species were found (Oriental Stork *Ciconia boyciana*, Swan Goose, Lesser White-fronted Goose, Siberian Crane *Grus leucogeranus*, White-naped Crane *G. vipio* and Hooded Crane *G. monacha*). The numbers of Swan Geese and Lesser White-fronted Geese counted exceeded the current global population estimates for these species. High proportions of the estimated flyway populations were found for Black Stork *Ciconia nigra*, Eurasian Spoonbill *Platalea leucorodia* and Tundra Swan, and for the global population of the Falcated Duck. A total of 33 sites were identified at which at least one waterbird species was recorded in internationally important numbers. Nineteen sites supported at least one species in numbers exceeding 5% of the global or flyway population, and some sites supported several, with Poyang Hu NNR (eight species >5%), Shengjin Hu (five), East Dongting Hu (four), Nanjishan (three) and Cai Zi Hu (three) holding the most. Three important regions within the lower Yangtze River floodplain were identified: (1) Poyang Hu; (2) Dongting Hu; and (3) Shengjin Hu and the lakes of the Anqing Yangtze River Wetland Provincial Nature Reserve. Waterbird populations are reported to have declined in recent decades owing to hunting pressure. It is very important to establish a programme to monitor waterbird numbers within the lower Yangtze River floodplain.

## INTRODUCTION

The wetlands of the lower Yangtze River basin are of great importance for a wide variety of waterbirds (Scott 1989). The huge concentrations during the non-breeding season include many globally threatened species. These include almost the entire global populations of the Oriental Stork *Ciconia boyciana* (Endangered) and Siberian Crane *Grus leucogeranus* (Critically Endangered), and significant proportions of the global populations of Swan Goose *Anser cygnoides* (Endangered), Lesser White-fronted Goose *Anser erythropus* (Vulnerable), White-naped Crane *Grus vipio* (Vulnerable) and Hooded Crane *Grus monacha* (Vulnerable). Among the other threatened waterbird species present within the region are Dalmatian Pelican *Pelecanus crispus* (Vulnerable), Baikal Teal *Anas formosa* (Vulnerable), Baer's Pochard *Aythya baeri* (Vulnerable) and Scaly-sided Merganser *Mergus squamatus* (Endangered; status from BirdLife International 2004). BirdLife International has identified five lake systems within the basin as Important Bird Areas because of their large non-breeding populations of threatened waterbirds, these being Chen Hu, Cai Zi Hu, Shengjin Hu, Poyang Hu and Dongting Hu (BirdLife International 2003).

Although the lower Yangtze River floodplain is known to be of great importance for waterbirds, no comprehensive and simultaneous count has been carried out to obtain accurate information on waterbird abundance and distribution throughout the region over a short time period when numbers are at a maximum. An analysis of available published count data collected over the 1990–2003 period shows that

the best censused locations are Poyang Hu, East Dongting Hu, Shengjin Hu and the Shanghai coastal region, but it is likely that few of these counts are truly comprehensive (Perennou *et al.* 1994, Anon. 1994, 1999a,b, 2001, Lopez and Mundkur 1997, Asian Waterfowl Census unpublished data, Barter and Lei unpublished data). Some of the other lakes within the floodplain have been surveyed, but mostly only once or twice since 1990, while others may never have been surveyed.

In order to collect up-to-date comprehensive information on the distribution and abundance of waterbirds in this highly threatened region, a simultaneous count of waterbirds in the lower Yangtze River floodplain was conducted during late January to early February 2004. Other objectives of the survey were to: collect data on the conservation status of the wetlands surveyed; identify key wetlands which are currently unprotected and recommend new protected areas; involve provincial, nature reserve and university staff, and local NGOs in the survey so that they could be trained in survey techniques, waterbird ecology, and waterbird identification and counting methods; and improve public awareness of waterbirds and their dependence on wetland habitats. This paper deals only with the results of the waterbird counts.

