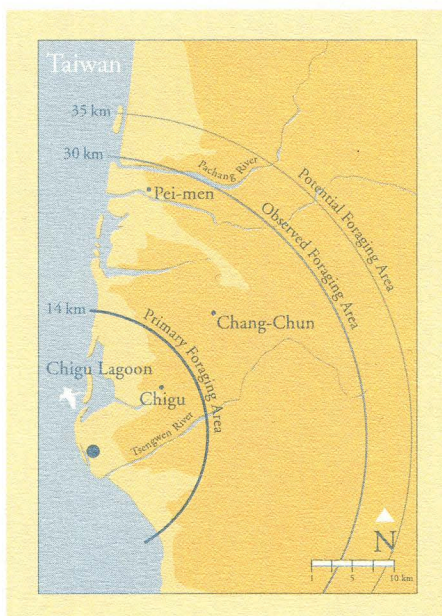


Overview: Black-Faced Spoonbill Faces Extinction



BLACK-FACED SPOONBILLS are one of the rarest and most endangered birds in the world. Large, egret-like waders, these spoonbills breed on small, rocky islands off the coast of North Korea, South Korea and China. Due to military restrictions, the colonies are not accessible and their breeding biology is largely unknown.



The wetlands within 14 km of the spoonbill roosting area are most critical for their foraging. They should be designated as core habitat and protected. Spoonbills have been observed foraging up to 30 km and probably forage for at least 35 km from their roosting site. These lands should be managed for both fish farming and spoonbill habitat.

Black-faced spoonbills migrate south from North Korea. Their flyway extends through South Korea, Japan, Taiwan, coastal China, the Philippines and Vietnam. The latest census estimates that only about 800 black-faced spoonbills are left in the world.

Black-faced spoonbills suffer most from loss of habitat. The wetlands of Taiwan are essential wintering sites along their migratory flyway. While some migrating birds simply stop to rest and feed before continuing

their long journey, more than half the world's population of black-faced spoonbills spend the winter at Chiku Lagoon in Taiwan. More than two hundred bird species have been sighted at Chiku; nineteen are listed as rare or endangered.

Because of the spoonbill's specialized feeding requirements in winter, only a handful of sites in the world are suitable habitat. Many coastal wetlands in China and along the bird's route in North and South Korea, Japan, and Vietnam have already been destroyed or damaged by industrial and agricultural development, making the preservation of Chiku and the remaining habitat along the flyway even more important.

The Taiwanese government is promoting plans to build a petrochemical and steel complex that will destroy this habitat, a move that will likely doom the black-faced spoonbill to extinction. The 4280-acre (1732 hectares) Binnan complex would be built directly on Chiku Lagoon, in areas needed by the spoonbills for foraging and roosting.

Founded in 1997, SAVE International is a volunteer group of professors, students and staff from the University of California, Berkeley and National Taiwan University. SAVE works directly with fishermen, residents, legislators and other concerned organizations and individuals to protect the black-faced spoonbill and its most important wintering site, Chiku Lagoon.

A project of Earth Island Institute, SAVE has produced a vast amount of scholarship, including a three year study that details, based on scientific evidence, the disastrous impact that the proposed industrial complex and related development will have on Chiku. It proposes an alternative plan that would protect the traditional jobs of the residents and preserve enough viable habitat to ensure the survival of the spoonbills and other species. Copies of this plan are available through SAVE International. SAVE's plan includes the development of eco-tourism, which is already benefiting Chiku. Through promotion by local organizations and constant media attention, the black-faced spoonbill is now one of the most recognized birds in Taiwan. Last year, more than 1.5 million tourists came to watch the bird during its winter stopover in Taiwan.

Black-faced spoonbills face similar threats along their migratory flyway. SAVE hopes to create community partnerships in these countries to ensure the long-term protection of the species.

spoonbill@uclink4.berkeley.edu

FOUNDED IN 1997, SAVE International is a volunteer group of professors, students, and staff from the University of California, Berkeley and National Taiwan University. SAVE's mission is to save the endangered black-faced spoonbill from extinction by protecting the Tsengwen Estuary in Taiwan, the bird's most important wintering site. SAVE (Spoonbill Action Voluntary Echo) is a project of Earth Island Institute. Its members include concerned citizens around the world.

SAVE has enlisted the assistance of grassroots environmental groups, fishermen, environmentalists and important legislators in Taiwan in their cause. From bake sales in Berkeley to top-level governmental meetings in Taiwan, this small, but very active, group has had extraordinary success in affecting key decisions that impact the fate of the black-faced spoonbill.

