

SPECIALIST GROUP ON STORKS, IBISES AND SPOONBILLS

NEWSLETTER

Volume 5, Number 1/2

November, 1992

LETTER FROM THE CO-CHAIRS

There is a great deal of exciting activity and new involvement within SIS. In April, Koen attended the Waldrapp Ibis Conservation meeting in Rabat, Morocco (page 8). This was a productive meeting. The increased interest and cooperation will lead to a more unified and effective conservation effort. We hope that similar cooperative efforts will be generated for other species.

In July, Malcolm attended a workshop for the conservation of storks and cranes in the Amur River Basin (page 9). The meeting was well attended by Russians, Chinese, Japanese, Koreans as well as conservationists from Hong Kong and the United States. One working group dealt with the Oriental White Stork *Ciconia boyciana*. We discussed and summarized the conservation needs of the species. The cooperation generated at the meeting will lead to greater effectiveness in our efforts to preserve this species.

As we were preparing this newsletter, we received an urgent request for aid in preserving the Blackfaced Spoonbill *Platalea minor* wintering grounds in Taiwan. ***We need your participation in writing letters to support this effort. See page 11 for details.***

Finally, we must develop Action Plans for all of the species of Storks, Ibises and Spoonbills. We have begun to determine the conservation status and conservation needs of many species. This must be updated and compiled. We will call on all of you for your participation. Your ideas and concerns are always important to our joint efforts.

-- Malcolm Coulter and Koen Brouwer

POPULATION VIABILITY ANALYSIS

Population Viability Analysis or Population Viability Assessment or even Population Vulnerability Analysis (PVA) is a term that is increasingly used among conservationists in reference to a process developed to

improve management of small populations of endangered species.

Initially, Michael Soulé and others began using mathematical models to examine the vulnerabilities of small, threatened populations and to contribute to their management (See references below). More recently, the IUCN/SSC Captive Breeding Specialist Group has developed one aspect of the use of models. Special (PVA) meetings are held to model individual endangered species (e.g., the recent PVA meeting on the Waldrapp Ibis in Rabat). At these meetings a single computer model is used: Vortex which was written by Robert Lacy of the Brookfield Zoo.

Because it is commonly used, the term PVA has come to mean different things to different people. To some it refers to the results of a PVA meeting. For some people, the crux of these meetings are the results of computer programs, but for others the crux is the gathering of key people and the focus of their efforts to identify conservation problems of the endangered species. For other people, PVA refers to analyses not necessarily associated with a meeting that brings together our current understanding of the population of the species, of population dynamic models, genetic models and current understanding of the dynamic changes in the environment. We have asked people currently involved in Population Viability Analysis to provide their ideas of PVA.

I. Population viability assessment (PVA) is a procedure that allows managers to simulate, using computer models, extinction processes that act on small populations and therefore assess their long-term viability. In both real and simulated populations, a number of interacting demographic, genetic, environmental, and catastrophic processes determine the vulnerability of a population to extinction. These four types of extinction process can be simulated in computer models and the effects of both deterministic and stochastic forces can be explored. In turn, the outcome of various

management options such as reducing mortality, supplementing the population, and increasing carrying capacity can also be simulated. Thus, PVA provides managers with a powerful tool to aid in assessing the viability of small populations and in setting target numbers for species recovery as a basis for planning and carrying out recovery programs. In addition, having performance-based management programs enables progress to be quantified and assessed. PVA also offers managers a policy tool when vying for limited financial resources. PVA allows exploration of management options for small populations of endangered species.

-- T.W. Clark, G.N. Backhouse, R.C. Lacy
Captive Breeding Specialist Group

II. The appropriate uses of PVA are (1) as a tool for screening small populations to detect critical situation, and (2) as a means of making comparative assessments of the impact of alternative management practices on population viability. In most cases, the data available for PVA are not sufficiently detailed or complete to warrant accepting the numerical results of PVA at face value. Rather, the results should serve one of the two functions mentioned above.

PVA is very useful as a method of synthesizing available information about species biology and demography, including both "hard" data and "expert opinion". It helps identify gaps in information and, in conjunction with sensitivity analysis of PVA models, direct attention to those places where lack of information most seriously affects our ability to draw conclusions about population viability under different management points out where caution is needed when formulating management plans under uncertain information.

When PVA is used on species with more than one isolated wild population, an important methodological question arises: what is the appropriate geographic scale for the PVA? This question should be answered in the context of both species biology and species management. With respect to species biology, most populations have a hierarchical spatial structure, where at some geographic scale the rates of interaction with other subpopulations (via migration or dispersal) diminish. These "natural" points of weaker connection occur at various points within the species' range, from very local populations up to regional and, finally, the entire species population. The appropriate point at which to break the PVA depends on the scale of management actions being compared. The biological scale and the management scale should coincide as nearly as possible.

-- Lynn A. Maguire
Duke University

PVA is an important and rapidly developing tool that will be increasingly important in our management of small populations of endangered species. We welcome your ideas on this for future newsletters.

Suggested references for PVA

- Soulé, M., and B. Wilcox, eds. 1980. *Conservation Biology: An Evolutionary-Ecological Approach*. Sinauer.
- Soulé, M., ed. 1986. *Conservation Biology: Science of Scarcity and Diversity*. Sinauer.
- Soulé, M., ed. 1987. *Viable Populations for Conservation*. Cambridge University Press.

PROTECTING THE GEM OF THE ORIENT -- ORIENTAL CRESTED IBIS

May 23, 1981 was a memorable day for ornithology around the world. Eleven years ago Chinese Ornithologists found seven Oriental Crested Ibises *Nipponia nippon* on Mount Qin in Shanxi Province. The ibis had not been seen for twenty years and was thought to be extinct. Chinese ornithologists spent three years traveling over 50,000 km in hopes of rediscovering the bird. They found the birds in Yaojiagou Valley, a small valley in Yang county on the southern slopes of Mount Qin. The news caused a sensation throughout the world. Many people, especially the Japanese, have followed the fate of this small population with interest, and have offered suggestions for protecting the Gem of the Orient. We can look back at the last ten years to see how well the birds are doing.