## METHODS

### Survey area

The survey area covered the lower Yangtze River floodplain, extending 1,850 km from the Three Gorges Dam (located near Yichang in western Hubei province) to

the river estuary at Shanghai. Most of the important wetlands were visited. The two largest lakes in China (Poyang Hu and Dongting Hu) and the Wuhan Lakes are located within the Yangtze's middle reaches, whilst the lower reaches contain the Lower Yangtze River Lakes and a number of large lakes in southern Jiangsu: Hongze Hu, Gaoyou Hu, Shaobo Hu and Tai Hu (Scott 1989).

Poyang Hu is located in the north of Jiangxi province. At the height of the wet season (April to September, with most rainfall from June to August), the lake has a surface area of about 3,600 km<sup>2</sup>, being about 170 km long and 90 km wide. At this time the lake surface is at an altitude of c.21 m, but this decreases to 13 m during the dry season (October to March) when the lake has a fragmented area of about 500 km<sup>2</sup> (Scott 1989). Dongting Hu, in north-eastern Hunan province, has an area of 2,700 km<sup>2</sup>. The average water level difference between dry and wet seasons is 18 m. Reclamation and siltation have resulted in the formation of three lakes, i.e. West, South and East Dongting. The Wuhan Lakes consist of about 40 lakes, each of over 250 ha in area, whilst the Lower Yangtze River Lakes contain about 80 lakes, each greater than 250 ha in extent, and innumerable smaller lakes and ponds with a network of interconnecting channels (Scott 1989).

### Survey techniques

The survey was carried out in late January and early February. This period was chosen because this is when waterbird numbers in the region should be at a maximum (owing to birds being forced south by cold winter weather in northern China) and birds were expected to be occupying their preferred habitats, owing to greatly reduced human disturbance during the period of the Spring Festival.

The counts were conducted by 14 teams: two teams in each of Shanghai municipality and Jiangsu, Anhui, Hubei and Hunan provinces, and four teams in Jiangxi province. Gaining access to wetlands in the floodplain was often difficult and time consuming. In many cases it was necessary to walk long distances to reach the shoreline and then along the shore to count birds. Daily walks of 15–20 km were commonplace. Teams used a variety of methods to gain access to the wetlands and the waterbirds, but in most cases cars were employed to get as close as possible to the target area and teams then proceeded on foot.

The waterbird species that were counted were those listed in Wetlands International (2002), i.e. those used by the Ramsar Convention for identifying wetlands containing internationally important concentrations of waterbirds. Those species that could be reasonably expected to occur in the survey region during the northern winter were selected from this document and were listed in the bilingual count forms used during the survey.

Observers generally underestimate the numbers of waterbirds present when counting large flocks (Rappoldt *et al.* 1985). Underestimation is also compounded by the common problem of missing birds when counting over large wetland areas. Double-counting of the same bird at more than one site leads to inflation of estimates, but this is probably normally

outweighed by the underestimation resulting from the previous two factors. Therefore, it is to be expected that the counts probably underestimate the numbers of waterbirds present in the survey region. The overall coverage of the wetlands visited in Hunan, Hubei, Anhui, Jiangsu and Shanghai was estimated to be 64%.

### Identifying Ramsar sites

The Ramsar Convention has developed two criteria to determine whether a wetland supports internationally important numbers of waterbirds (Ramsar Convention Bureau 2000): (1) a wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds; and (2) a wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

The objective nature of these criteria makes them easy to apply to the identification of internationally important waterbird sites. The availability of population estimates for waterbird species occurring in the lower Yangtze River floodplain during the northern winter (Wetlands International 2002) means that the second criterion is the most appropriate one to use in assessing the international importance of wetlands in the region. The employment of this criterion has the significant advantage that it enables identification of



