

Black-faced Spoonbill



B LACK-FACED SPOONBILL

Platalea minor

WORLDWIDE STATUS: *Endangered*

CLASS: *Aves*

ORDER: *Ciconiiformes*

FAMILY: *Threskiornithidae*

SUBFAMILY: *Plataleinae*

OVERVIEW

Length: 27 – 29 inches (70-75 cm)

Weight: Unknown

Clutch size: 3-5 eggs

Incubation: 21-25 days

Diet: small fishes, crustaceans, insects, mollusks, occasional plant material

Habitat: Wetlands, particularly marine estuaries

Range: Spoonbills breed in North and South Korea and China, and migrate south to winter in Japan, Taiwan, Hong Kong, Vietnam, and the Philippines.

DESCRIPTION

Black-faced spoonbills are long-legged, long-necked wading birds that look like egrets. Their elegant feathers are snow white most of the year, but develop a shaggy, golden-yellow crest and breast patch in the summer breeding season. Their legs, feet and toes are jet black; faces are black and bare around the eye and across the forehead. Their black, elongated beaks gradually narrow, then abruptly flare out into a flattened disk with a nail at the tip.

Spoonbills feed in the water. They use their beaks to both dabble and sweep from side to side in big arcs as they walk. They consume a broad variety of foods but prefer small fish.

GENERAL INFORMATION

Black-faced spoonbills are the rarest, and least-studied, spoonbills in the world. They have a global population of around 800. The only known breeding colonies are on a few small, rocky islands off the coast of the demilitarized zone between North and South Korea and China. Due to military restrictions, these colonies are not accessible, so the black-faced spoonbill's breeding biology is largely unknown. There is also a small breeding ground in the adjacent province of Liaoning in China. Black-faced spoonbills nest on cliffs with gulls and other seabirds, despite the fact that these birds form a threat to spoonbill eggs and young.

The Wild Bird Society of Japan has sponsored satellite tracking of black-faced spoonbills from wintering areas in Taiwan and Hong Kong to determine migration routes and other nesting areas. Three of the major wintering sites are the Tsengwen River estuary of Taiwan, Deep Bay of Hong Kong, and the Red River Delta in Vietnam. The birds migrate along the coast of eastern China to northern Jiangsu, then over the Yellow Sea to the Korean peninsula. An annual count is held to monitor the population.

"The fate of the black-faced spoonbill will depend on increasing our understanding of the species' biology and on preservation of its wetland habitats. Only four of the fourteen sites used by wintering black-faced spoonbills are protected or are under some form of conservation management; each of those four sites is in China. The remaining ten sites have no formal conservation status. The ten unprotected sites are used by 81 percent of the world's black-faced spoonbills; thus, there is a serious threat to most of the world's black-faced spoonbill population."

MALCOLM C.

COULTER

Co-chairman, IUCN Specialist

Group on Storks, Ibises, and

Spoonbills

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A Lesson in Grassroots Activism

STUDENTS AT THE UNIVERSITY OF California, Berkeley (Cal) and National Taiwan University (NTU) are working together to save critical habitat for the black-faced spoonbill in Taiwan. Cal students work in the Department of Landscape Architecture and Environmental Planning, led by Professor Randy Hester. In Taiwan, NTU students attend the Building and Planning Research

Foundation under the guidance of Professor John Liu. Together they formed SAVE International, a non-profit organization devoted to protecting the black-faced spoonbill and the habitat it needs to survive.

Hester and Liu are long-time colleagues, having met while Liu was working on his Ph.D. in Berkeley. In 1997, Liu took Hester to the Tsengwen River estuary to discuss a land subsidence problem caused by groundwater leaching. They met with a group of local fishermen who were concerned about

Binnan, a proposed industrial complex in their area. The fishermen estimated that 7,000 marine jobs would be lost, the ecosystem would be ruined, and temperature changes and pollution due to runoff from the factories and subsequent land development would threaten their prized oyster beds, the largest in Taiwan.

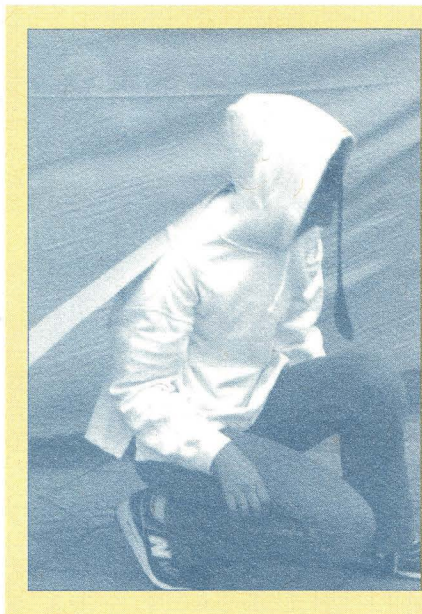
The fishermen asked Hester and Liu to look into the problem. Many of them shared their life stories. One fisherman had been sold away as a child because his family was so poor. It took twenty-five years for him to earn enough money to return, and he is now in danger of losing his home and his livelihood.