History

The Oriental Crested Ibis is a medium-sized wading bird endemic to Asia. It was once found in China, North Korea, South Korea, Japan and the Russian Far East. They bred in northern China, the Koreas, Japan and the Russian Far east. In the autumn, ibises from the northern part of the range migrated to spend the winter along the middle and lower reaches of the Yangtze River, Taiwan Island and Hainan Island. Birds in the southern part of the breeding area may have remained within the same region year-round and may not have migrated.

Man has exploited his environment, destroying important habitats, using large quantities of fertilizers, pesticides and herbicides. Important habitats have become poorer and many have been destroyed. As a result the Crested Ibis has decreased in numbers and become extinct in much of its former range. It was declared an endangered bird at the International Protected Bird Conference held in Tokyo in 1960. It is now viewed as one of the rarest birds by ornithologists and conservationists throughout the world.

In China, Crested Ibises have appeared in literature as far back as 1900 years ago. Ibises were found from Hainan Island in the south to Heilongjiang Province in the north and Gansu Province in the West. Numbers decreased. In the 1930's, ibises were still seen in 14 provinces but by the 1950's, they were recorded only in Gansu, Shanxi and Jiansu provinces. The last ibis was taken in Kang County, Gansu Province in 1964.

Larger numbers were found in Japan. One hundred were recorded in 1934, but these were reduced to 27 only three to four years later, and to eight in 1974. Ornithologists' captured the remaining four birds in hopes of breeding them in captivity. To date, no birds have been bred in Japan but three were successfully raised in Beijing in 1992.

The rediscovery of ibises in China has posed a crucial challenge to ornithologists to protect these magnificent and rarest of birds.

Large Conservation Efforts have been made

Modern China has made special efforts to protect the Crested Ibis. Shortly after the first seven birds were discovered in Yang County, Shanxi Province, in 1981, a group of wardens were sent to the nesting area at Yaojiagou. The Crested Ibis Protection and Observation Stations were established with a staff of 12. The government bought the old, tall oak trees where the ibises like to nest. Two permanent observation points in the two main nesting areas were built in 1983. The use of chemical fertilizer and pesticides was forbidden in the paddy fields in the region because this is where the ibises feed. Land reclamation, hunting and lumbering were prohibited in the ibis habitats. Efforts were made to discourage predators such as birds of prey. Straw mats were spread under the nest trees and a warden was hired to watch at night and protect the nests against weasels. To ensure adequate food, feeding pools were constructed and have been stocked with loach and other small fish during the breeding season each year. Over 6,000 kg of fish have provided over the last several years. The government and wildlife protection organizations have provided support and information to the protection efforts. The Ministry of Forestry of the People's Republic of China has issued documents and proclamations calling for the strict protection of the Crested Ibis, and has invested large funds, over 1,000,000 Yuan RMB, to establish the Shanxi Ibis Protection and Observation Station, to support agricultural production and ensure jobs in the area where chemical fertilizers and pesticides have been prohibited. The Yang County and Shanxi Provincial governments have issued protection documents, they have decided to decrease or remit some of the agricultural tax paid for grain by farmers working in the ibis habitats and have contributed to efforts to save the rare birds. They have also made two films about the ibis: "The Crested Ibis" and "Protection of the Crested Ibis". Each year during *Bird Loving Week* the importance of protecting

rare birds is promoted among the people in the thickly forested mountains, towns and factories nearby. In 1984, the Ministry of Post and Telecommunications of the People's Republic of China issued a set of commemorative stamps of Crested Ibises. The Zoological Research Institute of the Chinese Academy of Sciences, the Zoological Research Institute of Shanxi Province, the Shanxi Protection and Observation Station, and other institutions have studied the ecology of the ibises in the wild, and have attempted to breed the birds in captivity. The Ibis Breeding Center at the Beijing Zoo has hatched eggs in 1990, 1991 and 1992, and for the first time in 1992, the chicks survived. There has been a great effort in China to save the bird and this has laid a foundation for efforts in the future.

Through this large effort over the last ten years, the situation in the breeding area has been stabilized. Two new new nesting areas have been discovered in Sanchahe and Guniuping Valleys. In 1988, 22 ibises were counted in Yang County. We hope that with additional efforts, we can save the bird, not only in the near future, but for all time to come.

Problems and Challenges Remain

Although the numbers of ibises have increased slowly, we should not be unrealistically optimistic about their future, for they are not free of the danger. The young that have been raised in the wild have not returned to the breeding area. We do not know where they have gone, but we hope to areas where they are strongly protected. Most of the chicks that have been raised in the wild have been produced by only three pairs. Inbreeding may pose threats in the future. There are initial suggestions that the reproductive ability of the pair of birds breeding in Yaojiagou is declining. The birds in the wild are suffering from disease and natural enemies, and the death rate is probably unduly high. Recruitment is low. Although fifty young have fledged during the past 10 years, a maximum of only 22 birds has been counted. This small number with such low recruitment is insufficient to maintain the population.

The birds are still exposed to threats. Conservation of the birds is in conflict with the agriculture in the area. Despite the ban on chemical fertilizers and pesticides, some farmers still use them while other farmers who respect the ban are becoming poor because of low agricultural productivity. Some ibises have been killed by poachers. Efforts are underway to solve these difficult problems. A long-term program is being developed for the area to expand the ibis habitat and include it in a special Crested Ibis Preserve, to include harsh punishment to poachers who kill ibises, to expand the area under the ban on agricultural chemicals, and to provide additional aid to farmers in the region.

The Oriental Crested Ibis is a precious natural heritage that we have. Saving this rarest of birds is critically important, not only for China and Japan, but for everyone.

-- Zhang Zhiyen

FIRST ORIENTAL CRESTED IBISES RAISED IN CAPTIVITY

The Crested Ibis Breeding Center, Beijing Zoo, is pleased to announce the first raising of three Oriental Crested Ibises *Nipponia nippon*. The eggs were laid in May and the chicks had left the nest by mid-July. While eggs have been laid and hatched in previous years, this is the first time that young Crested Ibises have been raised to independence in captivity. This offers great hope for the captive breeding program and for preservation of the species.