INTERNATIONAL ADVISORY COMMITTEE

Dr. Y.T. Lee, Chair, Nobel Laureate, Taiwan

Dr. John Byrne, University of Delaware

Dr. Shenglin Chang, University of Maryland

*Dr. Li-Yang Chang, Lawrence Berkeley National
Laboratory*

*Dr. Malcolm C. Coulter, IUCN Specialist Group on Storks,
Ibises and Spoonbills, New Hampshire*

Tom Dahmer, Ecosystems, Ltd., Hong Kong

Randolph T. Hester, University of California, Berkeley

Dr. Chu-Joe Hsia, National Taiwan University

Dr. Keelung Hong, California Pacific Medical Center

Dr. Jeffrey Hou, University of Washington, Seattle

Dr. G. Mathias Kondolf, University of California, Berkeley

Dr. John K. C. Liu, National Taiwan University

*Marcia McNally, Community Development by Design,
Berkeley*

Dr. Deborah Savage, Tellus Institute, Boston

ENDORSEMENTS

"SAVE International's work to help protect the endangered black-faced spoonbill provides a wonderful model for the future of ecological preservation. This rare bird appeared to be a lost species until SAVE intervened with a strategy that combines scholarly research, innovative planning, grassroots economic development, and political action. SAVE challenges the prevailing scientific beliefs about spoonbill habitat needs through a systematic synthesis of research from seemingly unrelated disciplines. Were it not for SAVE's work, and its ability to work with many groups, the spoonbill would certainly be headed for extinction.

Most important to imperiled species everywhere is the fundamental lesson SAVE teaches by example. They have successfully integrated conservation science and local people's needs in a singularly creative way. SAVE's commitment to protecting the black-faced spoonbills, and the rich wetlands that are their home, is an inspiration."

JANE GOODALL, PH.D., CBE

Internationally renowned primatologist and founder of the Jane Goodall Institute

"SAVE International provides an invaluable opportunity for our students to make a real difference in communities, both here in our region and, spanning two continents, in Taiwan. Students present their research, not only to faculty, but also to fishermen, residents and legislators. The real-life impact of their work is tangible and inspiring."

HARRISON S. FRAKER, JR., FAIA

Dean, College of Environmental Design, UC Berkeley

AWARDS

2000 University and Community Chancellor's Award

The award commends those from the University of California, Berkeley and the local community whose joint efforts provide educational, cultural, science, and health resources to enhance the quality of life for local residents. "Save International has expanded our definition of 'community' partnership to encompass our global community."

IRENE HEGARTY

Director of Community Relations, UC Berkeley

2001 "Little Engine That Could Award" from GoodThings Inc., Seattle

SAVE International was formally recognized as the Favorite "Little Engine That Could" honoree in GoodThings, an international e-magazine.

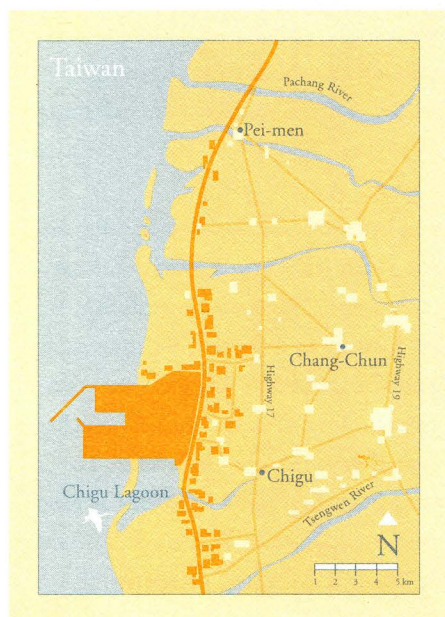
"In 1997, the plight of an odd-looking endangered bird—the black-faced spoonbill—garnered the attention of a small group of students and faculty from the University of California at Berkeley. Its wintering wetland habitat in southwestern Taiwan threatened by plans for development of a major petrochemical plant; the spoonbill became the inspiration for a new grassroots organization, SAVE International. SAVE confirms late anthropologist Margaret Mead's prescient words: 'Never doubt that a small group of thoughtful, committed citizens can change the world.'"

GOODTHINGS INC. WEBSITE

Chiku Lagoon: Last Chance for the Black-Faced Spoonbill

THE ISLAND OF TAIWAN lies about 100 miles (160 km) off the southeast coast of mainland China. It is slightly smaller than the states of Maryland and Delaware combined, about 210 miles (336 km) long and 90 miles (144 km) across at its widest point, with a tropical, marine climate. Rugged mountains dominate the eastern two-thirds of the island, subsiding into flat or gently rolling plains in the west.