Students at Cal and NTU are encouraged to devise solutions for real-life problems. "Let students help communities that need it," is the motto. Both institutions motivate students to be involved in the real world, doing projects to help the quality of life in their communities.

Hester and Liu's classes examined the conservation biology needed to save the lagoon and come up with an alternative plan to the proposed Binnan complex. Their studies culminated in conferences held in Taiwan at which scientists and planners from both countries joined the students and faculty from Berkeley and NTU. After the conference, Dr. Malcolm Coulter, one of the world's foremost spoonbill experts, returned to Berkeley to help students examine the needs of the birds in Chiku. In the process, they discovered that the Environmental Impact Assessment (EIA) developed for Binnan had a fatal flaw: spoonbills feed at night and roost during the day. The EIA only took into account the spoonbill's daytime range, which is quite small. At night, the birds forage quite far. Clearly, black-faced spoonbills needed to be studied at night.

After thorough scientific study, SAVE realized that an industrial complex in Chiku Lagoon was incompatible with the survival of the spoonbills and the protection of the water for the livelihoods of the fishermen. Mediation could not resolve this issue. The development had to be stopped.

The students modeled alternative land uses for the region using computer mapping. None were compatible with Binnan and its future development. While Berkeley students approached the issue from an environmental science perspective, Taiwanese students analyzed the local politics. After Magistrate Su Huan-Chi saw the information, he arranged a congressional



While serious about the research, visits between Cal and NTU students often involve a little spontaneity.

hearing where Liu, Hester, Coulter, and a group of students presented their findings to the Taiwan legislature.

Environmental planning and landscape architecture students continue to probe and investigate the problems and opportunities surrounding the situation in Chiku. They create case studies and present them to Taiwanese government officials, working with the NTU students and faculty. Leading scientists are also involved, studying the black-faced spoonbill and the local economy.

Each October, students at Cal host a "Great Spoonbill Migration." Physical representations of black-faced spoonbills and the challenges facing them are erected on campus. When NTU students held a press conference about the birds, the Berkeley models were flown to Taipei, creating wonderful images for Taiwanese television cameras and newspaper reporters.

Although Cal students approach this issue academically, Taiwanese students are motivated to political action. They grew up—as did many of their professors—under martial law and now are adept at protests and high profile press conferences. During a visit from Berkeley SAVE members, NTU and Cal students donned black-faced spoonbill masks and staged an impromptu dance as a protest at the Taipei train station.

Public sentiment is starting to build for the spoonbills. Taiwanese students even convinced a local rock star to produce a CD featuring a track entitled, "Song of the Spoonbill." In 2000, Taiwan named the black-faced spoonbill its Millennium Bird, and its image now appears on Taiwanese passports.

Flyway Threats and Opportunities

THREATS

Habitat destruction is the biggest threat facing black-faced spoonbills. Their wintering grounds are threatened by industrial development in Taiwan. China's economic development has converted many coastal wetlands into industrial estates. Land reclamation is a problem in South Korea and Japan. Pollution is a major issue for birds wintering in Hong Kong. Increasing levels of disturbance and habitat destruction are challenges in China and Vietnam.

Many wintering and breeding sites along the flyway of the black-faced spoonbill are not protected, including sites that face pressure from urbanization, pollution, and coastal erosion. The spoonbill is in imminent danger of losing its wintering habitat in Taiwan. The Saemankeum Project in South Korea threatens mudflats near major breeding sites. Dam building in Japan has already destroyed spoonbill habitat.

OPPORTUNITIES

The range of summer and winter habitats forms an international flyway that extends over North and South Korea, Japan, Taiwan, China, Vietnam, and the Philippines. Those sites most threatened by development or other land use should be earmarked for conservation efforts and wildlife management. Better networking and sharing of information among countries is needed. There should be an international effort to identify spoonbill breeding and wintering sites, and assist in their preservation.

Areas on the Chinese coast and North Korea are largely unstudied. Surveys of these areas would help scientists better understand migration patterns and identify breeding sites.

Having had great success in fighting development proposals in Taiwan, SAVE recognizes the need to protect the entire international flyway to ensure the

survival of this rare bird. SAVE is building a coalition of environmental groups, students, universities and other organizations to preserve important spoonbill habitat sites, protect the flyway, and ensure the long-term survival of the black-faced spoonbill.