-- Li Fulai

THE INTERNATIONAL SYMPOSIUM ON EUROPEAN WHITE STORKS HELD IN HUNGARY

The International European White Stork Symposium was held from 18-20 October, 1991, in Nyiregyhaza, Hungary. The meeting was organized by the Hungarian Ornithological Society. Representatives from nine countries, most in Eastern Europe, attended. The meeting was highly successful.

The international census was an important topic. Dr. Goetz Rheinwald analyzed the census of 1984 and indicated that more thorough censuses are needed to appreciate trends. He therefore suggested that the 1994 census should be expanded to include counting birds during the spring migration at Gibraltar; Cap Bon, Tunisia; and in Israel. Other topics included population changes since the 1984 census, a decrease in storks in Eastern Europe, starvation in the nest by young which had been fed plastics by their parents, the threat and protection from electrocution on electric power lines and research on feeding areas. New phenomena that were brought up included a negative affect of tourism on migrating storks, birds suffering because of contaminated water basins, and storks being cut by razor blades and sharp NATO wire while feeding at rubbish dumps. Furthermore, with the decreasing numbers of wild birds in Western Europe, there was considerable discussion about reintroduction programs. There was great interest in methods and programs for protection. This involved not only public awareness and public participation, but also the involvement of governments. Proposed protection measures included:

- protection, creation and expansion of wetlands
- extensive agriculture in tract areas
- protection of storks during migration
- biological control of locusts in Africa

Details of all the contributions will be published in the proceedings of the symposium.

-- Dick A. Jonkers

SPOONBILL POPULATIONS IN CROATIA

Large numbers of Eurasian White Spoonbills *Platalea leucorodia* bred in Croatia in 1991. The "Krapje Dol" colony in the Sava wetland was active again following two unsuccessful years. In 1990, a 300-m pipe was laid to connect the oxbow with the Sava River. The link between the wetland and the river was interrupted 15 years ago and the Ornithological Reserve had become completely dry by 1988. The reserve was revived by the Croatian Ministry for the Environment (Conservation Department) with the support of the European Natural Heritage Fund (ENHF) and the Frankfurt Zoologische Gesellschaft. The area was supervised by a warden from the Biological Station in Drenov Bok and one to two ENHF volunteers.

In 1992, at least 30 pairs bred in the reserve, and at least 90 individuals were counted (Schneider-Jacoby unpubl. obs.). In addition, Little Bittern *Ixobrychus minutus*, Night Heron *Nycticorax nycticorax*, Little Egret *Egretta egretta*, Purple Heron *Ardea purpurea*, Squacco Heron *Ardeola ralloides*, Great White Egret *Casmerodius albus* and Bittern *Botaurus stellaris* were present in the reserve. Unfortunately, nothing is known about the breeding success, as the war in Croatia reached the region in July. The villages around the reserve had to be evacuated because of military activities.

Approximately half of the spoonbill feeding sites are occupied by the army and thus outside the control of the conservation authorities. The Nature Park Lonjsko Polje, which was designated as such because of its importance for the spoonbills, is thus extremely restricted in its function. Four of the five communities which are responsible for the reserve have been almost completely destroyed. The ICBP and SEN have requested the European Community support for the reserve. This support will be more important than ever when the war is over. In 1991, the Croatian Ministry for the Environment submitted applications to the European Community.

Most of the spoonbills bred in the fish ponds at Jelas Polje (IBA 012, M. Setina), as was the case in 1990. In 1991, there were 100 breeding pairs here. The fish ponds cover an area of 2,500 ha. As well as feeding in the fish ponds, the birds also feed along the remnant narrow strips of the floodplain along the Sava River.

The most important congregation point for Spoonbills, Kopacki Rit (IBA 014), was a battleground for many months in 1991 and is still occupied by military forces. There is no reliable data for this area, as those responsible are unable to enter the area (J. and T. Mikuska). It is, however, certain, that the protection status of the core zone (i.e. the total reserve that is to be strictly protected with no disturbance) has been lifted. This means the end of the most important spoonbill migration stopover site where over 1000 spoonbills have been observed. The international community must urge that the army pull out of the most important areas before the beginning of the next breeding season.

There is a third colony of spoonbills in the part of the Sava Valley in Vojvodina, at the oxbow Obodska bara (IBA 041). The population along the Sava River consists of approximately 250-300 pairs. The river and its floodplain is vital as a feeding site for a large part of the European population. The destruction of the oil refinery in Sisak, in which thousands of tonnes of oil were released into the Sava River, is a catastrophe for the species.

-- Martin Schneider-Jacoby

STATUS OF STORKS, IBISES AND SPOONBILLS IN SAUDI ARABIA

Saudi Arabia is one of the most arid regions of the world, and so for many people it will be difficult to imagine the presence of large waterbirds such as storks, ibises and spoonbills in such a vast, dry country. However, the whole of Arabia is not as dry as people think. There are many bodies of water -- both ephemeral and perennial -- which attract waterbirds, including three species of stork and ibis each and two species of spoonbill.

The central part of Arabia is dry, with less than 50 mm average annual rainfall. There are no large wetlands except the sewage lagoons of large cities. But the coastal plains, especially in the southwest, receive more rain (200 - 400 or more mm per annum). This rain falls when moisture laden clouds from the Red Sea are trapped by a chain of mountains extending almost 1300 km from Khalij Al-Aqabah in the north to Yemen in the south. In the north, the mountains are not high, so orographic rainfall is less than in the south where some peaks of the Asir Mountains are over 2000 m and where there may be as much mm of rain in a year. Most of this precipitation runs into the coastal plains of the southwest, locally called Tihah as 500 mm of rain in a year. Most of this precipitation runs into the coastal plains of the southwest, locally called Tihamah. The Tihamah extends into Yemen where similar physico-climatic conditions exist.