**Figure 1.** Location of the sites in the lower Yangtze River floodplain at which internationally important numbers of at least one species of waterbird were recorded during the survey. (1) Beiming Hu; (2) Kongjia Hu; (3) Tabai Hu; (4) West Dongting Hu; (5) South Dongting Hu; (6) Henling Hu; (7) East Dongting Hu; (8) Milu/Baijitan NNRs; (9) Chen Hu; (10) Wang Hu; (11) Saichen Hu; (12) Za Hu; (13) Xinmiao Hu; (14) Jishan Hu; (15) NW Poyang Hu; (16) Poyang Hu NNR; (17) SW Poyang Hu; (18) Raopoyangzhu Hu; (19) Raopoyanglian Hu; (20) Nanjishan; (21) Wuyuanquanyang; (22) Longgan Hu; (23) Daguan Hu; (24) Huang Hu; (25) Bo Hu; (26) Wuchang Hu; (27) Qili Hu; (28) Shengjin Hu; (29) Cai Zi Hu; (30) Baidang Hu; (31) Feng Sha; (32) Shang Hu; (33) Chongming Dao.

suites of sites that are important for individual waterbird species.

## RESULTS

### Waterbird numbers

A total of 515,896 waterbirds of 82 species was counted, including 19,101 unidentified waterbirds (3.7% of the total count). A summary of the total counts for each species is given in the Appendix. Waterbirds occurred in large numbers throughout the survey region. Provincial totals were: Anhui: 171,841 individuals; Jiangxi: 138,643 individuals; Hunan: 133,306 individuals; Hubei: 47,469 individuals; Jiangsu: 15,796 individuals; and Shanghai municipality: 8,841 individuals.

Ducks, geese and swans were the most common species group, comprising 66% of the waterbirds counted, followed by shorebirds (17%), gulls (7%), and egrets and herons (5%). The ten commonest species were Bean Goose *Anser fabalis* (79,758 individuals), Swan Goose (60,886), Dunlin *Calidris alpina* (40,709), Common Teal *Anas crecca* (36,483), Black-headed Gull *Larus ridibundus* (32,114), Tundra Swan *Cygnus columbianus* (30,925), Greater White-fronted Goose *Anser albifrons* (25,241), Spot-billed Duck *Anas poecilorhyncha* (22,562), Falcated Duck *Anas falcata* (18,364) and Lesser White-fronted Goose (16,937). These ten species comprised 70% of the total waterbird count.

**Table 1.** Waterbird species ranked according to the number of sites in the lower Yangtze floodplain at which they were recorded in internationally important numbers.

Species	No. sites of international importance
EURASIAN SPOONBILL <i>Platalea leucorodia</i>	11
BLACK STORK <i>Ciconia nigra</i>	10
TUNDRA SWAN <i>Cygnus columbianus</i>	10
BEAN GOOSE <i>Anser fabalis</i>	8
SWAN GOOSE <i>Anser cygnoides</i>	7
HOODED CRANE <i>Grus monacha</i>	6
SPOTTED REDSHANK <i>Tringa erythropus</i>	5
FALCATED DUCK <i>Anas falcata</i>	5
PIED AVOCET <i>Recurvirostra avosetta</i>	4
COMMON CRANE <i>Grus grus</i>	4
ORIENTAL STORK <i>Ciconia boyciana</i>	3
SIBERIAN CRANE <i>Grus leucogeranus</i>	3
WHITE-NAPED CRANE <i>Grus vipio</i>	3
GREAT CRESTED GREBE <i>Podiceps cristatus</i>	3
GREATER WHITE-FRONTED GOOSE <i>Anser albifrons</i>	3
NORTHERN LAPWING <i>Vanellus vanellus</i>	2
GREAT CORMORANT <i>Phalacrocorax carbo</i>	1
GREAT EGRET <i>Casmerodius albus</i>	1
BLACK-CROWNED NIGHT HERON <i>Nycticorax nycticorax</i>	1
LESSER WHITE-FRONTED GOOSE <i>Anser erythropus</i>	1
MANDARIN DUCK <i>Aix galericulata</i>	1
COMMON TEAL <i>Anas crecca</i>	1
KENTISH PLOVER <i>Charadrius alexandrinus</i>	1