CONSERVATION

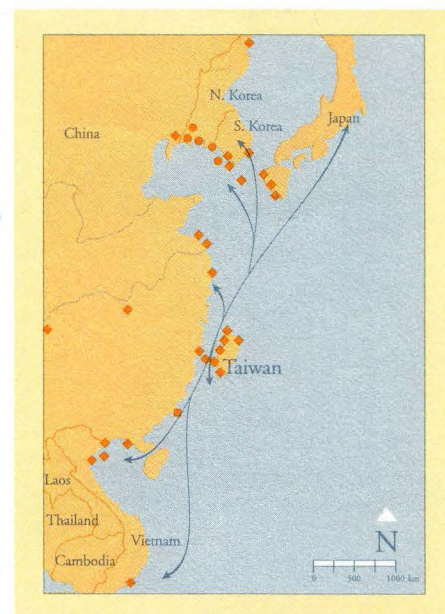
Black-faced spoonbills are legally protected in China (including Hong Kong), Taiwan, North Korea, South Korea, and Japan. Breeding sites in North Korea are designated as seabird sanctuaries, and sites in China have been declared as non-hunting areas. Protected wintering sites include Mai Po and Inner Deep Bay in Hong Kong, Xuan Thuy and Tien Hai in Vietnam, and Manko in Japan. China recently protected fourteen more wetlands that are "of utmost importance" as defined by Ramsar. These are very important to the black-faced spoonbill, and include Yancheng National Nature Reserve, Jiangsu Dongtan Nature Reserve, Guangxi, and many more.

In 2001, a Hong Kong court rejected a planned railway development in the wetlands of the Long Valley and Deep Bay operated by the Kowloon Canton Railway Company. The black-faced spoonbill uses these wetlands as a feeding and rest area, en route to Taiwan and Vietnam. Future generations in China will enjoy the remarkable biodiversity of these wetlands, which harbor a variety of plants and birds such as the yellow bunting and painted snipe.

The future of the black-faced spoonbill in Korea is, however, in doubt. Most of the bird's critical breeding areas are in or near the Demilitarized Zone, which encompasses an expansive but fragile system of mudflats and islands. Major land reclamation work and the new Incheon airport pose major threats to the spoonbill in Korea.

Confirmed wintering sites

Confirmed breeding sites



Recognizing that spoonbills do not live in Taiwan alone, SAVE is working with others to organize an international network of groups along the flyway to protect important habitat sites.

WHAT IS THE BLACK-FACED spoonbill?

The black-faced spoonbill (*Platalea minor*) is a large, egret-like wading bird. It has a long black spatulate bill and black face mask, legs, and feet. During the breeding season, it sports a bright yellow crest and breast patch.

How endangered is it?

Very. There are only about 800 black-faced spoonbills left in the world. More than half of them migrate to the Chiku Lagoon on the Tsengwen River estuary in southwestern Taiwan. Planned industrial development threatens this critical habitat and would lead to the bird's extinction.

Where does it breed and migrate?

The black-faced spoonbill lives and migrates in Asia, primarily North and South Korea, Japan, Taiwan, coastal China, the Philippines, and Vietnam.

What is happening to its wintering grounds in Taiwan?

A proposed petrochemical and steel factory, known as the Binnan Complex, would be built on Chiku Lagoon and remove 4280 acres (1732 hectares) critical to the survival of the spoonbill and the 200 other bird species in the estuary. More than 90 percent of the wetland and fishpond habitat essential for spoonbill survival would be subdivided by freeways, roads and secondary land uses.

Is this area an internationally protected wetland?

No. But Chiku Lagoon in the Tsengwen River estuary and its associated marshes and fishponds in coastal Tainan County qualify as "wetlands of utmost importance" as defined by the scientific criteria established at the Ramsar Convention, the international accord developed to protect wetlands. Presently excluded from the United Nations and therefore unable to join Ramsar, Taiwan has sought international recognition through improved environmental policies. Approving the Binnan project, however, undermines any potential for wise use of these wetlands.

What is happening along its migration route?

Many of the wintering and breeding sites along the flyway of the black-faced spoonbill are not protected. These sites face pressure from urbanization, pollution, coastal erosion, and more. The spoonbill is in

imminent danger of losing its wintering habitat in Taiwan, and the Saemankeum Project in South Korea threatens mudflats near major breeding sites. The sites faced with human-caused destruction should take highest priority. SAVE and other defenders of the spoonbill are spearheading an international effort to identify all sites where spoonbills breed and winter, and to rank the threats to those sites.

What is the relationship between tourism in Taiwan and the black-faced spoonbill?