The Tihamah is the most fertile land in Saudi Arabia, with numerous wadis and woodlands. The

bird life shows strong affinity to Afrotropical regions, because Africa is just across the Red Sea. The shortest distance between Africa and the Arabian Peninsula is just 29 km at Bab al Mandeb in Yemen. Many African species such as the Hamerkop and the Abdim's Stork are present in the Tihamah.

During our studies of the highly endangered Arabian Bustard *Ardeotis arabs*, from 1987 to 1992, we did extensive surveys in the Tihamah. This article is based on our field notes and also on information collected from other ornithologists active in this region. During our work we had opportunities to visit many water courses in the wadis and also the long Red Sea coast. The Tihamah extends into Yemen, but this article is based on our observations between Jeddah and Jizan.

Near Abu Arish (Jizan Administration Division), there is a large dam called the Hakimah Dam (Jizan Dam), which attracts many waterbirds. Most of the large concentrations of storks, ibises and spoonbills were seen in the backwaters of the Hakimah Dam.

A. Ciconiidae: Storks

1. European White Stork *Ciconia ciconia*

This stork is a winter visitor, common only in the extreme south of the Saudi Arabian Tihamah. While most storks move to Africa, some individuals stay in the Tihamah. In October, 1987, we saw 17 near a rubbish dump near Abu Arish, about 30 km from Jizan. On 8 February, 1992, about 100 storks were seen on the same rubbish dump. The next day, up to 300 flew from the dump and began soaring over Malaqi Dam, about 10 km from the dump. Every year, about 300 White Storks winter in this area.

The White Stork is generally not shot by hunters because it is considered sacred. Some people think that it flies to Mecca (the most important pilgrimage center of Muslims) and returns to mosques to nest on minarets, so it is venerated in many regions of the Middle East, such as Turkey and Iraq. However, it does not breed in Saudi Arabia.

2. Black Stork *Ciconia nigra*

This is another regular autumn migrant, and occasional winter resident, especially in the wetter Tihamah. It is generally seen alone or in small groups of two or three individuals in pools and on the sea coast. The largest flock which we saw was of 11 birds sitting on a hillock near Al Lith on 15 October. The birds were probably in migration, resting before crossing the Red Sea to reach Africa.

3. Abdim's Stork *Ciconia abdimii*

There is no breeding record for this stork in Saudi Arabia, although it does breed in Yemen. We did not see any Abdim's Storks during our survey. It has

been reported in the extreme south of Saudi Arabia, near the Tihamah near the Yemen border.

Unlike the Black Stork, the Abdim's Stork is gregarious and flocks of up to 10,000 have been reported from Africa where it is widespread (except in the Sahara Desert and equatorial forests). Abdim's Storks forage in grasslands, pastures and cultivated fields in contrast to Black Storks which usually feed near water.

B. Threskiornithidae: Ibises and Spoonbills

1. Sacred Ibis *Threskiornis aethiopicus*

We did not see this species as it is a vagrant in the Arabian Peninsula. There is only one old record of this bird in Saudi Arabia: from Jeddah in the late 1930's.

2. Glossy Ibis *Plegadis falcinellus*

The Glossy Ibis is quite common in the backwaters of the Malaqi dam. For two days in early February, 1992, we observed nearly 30 ibises feeding on ripe grains of a standing crop of maize. Following good rains, water behind the dam had inundated the nearby crop fields. The ibises were feeding with Blacktailed Godwits *Limosa limosa*. They would hover or sit momentarily on the bent stems of maize plants and quickly pluck the seeds. According to local farmers, the Black Ibis, as it is locally known, does great damage to maize crops in this area.

3. Waldrapp Ibis *Geronticus eremita*

This is one of the rarest birds of Saudi Arabia and the world. The species has been reported earlier in small numbers from the Tihamah coastal plains of Saudi Arabia and Yemen, but in March, 1991, 27 were seen near Taif (altitude about 1200 m) by ornithologists of the National Research Center. The breeding population of Birecik in Turkey has become extinct recently, and the only known breeding colonies are in Morocco. However, the species could be breeding in Yemen because during an expedition of the Ornithological Society of the Middle East in 1985, a group of 14 birds, including two juveniles, was seen in the Yemen Tihamah.

4. Eurasian Spoonbill *Platalea leucorodia*

This species is common along the Red Sea coast, and is seen occasionally in pools in the wadis. We had more than 50 sightings during our surveys. Breeding colonies have been reported among the mangroves but we did not see any such colonies.

5. African Spoonbill *Platalea alba*

As the name indicates, this species is mainly an African species but is sometimes reported as a vagrant

in South Oman and Yemen. Although we did not see any African Spoonbills, they could occur in the extreme southwest, in the area bordering Yemen. The African Spoonbill is very similar in appearance to the Eurasian Spoonbill and so can be easily mistaken for its more common cousin.

Conservation

Hunting is very popular in Saudi Arabia but none of the storks or ibises are under any pressure. The Hakimah Dam area is protected by the National Commission for Wildlife Conservation and Development and shooting is totally banned in this area. Similarly, the sewage watercourse of Al Hair about 50 km from Riyadh is also a protected area. Most of the birds of the shallow coast of the Red Sea remain out of reach of hunters because of the difficulty in reaching this area. Almost all of the islands and mangrove areas which have nesting colonies of pelicans, spoonbills, herons, etc. are either already protected by the Commission or under active consideration to be included in the protected area network. Some of the waste disposal areas and sewage lagoons of large cities now attract many birds including storks and ibises, so habitats for many species is increasing and it is likely that in the future we will see some species in areas where they have not been seen before.

- Asad R. Rahmani and Mohamed Shobrak

CLIFF STORKS (*CICONIA CICONIA*) IN IRAN

The cliff-dwelling European White Storks *Ciconia ciconia* at Shuckurchi, Azerbaijan -- some 50 km northwest of the high plateau city of Zanjan in the moonscape of rough, almost inhabitable hills -- may have been perched there on the cliff towers for summer long before man settled in the vicinity. Or did the birds follow the villagers to this out-of-the-way place in some distant past? The village of Shuckurchi is within one km of the shadow of the cliffs, while the life-sustaining river runs on the other side. The villagers say, "the storks have always been there."

