

INTERNATIONAL CONSERVATION

NEWSLETTER

Vol. 10, No. 1

◆ March 2002 ◆



Published by Society for Wildlife and Nature

WCPA Fourth Conference on the Protected Areas of East Asia

The Fourth Conference on the Protected Areas of East Asia, convened by the IUCN World Commission on Protected Areas (WCPA), was held over six days in Yangmingshan National Park, Taipei, Taiwan from March 18, 2002. Those present included representatives from 19 countries and areas around the world, including Australia, Bhutan, Canada, China, Hong Kong, Indonesia, Japan, Macau, Malaysia, the Mongolian People's Republic, North Korea, the Philippines, South Korea, Sweden, Thailand, the United States of America, and Taiwan. Under the main theme of "Benefits Beyond Boundaries in East Asia", the conference discussed such issues as the conservation of high-mountain ecosystems, the conservation of marine ecosystems, the socio-economic aspects of protected areas, improving the management of protected areas, and strengthening and enforcing key

implementation mechanisms and international conventions and agreements.

During the conference, discussion focussed on whether or not a Marine Protected Area should be established at the Dong-Sha atoll (Pratas), which has abundant marine resources, including coral reefs. Regarding this issue, conference representatives presented papers highlighting four major points that must be addressed: firstly, the need to extend Southeast Asian coral reef reserves and networks because only eight percent of coral reefs within this area are currently preserved in Marine Protected Areas; secondly, the need to reduce negative impact from overfishing through effective management and by providing fishermen with alternative means for earning a living; thirdly, the need to restrict international trade in live corals; and fourthly, the need to effectively improve management of existing Marine Protected Areas through the consolidated efforts of government, NGOs and the tourism industry.

Post-conference discussion focussed on the need for relevant groups and individuals in East Asia to realize the importance of protected

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areas to the people of East Asia. In particular, attention was needed:

1. To review the range of protected areas within East Asia and ensure that use is made of the full range of IUCN protected area categories;
2. To facilitate the establishment of important Marine Protected Areas, such as Dong-Sha atoll (Pratas) as recommended in “Global Representative System of Marine Protected Areas (Great Barrier Reef Marine Park Authority, World Bank and IUCN, 1995)”, the “Coral Reefs and Mangroves of the World (WCMC, 1996)” and the

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“Large Marine Ecosystems of the World (IUCN, 2001)”;

3. To promote research and data gathering about protected areas, including the development of networks and systems for the better collection and use of such information;
4. To boost the training of protected areas personnel at all levels, through local, national, and regional programmes;
5. To increase public awareness and support for protected areas at all levels, particularly through educational programmes and sustainable ecotourism, as well as clearer demonstration of the many benefits that such areas provide to society and through the more effective involvement of local communities in protected areas;
6. To strengthen and enforce national protected areas legislation, and make full use of international conventions and agreements affecting protected areas, such as the Agenda 21, Convention on Biological Diversity, the Ramsar Convention, the World Heritage Convention, and the Biosphere Reserve concept;
7. To improve the management of the protected areas, particularly through provision of adequate financial and human resources, and involvement of local governments, local communities, non-governmental organisations, and private sector as appropriate;
8. To consider planning and management of protected areas at broader scales so that

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protected areas are managed as integral elements of regional planning, including integrated coastal management, rather than as 'isolated islands', using measures such as green corridors, buffer zones, and potentially conservation corridor at national scale;

9. To expand cooperation on protected areas within and beyond the region, such as through exchange programmes and cooperative research on endangered species, habitat restoration and as appropriate informal and formal trans-boundary alliance; and,
10. To engage indigenous and/or aboriginal people into knowledge, planning and management system of protected areas.

The conference agreed:

1. To encourage governments and other potential sources of assistance to continue to support the central role of the Regional Steering Committee for WCPA in East Asia in ensuring implementation of the Regional Action Plan and other associated activities;
2. To strengthen and develop the WCPA network in East Asia, through an active programme of international cooperation, so as to help secure protected areas in the region and at the global level;
3. To participate fully in the preparations for the 5th World Park Congress, to be held in Durban, South Africa in September 2003, as well as in the Congress itself;

4. To further collaboration generally so as to give regional leadership in this vital area of human endeavour;
5. To facilitate core participation of indigenous and/or aboriginal peoples in our discussions and meetings; and,
6. To participate, as appropriate, in the International Year of Mountains 2002, and meet in China in 2004 and Hong Kong in 2005.