Twelve globally threatened species (Oriental Stork, Black-faced Spoonbill *Platalea minor*, Swan Goose, Lesser White-fronted Goose, Baikal Teal, Baer's Pochard, Scaly-sided Merganser, Siberian Crane, White-naped Crane, Hooded Crane, Swinhoe's Crane *Coturnicops exquisitus* and Saunders's Gull *Larus saundersi*) and one Near Threatened species (Ferruginous Pochard *Aythya nyroca*) were encountered.

### Species present in important concentrations

The great importance of the lower Yangtze River floodplain is shown by the fact that it supports very high proportions of the populations of six globally threatened species: Oriental Stork (57% of the estimated global population), Swan Goose (60,886 individuals, which exceeds the current global population estimate of 55,000 individuals), Lesser White-fronted Goose (16,937 individuals, which exceeds the current flyway population estimate of 14,000 individuals), Siberian Crane (93% of the estimated flyway population), White-naped Crane (68% of the estimated flyway population), and Hooded Crane (93% of the estimated flyway population). In addition, we found very high proportions of the flyway populations for four other species: Black Stork *Ciconia nigra* (108 individuals, which exceeds the current flyway population estimate of 100 individuals), Eurasian Spoonbill *Platalea leucorodia* (89% of the estimated flyway population); Tundra Swan (36% of the estimated flyway population), and Falcated Duck (53% of the estimated global population).

Twenty-three species were found to be present in internationally important numbers at one or more sites (Table 1). Eurasian Spoonbill, Black Stork, Tundra Swan, Bean Goose, Swan Goose and Hooded Crane all occurred in internationally important numbers at more than five sites. Table 2 gives an indication of the degree to which the global or flyway populations of different species are concentrated in the lower Yangtze River floodplain. Of particular conservation significance is the fact that six globally threatened species occur at one or more sites in numbers exceeding 20% of their estimated global or flyway populations.

### Sites of international importance

A total of 33 sites were identified at which at least one waterbird species was recorded in internationally important numbers (Table 3, Fig. 1). Four sites supported more than five such species: Poyang Hu NNR, East Dongting Hu, Nanjishan and Shengjin Hu. Many sites supported high percentages of a species's flyway population: 19 sites supported at least one species in numbers exceeding 5% of its global or flyway population (Table 2). Some sites supported a number of such species, with Poyang Hu NNR (eight species >5%), Shengjin Hu (five species), East Dongting Hu (four species), Nanjishan (three species) and Cai Zi Hu (three species) holding the most. These sites are obviously of great conservation significance.

Three extremely important regions within the lower Yangtze River floodplain were identified during this survey: (1) Poyang Hu; (2) Dongting Hu; and (3) Shengjin Hu and the lakes of the Anqing Yangtze River Wetland Provincial Nature Reserve.

**Table 2.** Species occurring in concentrations >20%, >10% and >5% of their estimated global or flyway population, and the sites at which they occur.