Existing Urban Area
Proposed Urbanization



The Binnan industrial complex and associated growth will destroy most of the critical wetlands necessary for spoonbill foraging.

Black-faced spoonbills feed over a large range at night, in only six inches (15 cm) of water. Because of these specialized feeding requirements, only a handful of sites in the world are suitable habitat. Chiku is a critical component of the black-faced spoonbill's survival.

Chiku Lagoon faces these threats from current and proposed development:

Binnan Industrial Complex – Petrochemical Complex Number 7, also known as the Binnan Project, would fill a 4280-acre (1732 hectare) site in the north end of the lagoon. It would include a naphtha cracker (used in the processing of petrochemicals), a steel mill, an industrial port and an oil refinery. Located

near the main roosting site of the spoonbills, the project proposes to fill nearly one third of Chiku Lagoon. Wastewater discharge and air pollution from the complex, as well as industrial and urban development, present a critical threat to black-faced spoonbill habitat.

High CO₂ Levels – The Binnan complex would emit 20.5 million tons of CO₂ annually, equivalent to 18 percent of Taiwan's 1990 CO₂ emissions levels. The proposed municipal incinerator of Tainan County would lie less than 225 yards (206 meters) from the main foraging area.

Water Shortage – Construction of the proposed Meinung Dam, required to divert water to the proposed industrial complex, would divert massive amounts of water. This will reduce flows in rivers downstream, flood two aboriginal villages and important ecosystems upstream, reduce groundwater recharge of several rivers in southern Taiwan, and increase seismic risk in the area. Increased water salinity, temperature changes caused by industry, and pollution would significantly damage the Chiku fishery, which now generates NT \$4.6 billion annually and employs 16,000 people.

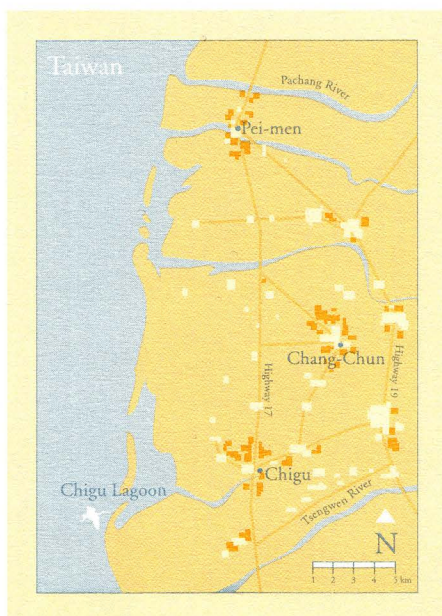
Development & Urbanization – The recent construction of a science park in nearby Sitsao has resulted in the loss of salt ponds and fishponds, preventing the spoonbills and other birds from visiting the area. More urbanization as a result of industrial and road development will cut into critical foraging habitat.

Highway and Road Building – Now under construction, the West Coast Highway will cut across the lagoon, dividing and destroying critical foraging habitat. Traffic and noise pollution from the highway will disrupt the activities of the birds.

No Protection – Black-faced spoonbills are listed as endangered species in Taiwan. Only the core roosting area is proposed for protection.

The harm from Binnan will not stop at Chiku. Air pollution caused by the petrochemical refinery could affect crops in the entire coastal Tainan County, one of the few remaining agricultural regions in the country. An endangered yellow butterfly would also be threatened.

Existing Urban Area
Proposed Urbanization



The alternative plan based on fishing, green industries, and eco-tourism provides for significant growth within existing towns and villages while protecting the most critical spoonbill habitat.

SAVE International has prepared an economic development plan for coastal Tainan County featuring eco-tourism and green industry. It is estimated that investment in tourism infrastructure would generate NT\$14 billion and more than 30,000 jobs, comparable to the proposed Binnan complex. The plan has been so popular that eco-tourism is already booming in Chiku. Through promotion by local organizations and constant media attention, the black-faced spoonbill is one of the most recognized birds in Taiwan. Busloads of tourists come to Chiku to see the birds and the scenery on weekends and holidays. Local restaurants serve as eco-education centers; souvenir and binocular vendors crowd the bird-watching stations. Local fishermen take tourists by boat to see Chiku Lagoon and its barrier islands. Community organizations train tour guides, conduct research on the habitat of black-faced spoonbills, and study the impact of tourism. Last year, more 1.5 million people came to watch the bird during its winter stopover.