Source: The Yangmingshan Declaration, Mar. 21, 2002.



Conference on the Management of Black-faced Spoonbill Conservation Areas

The Conference on the Management of Black-faced Spoonbill (*Platalea minor*) Conservation Areas took place on March 16 and 17, 2002 at Kunshan University of Science and Technology in Tainan. Attended by over 100 people, the conference was organized by the Tainan County Government, supported by the Council of Agriculture and assisted jointly by the ROC Wetlands Preservation League, the Black-faced Spoonbill Conservation Society of Tainan County, Tainan City Environmental Protection League, Tainan County Environmental Protection League, and Kunshan University of Science and Technology. Discussion focused on the issues of black-faced spoonbill ecology and habitat,

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the management of conservation areas, local development and conservation areas, participation in conservation by community and enterprise, and other topics.

During the conference, the Tainan County magistrate Mr. H. C. Su announced that 300 hectares within a 407-hectare Major Wildlife Habitat Area would be designated as a black-faced spoonbill reserve.

Those present at the conference came to the consensus that management of black-faced spoonbill would be based mainly on the principles of controlling water levels and food resources. Furthermore, it was agreed that local residents should be consulted and their experiences considered in the planning of relevant details so that a win-win situation might be created for the black-faced spoonbill, its habitat and the local tourism industry. It was decided that the primary aim of the black-faced spoonbill reserve should be to conserve the species, with the secondary aims of promoting environmental education, academic research and eco-friendly leisure activities. It is hoped that local economic progress can be made without sacrificing conservation of the natural environment.

According to results of initial research, over the past 10 years, black-faced spoonbill populations have continued to grow at a rate of 12.9% each year. In order to meet the future habitat requirements of increased numbers of black-faced spoonbills and other bird species,

those at the conference insisted that the reserve's long-term goal should also include enlarging the reserve's area to meet these needs; however, it was agreed that this would require assistance and participation by the local community, including fishermen, in the management of the reserve.

As for leisure activities, it was agreed that the reserve could be used to stimulate local development and, under careful conservation principles, resources could be used to organize leisure activities, thus increasing the willingness of local community members to participate. Already, residents of the Chiku area have started using spoonbill to develop their own commercial leisure activities and it is hoped that the black-faced spoonbill reserve can be used to develop ecotourism at an international level. Plans are being made to establish a national scenic area at Dachiku and various meetings will be held to hear the views of all concerned.

The conference also emphasized the need to consolidate government, non-government and expert opinion to investigate the feasibility of establishing NGOs, foundation committees or other possible frameworks for the promotion of conservation work. Because no local residents were present at the March conference, the organizers said they would visit Chiku and other relevant areas in the future to hold meetings with local people to understand their needs and encourage them to take part in the management of the spoonbill reserve.



Steps Taken to Conserve Whale Sharks in Taiwan

In mid-April 2002, the Fisheries Administration (FA), Council of Agriculture, and National Taiwan Ocean University began a project for the sustainable use and management of Whale sharks (*Rhincodon typus*). The project is being undertaken in three stages: a survey of whale shark catches in Taiwan, research into the biology of whale shark fishery, and the release into the wild of whale sharks that have been tagged with satellite telemetry markers. The whale shark tagging and release phase is the first time that Taiwan has used satellite telemetry equipment to study the migratory patterns of whale sharks.

The first step in the tagging and release project took place off the coast of Sanhsientai, Taitung County, in southeast Taiwan. Satellite telemetry equipment was attached to a young whale shark that had accidentally entered a set-net (trap net). As the young whale shark rose slowly to the surface, set-net fishermen had to aim a harpoon accurately at the whale shark's back so that the mechanism for attaching the satellite telemetry tag was secured to the front part of its dorsal fin. At the other end of the attachment mechanism, a fine metal wire allowed the satellite telemetry tag and sonar transmitter to be attached to the whale shark without impeding its movement. The sonar transmitter is capable of recording the water

temperature, water pressure and the swimming speed of the whale shark. This data is transmitted to researchers via echo-sound. After tagging was completed, divers entered the water to determine whether the telemetry tag was operating properly. Then the entrance to the set-net was opened and the young whale shark was led out of the net.