Species	>20%	>10%	>5%
BLACK-CROWNED NIGHT HERON <i>Nycticorax nycticorax</i>	Shang Hu		
BLACK STORK <i>Ciconia nigra</i>	Qili Hu	Poyang Hu NNR Shengjin Hu Bo Hu Nanjishan Kongjia Hu Milu/Baijitan NNRs Raopoyangzhu Hu	
ORIENTAL STORK <i>Ciconia boyciana</i>	Poyang Hu NNR		
EURASIAN SPOONBILL <i>Platalea leucorodia</i>	Poyang Hu NNR	Cai Zi Hu	Shengjin Hu NW Poyang Hu
TUNDRA SWAN <i>Cygnus columbianus</i>			Raopoyangzhu Hu Baidang Hu Shengjin Hu
SWAN GOOSE <i>Anser cygnoides</i>	Poyang Hu Shengjin Hu	Fengsha Hu Cai Zi Hu	Nanjishan
BEAN GOOSE <i>Anser fabalis</i>	Wuchang Hu East Dongting Hu		Chen Hu
GREATER WHITE-FRONTED GOOSE <i>Anser albifrons</i>			East Dongting Hu Poyang Hu NNR
LESSER WHITE-FRONTED GOOSE <i>Anser erythropus</i>	East Dongting Hu		
FALCATED DUCK <i>Anas falcata</i>	Henling Hu	South Dongting Hu	East Dongting Hu
SIBERIAN CRANE <i>Grus leucogeranus</i>	Poyang Hu NNR SW Poyang Hu		
WHITE-NAPED CRANE <i>Grus vipio</i>	Poyang Hu NNR		
COMMON CRANE <i>Grus grus</i>			Nanjishan
HOODED CRANE <i>Grus monacha</i>	Cai Zi Hu Shengjin Hu	Chongming Dao	Poyang Hu NNR

## DISCUSSION

The great importance of the wetlands within the lower Yangtze River floodplain is confirmed by the count of more than 0.5 million waterbirds of 82 species, of which 23 were present in internationally important concentrations at one or more sites. The occurrence of very high proportions of the populations of six globally threatened species is of particular conservation importance, especially as four of these (Oriental Stork, Lesser White-fronted Goose, Siberian Crane and White-naped Crane) are concentrated in significant numbers at only a few sites. There are undoubtedly many more internationally important sites within the floodplain. Some have been previously identified, e.g. Hongze Hu, Shaobo Hu and Gaoyou Hu in Jiangsu (frozen during the survey) and Shijiu Hu in Anhui (unvisited), and more will be identified as survey coverage improves.

The number of waterbirds present within the lower Yangtze River floodplain during the survey period is likely to have been considerably higher than that counted, as it is estimated that only about 64% of the total area of wetlands visited was covered. Additionally, as noted previously, counts generally underestimate numbers actually present.

The wetlands of the lower Yangtze River floodplain have been much reduced and degraded by economic activities, principally reclamation for agriculture. The total area of lakes is reported to have declined by 62% between the 1950s and 1980s. More than 1,100 lakes have been totally reclaimed, notably in Hubei province where numbers have decreased from 1,066 to 83 lakes over the 1950–1980 period. The surface area of Poyang Hu has been reduced from 5,000 km<sup>2</sup> to 3,600 km<sup>2</sup> and of Dongting Hu from 4,350 km<sup>2</sup> to 2,700 km<sup>2</sup>. Although the total area of wetlands is still large, their quality has been greatly affected by development, pollution, overfishing, crab farming, fish farming using fertilisers, planting of poplars and human disturbance; waterbirds are concentrated in the remaining suitable areas of shallow wetland during the non-breeding season (BirdLife International 2003, personal observations)

The construction and operation of the Three Gorges Dam, which commenced filling in mid-2003, will change the seasonal flow of water in the Yangtze River and could negatively affect the wetlands downstream. There is a danger that by artificially maintaining low water levels during the summer flood season and raising them in the winter (to a level estimated to be 1 m higher) the character of the

wetlands will be changed, and the shallow areas that most waterbirds require for feeding will be greatly reduced in extent (BirdLife International 2003). Implementation of the South-North Water Transfer project, which plans to draw 48 billion m<sup>3</sup> from the Yangtze River watershed and send it via three canals to arid areas of northern China, can also be expected to affect water supply to wetlands in the region. Construction of two of the canals began in 2002–2003.