This parallels the story of the White Storks nesting on the tall column at Pasargadae in the ruins of Cyrus the Great's palace (ca. 100 km from Persepolis) dating back 2500 years. The village of the "Mother of Solomon" is about 2 km away. The nest on the tallest pillar in the deserted ruins "has always been there", according to villagers. I personally have observed storks on the nest twice (in 1977 and 1986).

The answer to the origins of White Storks' association with man may well be woven into the patchwork of history on the emergence of agricultural society in these parts of the world where precious river habitats had to be shared. How and

why early man chose an unthreatening stance toward the perhaps-already-resident birds is another interesting question. According to an Iranian ornithologist, J. Mansoori, the strange bond between stork and man has been demonstrated by observations whereby storks have been noted to follow villagers to nest at their new locations rather than staying in the deserted old village sites (pers. com.). Still, storks nesting on high roofs and steeples in villages seem somewhat compatible with the peaceful quality of bird life, but when you seen them nesting on lamp posts or steeples in the midst of large, busy cities, the 'how come' question must be posed in utter amazement, while there is usually no alternative natural food source (as is the case with pigeons, swallows, etc. for which the food was supplemented by man).

Then, against this framework of hypotheses, the cliff-wall with a dozen nests at Shuckurchi seems to represent a transition phenomenon either way: whether the early resident storks tolerated the invasion of incoming villagers, or, the storks moved away from disturbed roof-tops to higher inaccessible cliff-tops. The 10 to 12 nests were observed in 1986 on 28 July with 2-3 chicks in some and 25 storks in flight, while five years later, on 4 August, 1991, only 2 storks were guarding the nests while others, including chicks, must have flown out to feed, as we had missed the early morning arrival due to being lost on the road. The villagers claimed there were 30 to 50 storks this year!

However, another observation of stork nests on remote cliff walls about 30 km from Shuckurchi beyond Garagooteh behind alfalfa fields seemed to represent a recent choice of storks nesting away from a village. The 4 to 5 nests nestled against the perpendicular cliff walls were inaccessible to any but flying predators. Another similar 'backwoods' case was observed about 25 km north (near the Russian border) of Meshkinshahr beyond the village of Khorjin (past Gahrabad), where two nests of obviously recent construction were perched on rock buttings on the cliff-side on foothills of Kohuloo Mountain. Two storks were observed feeding along the Gerresoo River nearby. The boy guiding us admitted disturbing one nest and killing the chicks, even in this remote place, so the storks may have fled such attitudes in the village.

Again, elsewhere in Azerbaijan, numerous nests can be observed in trees along rivers quite apart from villages, especially along the tributaries of the long Gezclozoon River near Mianeh between Tabriz and Zanjan, also near Maku, and along the Aras River at the Russian border (where I have observed my first-ever stork in a river-side nest). Whether these represent ancient residents or 'refugees' from habitats of men who have become intolerant of the birds is a matter of speculation. But it was clearly evident, on our visits and interviews with people in

dozens of 'stork villages' in Azerbaijan (1985) that the traditional friendly attitudes and even religiously oriented respect for the 'Haji lac-lacs' (Haji because storks visit the Holy city of Mecca in the winter) have been eroding. When old buildings get demolished storks tend to move their nests on electric poles to the only available elevated place, where they sometimes cause short circuits. Thus, provoking the villagers to destroy the nests, or such were the reasons often quoted. In contrast, we did also observe a village around the Lake Urmia where 3 to 5 nests were tolerated on single roof-tops.

The cliff-nesting White Storks in remote places might represent a new trend, a possibility to return back (a regression?) to their primeval element before humans existed, living in the heights of cliffs and mountains provided by nature, far away from new man who with 'progress' is losing his touch with nature, thus losing its bounty and gifts. Yet, even elsewhere today the white stork has retained its ability to live alone; in winter when some storks can be observed in the southern part of Iran in Fars Province especially, they are seen singularly in often remote fields or river beds.

-- Ellen Vuosalo-Tavakoli

RABAT WALDRAPP IBIS CONFERENCE

A Waldrapp Ibis *Geronticus eremita* Conservation Workshop was held in Rabat, Morocco, April 27-30, 1992. The meeting was hosted by the Direction des Eaux et Forêts et de la Conservation des Sols and the Parc Zoologique National de Rabat. The Specialist Group for Storks, Ibises and Spoonbills, the IUCN/SSC Captive Breeding Specialist Group and the Interim Waldrapp Ibis Management and Recovery Committee assisted with organizational aspects of the meeting.

The meeting was set up to provide an opportunity to follow up on the activities and actions discussed at the 1991 Waldrapp Ibis Workshop held in Wuppertal. Several successful working groups were set up at the Rabat meeting and working documents were produced on the historical and current status of Waldrapp Ibis in Morocco, the Souss-Massa National Park, the proposed introduction of Waldrapp Ibis to Spain and management of the captive population. Attention was also devoted to the recent observations of Waldrapp Ibis made in Saudi Arabia.

Proceedings including conference resolutions and recommendations are currently being prepared and will be available with a few months.

An enjoyable post-conference tour to the Massa National Park was attended by some 15 participants. Highlight of the tour that was organized by Dr. Haddane Brahim of the Rabat Zoo and

Mr. Mohammed Ribí, director of the National Park, was a visit to one of the few remaining breeding colonies in the Massa National Park. The colony was carefully and briefly visited. It contained 26 of the 37 pairs nesting in the park in 1992. Many of the nests had chicks.

-- Koen Brouwer

NEW RECORDS OF THE WALDRAPP IBIS

The eastern population of the Waldrapp Ibis *Geronticus eremita* was generally considered to be extinct in the wild since 1989. Between August 1990 and August 1991, however, scientists of the National Wildlife Research Center (NWRC) in southwestern Saudi Arabia recorded 25 Waldrapp Ibises in a regularly surveyed area of about 8 km². As similar habitat extends over hundreds of square kilometers along the eastern edge of the Asir Mountains, it is expected that many more Waldrapp Ibises were present in southwestern Saudi Arabia. Details of the observations were presented in September 1991 during the Annual Meeting of the German Ornithological Society in Interlaken, Switzerland.