The first step of the tagging project was conducted successful. Now, the next stage of the project will be for Dr. S. C. Chuang of the Fisheries Science Department at National Taiwan Ocean University to monitor and analyze data gathered from the whale shark tag. In addition, during the second half of this year, a second whale shark will be tagged. The tagging and release project will be undertaken over three years. The tagging phase of the project is expected to be completed by next year.



Virgin *Taiwania* *Cryptomerioides* Forest Revealed

Several months ago, the Department of Ecology of Providence University undertook an investigation of the area around Shuangkuei Lake in Taitung and Pingtung counties in southeast Taiwan, in which they confirmed 25 years of unconfirmed reports of the existence of virgin *Taiwania Cryptomerioides* forest. The researchers made public their discovery of the

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virgin forest, attracting the attention of Taiwan's forestry authorities, academia and mountain climbing enthusiasts. The Council of Agriculture has defined Shuangkuei Lake area as the 'Shuangkuei Lake Major Wildlife Habitat' and, in the future, the area will be designated a wildlife refuge.

Taiwania Cryptomerioides is a 'living fossil' plant species—a sole survivor from the tertiary period. Like *Metasequoia glyptostroboides* Hu et Cheng, *Ginkgo biloba* and other ancient flora, *Taiwania Cryptomerioides* is a rare and endemic species. During the eight-day study, Ecology Department director Dr. Y. F. Chen of Providence University estimated that the area of land covered by the *Taiwania Cryptomerioides* forest around Shuangkuei Lake measured around 1,300 hectares and that the age of some of the specimens was at least 1,000 years or more. Dr. Chen called on the Council of Agriculture to use relevant laws and regulations and allocate manpower to strengthening measures to conserve the area.

However, according to forestry authorities, the Taiwan Forestry Bureau had already discovered groups of *Taiwania Cryptomerioides* at elevations of between 1,800 and 2,200 meters as early as the year 2000. Furthermore, members of the Rukai indigenous people living around Shuangkuei Lake said that the *Taiwania Cryptomerioides* forest at Shuangkuei Lake had been a part of their lives for many generations and that the reason they had not publicized its existence was in order to

preserve the forest and protect it from illegal logging activities. In spite of this, forestry authorities said that researchers would enter the mountain area and undertake a detailed one-year survey of the *Taiwania Cryptomerioides* forest using GPS equipment in order to establish accurate data on this valuable *Taiwania Cryptomerioides*.



New Fish Species Discovered at Lanyu

Lanyu, also known as Orchid Island, is located some 62 km off the southeast coast of Taiwan along the warm Kuroshio Current. The island has a wide range of fish and coral resources, as well as an interesting underwater topography. In particular, Lanyu is a valuable habitat and transit point for many economically valuable fish species on their migratory routes. During a survey of the area's ocean and freshwater fish species in April this year, a research party from the National Museum of Marine Biology Aquarium (NMMBA) discovered two new fish species of genera: *Trimma* and *Eviota* from the Gobiidae family, as well as more than 30 fish species that were found in Taiwan waters for the first time, including *Pseudamia hayashii*, *Chromis leucurus* and *Pseudoplesiops knighti*.

The director of the NMMBA's planning and research department, Dr. Y. H. Chen, said that there are more than 100 species of Gobiidae throughout Taiwan. At present, Gobiidae are

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the smallest vertebrates in the world with body lengths of just 1 to 10 cm. The two new species discovered at Lanyu both measured just two centimeters. Gobiidae play an extremely important role in coral ecosystems, rather like fireflies in aquatic environments on land.

In addition to finding the new fish species, the researchers also observed extensive damage to the aquatic environments of Lanyu Island. Of the six small rivers and creeks on the island, the riverbeds of at least four have been covered with concrete, causing the rivers to lose their original silt beds. Not only has the number of freshwater Gobiidae decreased by 50%, but other aquatic species are being lost too. Consequently, the issue of species conservation in Lanyu requires urgent attention.