The numbers of waterfowl in the lower Yangtze River floodplain have declined greatly in the last ten years (BirdLife International 2003). Recent information, based on data from the breeding areas, indicates that habitat loss and hunting in the staging and non-breeding regions (e.g. the lower Yangtze River floodplain) have caused significant declines in the numbers of waterbirds breeding in the Russian Far East. Over recent decades, all geese populations have declined by more than 80%; ten out of 13 migratory populations of dabbling ducks and six of the 14 populations of diving ducks have also decreased (E. Syrechkovski Jr. *in litt.* 2004). A study of hunting pressure in the lower Yangtze River floodplain in

1987–1992 estimated that c.50% of the total wintering waterfowl in this region were killed each year by local hunters, using netting, shooting and poisoning. Hunting appears to be the main reason for recent decreases in the numbers of Swan Goose and the eastern population of Lesser White-fronted Goose (BirdLife International 2003).

These declines indicate that it is very important to establish a programme to monitor waterbird numbers within the lower Yangtze River floodplain. A statistically robust sampling scheme will be required as it is impractical to count waterbirds at all the wetlands in the region over a short time period on an annual basis. In order to set up such a programme, more information will be required on the abundance and distribution of those species for which the region is important. It will firstly be necessary to cover those areas missed during this survey. However, as species distributions can be expected to change from year to year with varying water levels, either naturally occurring or due to the impact of the Three Gorges dam, it will be highly desirable to revisit some of the particularly important areas identified in this survey in order to assess the extent and degree of annual variation in distribution.

**Table 3.** Sites in the lower Yangtze floodplain ranked according to the number of internationally important waterbird species' populations supported.

Site	No. species with populations of international importance
Poyang Hu NNR	12
East Dongting Hu	10
Nanjishan	7
Shengjin Hu	6
Cai Zi Hu	5
Wuchang Hu	5
NW Poyang Hu	4
Chen Hu	4
SW Poyang Hu	3
Bo Hu	3
Baidang Hu	3
Raopoyangzhu Hu	3
South Dongting Hu	2
Wang Hu	2
West Dongting Hu	2
Daguan Hu	2
Feng Sha	2
Xinmiao Hu	2
Jishan Hu	2
Saichen Hu	2
Milu/Baijitan NNRs	1
Beiming Hu	1
Taibai Hu	1
Kongjia Hu	1
Henling Hu	1
Longgan Hu	1
Huang Hu	1
Qili Hu	1
Shang Hu	1
Chongming Dao	1
Za Hu	1
Raopoyanglian Hu	1
Wuyuanquanyang Hu	1

## ACKNOWLEDGEMENTS

Funding for the survey was provided by WWF Netherlands. We are very grateful to the State Forestry Administration, the Provincial Forestry Bureaus, Nature Reserve staff and the members of the counting teams for their assistance in the planning and execution of the project.