The new records confirm that the eastern population of the Waldrapp Ibis is not yet extinct, and that unknown colonies still do exist, possibly in southwestern Saudi Arabia.

The opportunity was taken by the NWRC research staff (Dr. H. Schulz) to carry out studies on the ecology and behavior of the birds; the results will be published in due course. The NWRC has initiated a research program on the conservation status of the species in Arabia. One of the goals of the project is to locate the remaining colony (or colonies) for immediate conservation action. As a first step the NWRC together with the National Commission for Wildlife Conservation and Development (NCWCD, Riyadh) are planning to organize an international workshop on the subject in 1993.

-- Holger Schulz

SOME WATERBIRD POPULATIONS IN THE FORMER SOVIET UNION

Long-term trends in wading bird populations are often difficult to find because there is often little early base-line data. The population trends in the former Soviet Union have been summarized in a recent book by Dr. Vitali G. Krivenko (1991. *Climatic Variability and waterfowl populations*. Moscow). He estimated from surveys and information in the literature that within the entire area in the former Soviet Union, the Glossy Ibis (*Plegadis falcinellus*) population increased from 15,000 pairs to 28,000 pairs between the

1970's and 1987, and that Eurasian Spoonbills (*Platylea leucorodia*) increased from 3,700 to 4,500 pairs during this same period.

BLACK STORK CONFERENCE

The First International Black Stork Conservation and Ecology Symposium will be held in Jurmala, Latvia, 19-23 April, 1993. The aim of this meeting is to bring together scientists studying different aspects of the Black Stork *Ciconia nigra* ecology. The Black Stork's status in different parts of its range as well as the measures needed to protect this species in the wild will also be discussed. The conference is being convened by Project "Black Stork" of the Latvian Fund for Nature in cooperation with the Latvian Ornithological Society and the Stork, Ibis and Spoonbill Specialist Group.

If you have not yet received an announcement or if you are interested in further details please contact Maris Strazds, c/o Latvian Fund for Nature, Project "Black Stork", P.O. Box 677, LV-1047, Riga, Latvia. Information can also be obtained from Koen Brouwer in Amsterdam.

BLACK STORK CENSUS IN THE UKRAINE

The year 1990 was declared the *The Year of the Black Stork* in the Ukraine. During that year, researchers and conservationists throughout the country censused Black Storks *Ciconia nigra* and studied their distribution. This work was continued in 1991. In 10 regions, 210 nests were registered. The numbers of nests have increased over the last 15 years, from 137 in 1977 to 171 in 1984. This represents a 3% annual rate of increase. With corrections to account for incompleteness of the count, it was estimated that there are 300 to 350 nesting pairs in the Ukraine. The southern limit of the breeding range of the species crosses the western and northern regions of the country.

-- Vytyliy Grishchenko

AUTUMN CONCENTRATION OF BLACK STORKS IN ROMANIA

On 20 September, 1990, during the International Ecological --Expedition *The Blue Danube - 90* -- we observed the beginning of the Black Stork (*Ciconia nigra*) migration near the town of Chirshov (44°40'N, 27°58'E). The birds reached heights of 250 to 300 m above the ground. During 50 minutes (1030-1120 h) we counted 6 flocks of 12, 19, 23, 30, 48 and 103 birds, respectively, and a total of 235 birds. The birds took off from a small swampy area in the north part of Gyska Island that is situated between the main

stream of the Danube River and the Borch arm. These observations are interesting because this is an unexpected area for transit during the migration to the Middle East.

-- A. M. Poluda

LATVIAN BLACK STORK PROJECT

In 1988, a research project on Black Storks *Ciconia nigra* was initiated in the Latvian SSR. In order to study the biology, including migration, color plastic rings were put on hatch-year Black Storks. In the first year of the project, two types of color rings were used: 1) 6-mm high rings in yellow, red or dark-green and 2) 10-mm high rings in pink and pale-green. Different combinations involving one of each of these ring types and an aluminum ring with "LATVIA RIGA" were put on the young birds. If you or your colleagues observe Black Storks with color rings, please note the number of rings and the color combinations on the right and left legs. Please send this information to Maris Strazds, Project Black Stork, P.O. Box 677, LV-1047, Riga, Latvia.

THE ORIENTAL WHITE STORK (*CICONIA BOYCIANA*) IN SOUTHWEST CHINA: A NEW RECORD

While making field observations in southwest China in January, 1992, we observed a single Oriental White Stork *Ciconia boyciana*. The bird was observed in the savannah grassland along the shore of Lake Lugu. The lake is at an elevation of 2,685 m in the southeast part of the Tibetan Plateau.

Local people showed us an old nest in the top of a tree on an islet in the lake and told us that the bird had once nested on a high cliff just above the lakeshore.

This is an important extension to the known range of this endangered species, and an important extension to the known breeding range of the species. When we returned to Lake Lugu in May, 1992, we found no evidence of the storks breeding this year.

-- Zhang Yinsun, He Fenqi

WORKSHOP ON AMUR RIVER: INTERNATIONAL COOPERATION FOR THE ORIENTAL WHITE STORK

A workshop on the Conservation of Cranes and Storks in the Amur River Basin was held on a boat sailing along the Amur River for 10 days in early July, 1992. Russians hosted the meetings to bring together re-

searchers, conservationists and public officials from Russia, China, Japan, Korea, Hong Kong. Very positive and cooperative discussions were held on preserving the Amur Basin and on the conservation needs of these birds that the countries in share and must cooperate in protecting.

Discussion groups discussed various topics including the Oriental White Stork *Ciconia boyciana*. In the breeding area, the storks suffer from disturbance, habitat destruction and lack of suitable nest sites. A recent positive development has been programs to build artificial nest sites at various nature reserves including Honghe, Xalong, Shingkai Lake. But most alarming was the realization that major threats to storks, cranes and other water birds occur in the large wintering areas along the Changjiang River in Central China. The continuing decline of stork and crane populations in northeastern Asia is largely due to these problems. We must increase our attention to these wintering areas to preserve these populations.