♣ Miaoli Sanyi Huoyenshan Nature Reserve

Introduction to Taiwan's Nature Reserves



Located along the central west coast of Taiwan, Huoyenshan in Sanyi, Miaoli County features unique rock formations. The area was originally a gravel and red clay plateau;

however, after being bisected by the Ta-an Creek, Huoyenshan has continued to erode away and crumble in places, creating natural cliffs, gravel layers, pebble rivers, underground streams and other strange geological features. The area incorporates the largest area of natural Chinese red pine (*Pinus massoniana*) forest in Taiwan. In order to preserve the natural geological features of the area and conserve the original Chinese red pine forest, the Miaoli Sanyi Huoyenshan Nature Reserve was established.

The Huoyenshan area is the product of dramatic seismic movement. The geology belongs to the quaternary Toukoshan formation or Tokazan series (including Huoyenshan and Hsiangshan), the red clay plateau deposited strata, terrace strata and the modern alluvium. The highest peak in the range is Huoyenshan at an elevation of 602 meters. The lower Tokazan beds consist mainly of sandstone and shale, intercalated with pebble bands. Thin layers of sandstone are sandwiched between thick layers of gravel, making the geology relatively fragile. Due to the ongoing effect of wind erosion, the topography has completely disintegrated; however, due to erosion by the rain, the sheer edges have been worn smooth, while the upper part of the outer face forms sharp, jagged peaks. The interior of the deep valley on the southern face is strewn with pebbles. Normally, the valley is dry, resembling a pebble river. These geological features are extremely unique in Taiwan. The topography and geology of the Reserve are extremely fragile and easily

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affected by flooding caused by torrential downpours.

In addition to Chinese red pine, the Reserve also includes pines, Taiwan acacia (*Acacia confusa* Merr.), Formosan sweetgum (*Liquidambar formosana*), the Chinese tallow-tree (*Sapium sebiferum* (L.) Roxb.), *Gordonia axillaris* (Roxb. ex Ker.) Dietr., as well as other types of broadleaf forest and various fern species. The animal resources of the Reserve are relatively simple. The most commonly seen species are the Red-bellied tree squirrel (*Callosciurus erythraeus*), Moltreche's green tree frog (*Rhacophorus moltrechti* (Boulenger)), the Brown tree frog (*Rhacophorus robustus* (Boulenger)), tree-climbing lizards and others.



Obituary: Mr. Adan W. Dulo

With much sorrow, we regret to report the death of Mr. Adan Ware Dulo, director of the Lusaka Agreement Task Force.

Mr. Dulo died in a tragic road accident while returning from work in Kenya's Isiolo region during the evening of 8th March. He was laid to rest in Kariakor Muslim Cemetery in Nairobi, on the afternoon of 9th March.

Mr. Dulo provided many of us with a model of good-will, integrity, modesty, competence and devotion to duty. His many professional accomplishments will become his legacy. The accomplishment he valued most was, in more than a dozen years of running covert operations in close-quarters with some of the most ruthless criminals in Africa, he never lost an officer.

Mr. Dulo was fully committed to enforcing laws that protect wildlife and habitats.

That was the essence of his being. Those of us who admired Adan, can best pay tribute to his greatness by emulating his good example.

May he rest in peace.



International Conservation Newsletter

Publisher: Ping-shi Yang

Editor-in-Chief: Dr. Ling-ling Lee

Editors: Chen Chien-Chih

Halima Dick

Publisher & Editorial Office:

Society for Wildlife and Nature
(SWAN)

Add.: No. 25, Alley 5, Lane 79, Hsiu-ming Rd.
Sec. 1, Wen-shan District, 116, Taipei
Taiwan, ROC

Tel: +(886-2) 2936-2832

Fax: +(886-2) 2937-6455

Email: swanint@eagle.seed.net.tw

Website: <http://swan.zo.ntu.edu.tw>

Printed by: Cheng-fong Art Printing Co., Ltd.

Add.: No. 28, Alley 1, Lane 458, Yungho Rd.,
Chungho City, Taipei Hsien, Taiwan,
ROC.