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## APPENDIX

Number of waterbirds counted in the lower Yangtze River floodplain, Jan–Feb 2004

Species	IUCN Red List Category	Hunan	Hubei	Jiangxi	Anhui	Jiangsu	Shanghai	Total
RED-THROATED LOON <i>Gavia stellata</i>							1	1
LITTLE GREBE <i>Tachybaptus ruficollis</i>		1,432	1,047	1,232	2,540	482	195	6,928
GREAT CRESTED GREBE <i>Podiceps cristatus</i>		541	219	119	1,088	5	33	2,005
GREAT CORMORANT <i>Phalacrocorax carbo</i>		2,909	767	827	146	35		4,684
GREY HERON <i>Ardea cinerea</i>		1,761	2,035	3,568	2,890	480	166	10,900
GREAT EGRET <i>Casmerodius albus</i>		142	408	98	1,865	102	1	2,616
INTERMEDIATE EGRET <i>Mesophoyx intermedia</i>			51	1		6	32	90
CATTLE EGRET <i>Bubulcus ibis</i>				2			0	2
CHINESE POND HERON <i>Ardeola bacchus</i>		2	2	1	2			7
LITTLE EGRET <i>Egretta garzetta</i>		97	63	128	197	2	351	838
BLACK-CROWNED NIGHT HERON <i>Nycticorax nycticorax</i>		90		1		10,035	3	10,129
GREAT BITTERN <i>Botaurus stellaris</i>		3	2	7	1	1	1	15
BLACK STORK <i>Ciconia nigra</i>		13	16	29	50			108
ORIENTAL STORK <i>Ciconia boyciana</i>	EN	24	20	1,491	162			1,697
EURASIAN SPOONBILL <i>Platalea leucorodia</i>		206	302	3,623	1,676		6	5,813
BLACK-FACED SPOONBILL <i>Platalea minor</i>	EN						2	2
WHOOPEE SWAN <i>Cygnus cygnus</i>			2					2
TUNDRA SWAN <i>Cygnus columbianus</i>		44	2,516	14,446	13,919			30,925
SWAN GOOSE <i>Anser cygnoides</i>	EN	172	139	29,378	31,197			60,886
BEAN GOOSE <i>Anser fabalis</i>		27,305	11,106	5,200	36,133		14	79,758
GREATER WHITE-FRONTED GOOSE <i>Anser albifrons</i>		12,576		12,568	97			25,241
LESSER WHITE-FRONTED GOOSE <i>Anser erythropus</i>	VU	16,928		9				16,937
GREYLAG GOOSE <i>Anser anser</i>		286	24	580				890
RED-BREASTED GOOSE <i>Branta ruficollis</i>				1				1
RUDDY SHELDUCK <i>Tadorna ferruginea</i>		143	72	347	1,028			1,590
COMMON SHELDUCK <i>Tadorna tadorna</i>		229		6	19		119	373
MANDARIN DUCK <i>Aix galericulata</i>				718		30		748
EURASIAN WIGEON <i>Anas penelope</i>		73	57	2,728	1,139		3	4,000
FALCATED DUCK <i>Anas falcata</i>		18,352	4		8			18,364
GADWALL <i>Anas strepera</i>		2	65		204			271
BAIKAL TEAL <i>Anas formosa</i>	VU	25			2		1	28
COMMON TEAL <i>Anas crecca</i>		10,594	517	8,791	15,195	1,085	301	36,483
MALLARD <i>Anas platyrhynchos</i>		3,150	423	3,922	2,438	130	20	10,083
SPOT-BILLED DUCK <i>Anas poecilorhyncha</i>		836	795	13,657	4,611	1,154	1,509	22,562
NORTHERN PINTAIL <i>Anas acuta</i>		305		1,303	4,890	4		6,502
NORTHERN SHOVELER <i>Anas clypeata</i>		3,430	11	20	112		31	3,604
COMMON POCHARD <i>Aythya ferina</i>			5		46	16	60	127
BAER'S POCHARD <i>Aythya baeri</i>	VU		11	600	13		6	630
FERRUGINOUS POCHARD <i>Aythya nyroca</i>	NT	7						7
TUFTED DUCK <i>Aythya fuligula</i>		2,587	4		91		85	2,767
COMMON GOLDENEYE <i>Bucephala clangula</i>		25						25
SMEW <i>Mergellus albellus</i>		670	531	56	588			1,845
SCALY-SIDED MERGANSER <i>Mergus squamatus</i>	VU			31				31
COMMON MERGANSER <i>Mergus merganser</i>		339	131	140	144		59	813
SIBERIAN CRANE <i>Grus leucogeranus</i>	CR	22		2,760	2			2,784