A very positive step is the initiation of a program to reintroduce Oriental White Storks to Japan by the Wild Bird Society of Japan. Experience with European White Stork reintroduction programs will contribute to the success of the Japanese efforts.

-- Malcolm Coulter

STORM'S STORKS HATCHED AT ZOO NEGARA

Zoo Negara in Kuala Lumpur, Malaysia proudly announces the first captive breeding of the endangered Storm's Stork *Ciconia stormi*. Three chicks were hatched in June 1992. One chick is being hand-reared and the other two are being raised by the parents. Other successful stork breeding at the Zoo Negara were the hatching of 11 Milky Stork *Mycteria cinerea* chicks by four pairs. More eggs have been laid as this is submitted.

-- Tunku Mohd. Nazim Yaacob

THE EASTERN REGIONAL STORK WORKING GROUP REPLACES THE STORK WORKING GROUP OF THE FORMER SOVIET UNION

The Third Symposium of the *Stork Working Group of the former Soviet Union* met at the Kanev Nature Reservation, Ukraine, from 23 to 25 September, 1991. The meeting was hosted by Kiev University and the Ukrainian Ornithological Society. The symposium attracted 20 participants representing Armenia, Byelorussia, Latvia, Russia and the Ukraine. Edward Samusenko was elected to be the new Chair of the working group. His address is: Institute of Zoology, Byelorussian Academy of Science, F. Skorini

Street, Minsk 220733, Byelorussia. The name of the working group was changed to *The Eastern Regional Stork Working Group*.

-- Vytaiy Grishchenko

FOCUS ON THE EUROPEAN WHITE STORK -- A NEW INSTITUTE FOR GRASSLAND CONSERVATION

A new *Institute for Grassland Conservation and Research* has recently been established for Germany by the conservation organization *Naturschutzbund Deutschland*. Focus of the institution will be on conservation of and research on the European White Stork (*Ciconia ciconia*) and its habitats. The new institute is located in Bergenhusen/Schleswig-Holstein, the well-known German "Stork Village", in the center of the Eider-Treene-Sorge lowlands. The area, one of the largest wet grassland areas of Germany, is at present the subject of a very ambitious conservation development concept of the regional government of Schleswig-Holstein; the *Naturschutzbund Deutschland* hopes to significantly contribute to the realization of this concept with the competence and experience of the staff of its new institute. However, the work of the grassland institute will not be limited to regional activities, but will also cover supraregional and international aspects. The three main topics can be described as:

- Regional conservation of grasslands and grassland birds, and related research,
- Supraregional and international conservation of grassland ecosystems, and related research
- Conservation of and research on the European White Stork, nationwide as well as internationally.

Buildings to house the institute have been provided by the regional government of Schleswig-Holstein. A farmhouse complex is currently being renovated and will provide offices and laboratories as well as space for exhibitions on grassland conservation and meeting rooms to hold seminars and conferences. The permanent staff of the institution will be supported by non-permanently employed scientists and technical assistants. In addition to projects financed by the *Naturschutzbund Deutschland*, the institute aims to carry out research and conservation contracts funded by national and international conservation organizations and government agencies.

Dr. Holger Schulz, the director, who has published many papers on storks, bustards and Waldrapp Ibis, and who was the director of the Saudi Arabian National Wildlife Research Center during the last two years, hopes to develop the *Institute for Grassland Conservation and Research* soon to an internationally recognized institution which then will be consulted by NGO's and government agencies on aspects of European White Stork and grassland conservation.

The Institute offers services such as help in literature search, project planning and execution and other aspects of stork and grassland conservation and research. Further information can be obtained from:

-- Dr. Holger Schulz, Institute for Grassland Conservation and Research, Naturschutzbund Deutschland e.V., Goosstroot 1, D-2381 Bergenhusen, Germany. Telephone: 04885-570; FAX: 04885-583.

NORTH AMERICAN ZOO ADVISORY GROUP FORMED

The American Association of Zoological Parks and Aquariums has formed an advisory group for three families of Ciconiiformes: Ardeidae, Threskiornithidae and Scopidae. Formed in late 1991, the group is called the Heron, Ibis & Hamerkop Advisory Group (HIHAG). HIHAG was formed to address five major problems: (1) Most long-legged wading birds are declining in nature, and many are vanishing entirely in nature. (2) Many of these taxa are candidates for intensive captive breeding and conservation programs. (3) These birds are important and popular in North American zoo collections, with nearly 3,000 spaces currently available. (4) Zoo spaces are not well used relative to the taxa's needs. (5) Most captive populations are declining because of low birth rates.

One responsibility of HIHAG is to coordinate North American studbooks for these species. (Studbooks contained records of the genealogies of all individuals of a species in captivity. They can be used in pairing birds to minimize inbreeding and for other management purposes.) Two ibis studbooks have been published by the New York Zoological Society: Mark Hoffling keeps the Waldrapp Ibis *Geronticus eremita* studbook and Anna Marie Lyles keeps the Scarlet Ibis *Eudocimus ruber* studbook. Studbook applications are underway for the Boat-billed Heron *Cochlearius cochlearius*, the Roseate Spoonbills *Ajaia ajaja* and the Hamerkop *Scopus umbretta*. HIHAG's two other immediate goals are to compile a husbandry notebook and to work on a Regional Collection Plan.

Membership is open to interested persons who are willing to actively participate. For more information, contact the chair:

Anna Marie Lyles
Department of Ornithology
New York Zoological Society
Bronx, New York 10460
USA

ATTENTION:

WE URGENTLY NEED YOUR HELP IN WRITING LETTERS TO SAVE THE BLACKFACED SPOONBILL

We recently received an urgent request for assistance from the Wild Bird Society of the Republic of China (Taiwan). The Government has plans for industrial development of the Tsen-Wen River Estuary in southwestern Taiwan. This is a very important wintering area for many waders and waterfowl, including the Blackfaced Spoonbills. About 200 Blackfaced Spoonbills winter in this area. This represents two thirds of the known world population of this endangered species. Development of this estuary could severely threaten the continued survival of the species. Alternatively, this estuary would be an ideal location for a winter wading bird sanctuary.