Despite Chiku's beauty and the fact that it has become a major draw for tourists, the current

proposed boundary for a Wildlife Protection Area fails to include the primary foraging habitat for black-faced spoonbills and other species.

Taiwanese Vice President Annette Lu believes that citizens are duty-bound to protect the spoonbill. "Tainan County is a marvelous place with a very special natural environment," Lu said in a recent press conference, adding that many of the county's ecological features, particularly the extraordinary maritime ecological scenery in Chiku, deserve protection.

Biologist Vicki Friesen, of Queen's University in Ontario, Canada, anticipates that the black-faced spoonbill will become extinct if the Binnan complex is built. Friesen states that "none of the potential effects are hypothetical – all have been observed in other areas – and few are included in environmental impact assessments."

Chiku fishermen have strongly opposed the Binnan project proposal. Chen Jia Wong, a local fisherman, speaks for his colleagues. "We know how to fish; we don't know how to work in a factory. We can support ourselves without this oil plant." The fishermen resent the media depiction of the area as poor fishing villages in desperate need of jobs. Another fisherman, Liu Sing-Tsia, counters that they don't need jobs as much as they need clean air and water. Says Uncle Au-Long, "We prefer this life. It is not about prosperity."

To have difficulty, or go through a difficult period of life, is expressed in Taiwanese as *chiku*, or to "eat bitterness." Local fishermen, many of whom have already faced great challenges in their lives, are worried that they will have to *chiku* when faced with the prospect of Binnan and other industrial development.

"There can be no doubt that the high-quality habitats at the Tsengwen River estuary are critical to the global survival of the black-faced spoonbill."

TOM DAHMER & MARY FELLE

Wildlife biologist and director, Ecosystems, Ltd. Hong Kong

International Coalition to Save the Black-Faced Spoonbill

CONTACT SAVE INTERNATIONAL in the United States and Taiwan at the addresses below, or visit our website at www.earthisland.org/save.

SAVE International
University of California, Berkeley
Department of Landscape Architecture and
Environmental Planning
202 Wurster Hall

Berkeley, CA 94720
Contact: Sheila Dickie
phone: (510) 642-7722
fax: (510) 642-7560
email: spoonbill@uclink4.berkeley.edu

National Taiwan University
Building and Planning Research Foundation
P.O. Box 23-204
Taipei, Taiwan, ROC
Contact: Kao, Hsu-jen
phone: 02-23660533-101
fax: 02-23660556
email: hsujen@seed.net.tw

The following organizations and individuals are among those who have endorsed SAVE International's campaign to save the black-faced spoonbill. For a complete list, visit SAVE's website at www.earthisland.org/save.

American Bird Conservancy
Black Hills Audubon Society, Washington
Chinese American Environmental Protection
Association, New York
Colonial Waterbird Society
Colorado Bird Observatory
Earthfirst! Journal
Geografica, Portugal
Gray's Harbor Audubon Society, Washington
Green Delaware
Green Korea United
Humane Society of the United States
Humane Society International
International Crane Foundation

International Rivers Network
International Wildlife Coalition
Donald Kennedy, President Emeritus and Bing Professor
of Environmental Studies, Stanford University
Leavenworth Audubon Adopt-a-Forest, Washington
Linnaean Society of New York
Maine Audubon Society
Marine Endeavors
National Audubon Society
National Park Association of New South Wales,
Australia
Natural History Museum of Los Angeles County
New Jersey Audubon Society
North American Engineering Association
Dr. Mitchell Northcott, New College, University of
Edinburgh, Scotland
Pacific Environment and Resources Center
Pacific Seabird Group
Rainforest Action Network
Rivers Council of Washington
Rocky Mountain Institute
Salmon Protection and Watershed Network
Save San Francisco Bay Association
Sea Turtle Restoration Project
Sierra Biodiversity Institute
Sierra Club
Spokane Audubon Society
Taiwanese Association of America
Taiwanese-Canadian Association
Urban Ecology
Vancouver Audubon Society
World Endangered Species Protection Association
World Nature Association

"Taiwan is a beautiful piece of the earth. It needs to be taken care of. Its rivers need to be protected, not dammed and filled with sediments. We can do something about the future. We can't do much about the past except enjoy some of the parts and regret other parts. But we can make sure that we give a break to the future."

DAVID BROWER
Conservationist and founder of
Earth Island Institute

spoonbill@uclink4.berkeley.edu