Species	IUCN Red List Category	Hunan	Hubei	Jiangxi	Anhui	Jiangsu	Shanghai	Total
WHITE-NAPED CRANE <i>Grus vipio</i>	VU	2		2,713	1			2,716
COMMON CRANE <i>Grus grus</i>		170	70	1,027		1		1,268
HOODED CRANE <i>Grus monacha</i>	VU	1		221	602		109	933
SWINHOE'S CRAKE <i>Coturnicops exquisitus</i>	VU			1				1
WATER RAIL <i>Rallus aquaticus</i>				1				1
BROWN CRAKE <i>Amaurornis akool</i>			6	15	5			26
WHITE-BREASTED WATERHEN <i>Amaurornis phoenicurus</i>				3			1	4
COMMON MOORHEN <i>Gallinula chloropus</i>		29	155	3	271	207	20	685
COMMON COOT <i>Fulica atra</i>		185	115		736		14	1,050
BLACK-WINGED STILT <i>Himantopus himantopus</i>				6			2	8
PIED AVOCET <i>Recurvirostra avosetta</i>		2,227	1	6,344	1,966			10,538
NORTHERN LAPWING <i>Vanellus vanellus</i>		1,463	2,362	1,639	1,828	73	120	7,485
GREY-HEADED LAPWING <i>Vanellus cinereus</i>			4				1	2
GREY PLOVER <i>Pluvialis squatarola</i>		384		90	580			1,054
LONG-BILLED PLOVER <i>Charadrius placidus</i>				3				3
LITTLE RINGED PLOVER <i>Charadrius dubius</i>		25	3	1	6	1		36
KENTISH PLOVER <i>Charadrius alexandrinus</i>		1,870	384	11	54	50	895	3,264
PINTAIL SNIPE <i>Gallinago stenura</i>		1	2	14		6		23
SWINHOE'S SNIPE <i>Gallinago megala</i>				1				1
COMMON SNIPE <i>Gallinago gallinago</i>		79	15	115	95	5	9	318
BLACK-TAILED GODWIT <i>Limosa limosa</i>				372				372
EURASIAN CURLEW <i>Numenius arquata</i>		70	28	95	118	5	63	379
SPOTTED REDSHANK <i>Tringa erythropus</i>		1,586	132	5,791	7,092	52	621	15,274
COMMON REDSHANK <i>Tringa totanus</i>			1	75				76
MARSH SANDPIPER <i>Tringa stagnatilis</i>				2				2
COMMON GREENSHANK <i>Tringa nebularia</i>		177	67	233	366	22	10	875
GREEN SANDPIPER <i>Tringa ochropus</i>		12	12	39	22	12	15	112
WOOD SANDPIPER <i>Tringa glareola</i>				1				1
COMMON SANDPIPER <i>Tringa hypoleucos</i>		28	191	8	3	4	9	243
RED-NECKED STINT <i>Calidris ruficollis</i>				20				20
TEMMINCK'S STINT <i>Calidris temminckii</i>				7				7
DUNLIN <i>Calidris alpina</i>		15,060	3,520	1,235	19,492	108	1,294	40,709
BLACK-TAILED GULL <i>Larus crassirostris</i>		3			70		58	131
MEW GULL <i>Larus canus</i>		36	37			2	4	79
VEGA GULL <i>Larus vegae</i>		288	839	233	384	214	886	2,844
SLATY-BACKED GULL <i>Larus schistisagus</i>		18						18
BLACK-HEADED GULL <i>Larus ridibundus</i>		3,078	14,997	4,951	6,919	658	1,511	32,114
SAUNDERS'S GULL <i>Larus saundersi</i>	VU					10		10
UNIDENTIFIED EGRETS					1,156			1,156
UNIDENTIFIED SPOONBILLS					177			177
UNIDENTIFIED GEESE			1,500	1,903	5,496	36		8,935
UNIDENTIFIED DUCKS		444	1,249	1,000	993	272		3,958
UNIDENTIFIED SHOREBIRDS		750	436	2,081	916	1	200	4,382
UNIDENTIFIED GULLS				1		490		491
<b>TOTAL</b>		<b>133,306</b>	<b>47,469</b>	<b>138,643</b>	<b>171,841</b>	<b>15,796</b>	<b>8,841</b>	<b>515,896</b>