**PLEASE WRITE LETTERS TO THE TAIWANESE GOVERNMENT AUTHORITIES
URGING THEM NOT TO DEVELOP THIS IMPORTANT AREA FOR INDUSTRIAL USE,
BUT TO SAVE THIS AS AN IMPORTANT SANCTUARY. WRITE TO:**

*Mr. President Lee, Teng-Hui
122, Chung-Chin S. Road, Sec. 1
Taipei, Taiwan, R.O.C.*

*Mr. Ling, Shiang-Nung
Vice-Chairman
Council of Agriculture
37, Nan-Hai Road
Taipei, Taiwan, R.O.C.*

*Mr. Hau, Pei-Tsun
President of Executive Yuan
1, Chung-Hsiao E. Road, Sec. 1
Taipei, Taiwan, R.O.C.*

*Mr. Li, Ya-Chao
Magistrate
Tainan County Government
36, Ming-Chee Road, Hsin-Yin
Taipei, Taiwan, R.O.C.*

We can help save the Blackfaced Spoonbill but only if each of us writes letters!

In order to evaluate the effectiveness of this campaign, we would appreciate your sending a copy of your letters to:

*Yeh-Wang Chen
President
Wild bird Society of R.O.C.
6, Alley 13, Lane 295
Fu-Shin S. Rd. Sec. 1
Taipei, Taiwan
R.O.C.*

WE APPRECIATE YOUR ASSISTANCE IN THIS CRITICAL AND URGENT CRISIS!

THE SIS LIBRARY AND BIBLIOGRAPHY OF STORKS, IBISES AND SPOONBILLS

In December of this year, we mailed copies of the printed bibliography to most people working on storks, ibises and spoonbills. In order to make this more useful to you, we will be happy to send keynames (authors and dates of publications) for given species, geographic regions or topics (see the list of keywords in the bibliography), or we can develop an updated bibliography specific to your interest.

We are extremely happy that there has been considerable cooperation in developing and maintaining the bibliography. We have received many corrections and additions. Since the printing, we have added over 1,000 new references to the bibliography. Continuing this cooperation is critical in making sure that this is a complete bibliography that is useful to everyone. We also maintain a strong library which allows us to copy articles and send them to you as needed.

In order to maintain these, please send additional references and copies of your articles to Malcolm Coulter. Your cooperation is very much appreciated.

-- Malcolm Coulter

NEW LITERATURE

Three proceedings have been produced recently:

1: Korzykov, A.I., A.I. Koshelev, and I.I. Chernichko (eds.). 1991. [Rare birds of the Black Sea Coastal Area. Kiev - Odessa, Lybid Publ.

Ardamatskaya, T.B. [Rare and endangered birds of the Ukrainian black Sea State Biosphere Reservation and its neighbouring territories]. Pp. 54-69. [*Ciconia ciconia*, *C. nigra*, *Platalea leucorodia*]

Chernichko, I.I., A.N. Chernaya, and S.A. Cherny. [Nesting of the Glossy Ibis in the high parts of the Tiligul Lagoon]. Pp. 113-128.

Grinchenko, A.B. [New data about rare and endangered birds of the Crimea]. Pp. 78-90. [*Platalea leucorodia*]

Koshelev, A.I., A.I. Korzyukov, V.A. Lobkov, and L.V. Peresadko. [The analysis of the number of rare species of birds in the district of Odessa]. Pp. 9-36. [*Ciconia ciconia*, *C. nigra*, *Plegadis falcinellus*, *Platalea leucorodia*]

Lysenko, V.I., and V.D. Siokhin. [The present status of the numbers and distribution of rare birds at the Northern Sea of Azov coastal areas]. Pp. 69-78. [*Ciconia ciconia*, *C. nigra*, *Platalea leucorodia*]

Panchenko, V.A., and K.L. Balatsky. [Rare and endangered birds of the deltas of the Danube, the Dniester and of the neighbouring territories]. Pp. 37-53. [*Ciconia ciconia*, *C. nigra*, *Plegadis falcinellus*, *Platalea leucorodia*]

2: Coulter, M.C., Wang, Q., and C.S. Luthin (eds.). 1991. Biology and Conservation of the Oriental White Stork *Ciconia boyciana*. Savannah River Ecology Laboratory, Aiken, South Carolina, USA.

Archibald, K. Recommendations for Captive Management of the Oriental White Stork (*Ciconia boyciana*). Pp. 193-202.

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Fei D. The breeding of one pair of Oriental White Storks in the outskirts of Qiqihar, Heilongjiang Province. Pp. 59-63.

Fei D., Ping W., Wu G., Wu T., and Xiu T. Observations on the breeding biology of the Oriental White Stork (*Ciconia boyciana*) near Qiqihar, Heilongjiang Province, China. Pp. 21-30.

Fei D., Yang T., and Tsau Y. Introduction to studies on and conservation of storks in China. Pp. 137-142.

He B. Research on artificial rearing of Oriental White Storks in Captivity. Pp. 207-211.

Jiang F. Preliminary Observations on Captive Breeding of Oriental White Storks. Pp. 213-217.

Li W., Zhao H., and Luan X. Reproductive ecology of the Oriental White Stork (*Ciconia boyciana*) with information on feeding and development of the chicks. Pp. 47-58.

Luthin, C.S., and Wang Q. Current Status of and Conservation Concerns for the Oriental White Stork. Pp. 155-164.

Ma Y., and Jin L. The census of Oriental White Storks in Heilongjiang Province. Pp. 149-154.

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3: Jennings, D.P. (Compiler), Proceedings of the Coastal Nongame Workshop, Gainesville, Florida, 10-12 Sept., 1991. 186 pp.

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**WE ARE EXTREMELY GRATEFUL TO PETER SHANNON AND
THE AUDUBON PARK ZOO FOR PRINTING AND MAILING THIS NEWSLETTER.**