Tourism accounts for only 1 percent of Taiwan's economy, compared to 11 percent worldwide, but offers great potential for creating new jobs and promoting international understanding. Residents of Tainan County are already using their own resources to capitalize on the presence of the black-faced spoonbill and the rich assortment of birds and wildlife in Chiku Lagoon. Entrepreneurs are actively developing an eco-tourism industry that attracts hundreds of thousands of visitors each year. The area's natural resources, under threat by the Binnan complex, are essential ingredients to a strong tourist economy.

What can the Taiwanese government do to stop the destruction of the spoonbill's habitat?

The Taiwanese government can stop the development of the proposed petrochemical and steel complex, highways, dams, and other industrial plans. It can formally protect the wetlands of the Tsengwen River estuary and help local people develop a sustainable plan for tourism and fishing.

Are there alternatives to building a petrochemical plant on Chiku Lagoon?

In 1999, researchers at the University of California, Berkeley and National Taiwan University prepared a report using the most current scientific research that proposed viable alternatives. The report, "The Future of Coastal Tainan County," covers in detail the assets and threats, alternative proposals, environmental stewardship, and economic development of southwest Taiwan. It also suggests how the government and the community can save the land. Already, a thriving fishing and tourism industry are galvanizing residents and stimulating the local economy. More than 90 percent of Taiwan's residents report that poor environmental conditions are reducing their quality of life. Many people who live in coastal Tainan County are concerned that the industrial complex will ruin the natural assets of this region: the beautiful beaches, forests,

*"I can't bear to think,
when I wake up every
morning, that the blue
skies, salt mountains
and flocks of water-
birds might be replaced
by dozens of smoke-
stacks and burning
torches. "*

MAGISTRATE SU
HUAN-CHI

試想、當清晨起來、
藍天、鹽山、水鳥
群飛

mangrove plantations and sand dunes. Fishermen worry about losing their way of life to water pollution.

How much land needs to be protected to ensure the survival of the black-faced spoonbill?

SAVE International proposes the establishment of a small national scenic area to protect the spoonbill roosting and foraging site. Zones of protection would be created to provide habitat for a sustainable population of 3,000 to 5,000 black-faced spoonbills worldwide. A second roosting site and the equivalent of 6500 acres (2631 hectares) in fishponds need to be preserved as well. The plan calls for maintaining and strengthening existing agricultural zoning to support the fishing industry and the families that depend on it.

What is so special about Chiku Lagoon and the Tsengwen River estuary?

More than half the world's population of black-faced spoonbills spends the winter at Chiku Lagoon. Nineteen bird species recorded at the estuary are listed as rare or endangered. It is one of the few places in the world that regularly supports wintering Saunders's gulls, another extremely rare bird. The lagoon's diverse wildlife habitat is a rich source of food and economic stability for local fishermen and an major attraction for birders and tourists from around the world.

Because the spoonbill feeds at night in only six inches (15 cm) of water, only a handful of sites in the world are suitable winter habitat. Many coastal wetlands in China and along the bird's migration route in North and South Korea, Japan, and Vietnam have been destroyed or damaged by industrial and agricultural development, leaving Chiku Lagoon as a vital part of the black-faced spoonbill's safety net.

Does Taiwan's land-use plan for Chiku Lagoon address environmental concerns?

No. The Environmental Impact Assessment (EIA) prepared for the proposed Binnan complex contains serious flaws. Spoonbills forage over an extensive area at night and roost during the day; the EIA only took into account their small daytime range. Black-faced spoonbills need to be studied at night. Chiku's black-faced spoonbills feed in the area where the industrial complex site is proposed.

What is SAVE doing to prevent this?

SAVE is actively working to persuade the Taiwanese government to stop Binnan and save the black-faced spoonbill. SAVE also provides scientific expertise and reviews EIAs. SAVE inspires community participation, develops sustainable alternatives, and garners political support from legislators and officials. In the future, SAVE will develop new partners along the flyway, evaluate their EIAs, develop alternative plans, and educate the media.

What can people in the U.S. do to help save this bird?

Join SAVE. For more information, contact

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Environmental Planning
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Berkeley, CA 94720
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www.earthisland.org/save

Write letters opposing the Binnan project to:

President Chen Shui-Bian
No. 122, Section 1
Chung-chin S. Road
Taipei, Taiwan, R.O.C.

Dr. Hau Lung-Bing
Environmental Protection Administration Director
No. 41, Section 1
Chung-Hwa Road
Taipei, Taiwan, R.O.C.

Make a donation to SAVE, and Working Assets and GiveFor Change will match your donation. Donations can be made online through the Earth Island website at www.earthisland.org/join/giveforchange-offer.html. All donations are tax-deductible.

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