

INTERNATIONAL CONSERVATION

NEWSLETTER

Vol. 17 No. 2



Jun. 2009



Published by Society for Wildlife and Nature

Legislature Prohibits Trading of Live Protected Wildlife

The legislature passed third reading on June 12 to revise the Wildlife Conservation Act to prohibit trading of live protected animals. DPP legislator Tien Chiu-Chin proposed amendments to the law. It was stipulated in Article 35 of the law that “Protected Wildlife, Endangered Species or Rare and Valuable Species products shall not be traded, displayed nor exhibited in public areas without the permission of the Authorities.”

A legal case about a turtle raiser in Pingtung prompted Tien to propose revision to the law. The turtle raiser was found “not guilty” because Pingtung District Court believed trading of the “products,” instead of the “living body” of protected wildlife, was a legal offense. The court ruling raised Tien’s concern because violators to the law were not punished as they should. In addition, Tien criticized the law not being able to embody the true spirit of wildlife protection.

The recent amendment to the law now stipulates that “without getting approval from the competent authority, protected wildlife species and their products can not be sold, or exhibited, displayed in public places.” Violators to the law will be liable for either a prison sentence of 6 months up to 5 years, or a NT\$300,000 up to NT\$1.5 million fine.



Documentary on Chinese Moccasin Receives Global Honors

A 24-minute documentary on Chinese Moccasin (*Deinagkistrodon*) by the Endemic Species Research Institute under the Council of Agriculture (COA) had won global honors. The documentary received Honorable Mention from the jury of IWWF awards on “Cultural Presentation of Information,” “Scientific Content” and “Cinematography” categories.

The documentary tells from aborigines’ points of view and intertwines the story with sufficient biological knowledge to the moccasin

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species. The Chinese Moccasin, also known as the hundred pacer snake because it is said that the person who gets bitten can only walk about a hundred paces before he or she falls dead, has long had a vicious image among the public, which has made conservation of the species difficult. Therefore, making people understanding the animal, the institute believed, would pave the way for better conservation.

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And it all started 3 years ago, when Chen Jian-ming, Director of the Institute's Medium Altitude Experimental Station in Taoyuan Township, Kaohsiung County, received a pregnant Chinese Moccasin from a local resident. The female snake gave birth to 21 offspring. The snakes are believed to be on the brink of extinction, the same as the Rukai tribal culture, of which the Chinese Moccasin is the sacred symbol. Therefore, the institute wanted the documentary to be shot from the aborigines' points of view and it also wished to weave in the knowledge of the protected wildlife.

In the documentary, the vicious Chinese Moccasin is incarnated as a Rukai aboriginal girl figure. This snake totem animation tinted with Rukai music fully embodies a beautiful love legend. Audiences will obviously be moved to witness Chinese Moccasin to undergo ecdysis, incubation and hatching. By incorporating the Rukai legend into the moccasin conservation, the documentary attempts to rid people of their existing bias against the Chinese Moccasin.



Chinese Crested Tern Makes First Appearance in Matsu This Year

A Chinese Crested Tern (*Thalasseus bernsteini*) made its appearance in Matsu while breeding among Greater Crested Terns (*Thalasseus bergii*). On June 17, while

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conducting an ecological survey, a staff of Matsu County's Construction Bureau made first spotting of the bird in Matsu Islands Tern Refuge this year.

Chang Shou-hua, the bird spotter, said only one bird was spotted on site, but while later flipping over photos, another 2 were also found breeding there. There were, according to Chang, at least 2 nests of Chinese Crested Terns found breeding in the refuge.

Ever since 2000, when the legendary Chinese Crested Terns were found in the refuge, the place has attracted bird watchers from around the globe. At last years' international conference dedicating to seabirds conservation of the Pacific region, wild bird experts had included the Chinese Crested Tern conservation into one of their most important agendas. According to the experts, the bird faced serious threats of extinction because annual spotting of the bird fell to around one to a dozen.

The Matsu Islands Tern Refuge includes 8 uninhabited coral reef islands. Every year from April to September, people need approval from authorities to go to the islands. According to the Construction Bureau, violations to the Wildlife Conservation Act will be liable for a fine between NT\$50,000 and up to NT\$250,000. If legal offenses of illegal hunting or killing of protected wildlife are found, people will face

prison sentence, starting from 6 months, up to 5 years. The Bureau made bid to the fishing industry and individuals from both sides of the Taiwan Strait to take notice and avoid breaking the law.



Taiwan's Endemic Hwamei Threatened by Hybridization

Taiwan's endemic Hwamei population faces serious genetic pollution from hybridization with its Chinese counterpart, according to a cooperative project of the Endemic Species Research Institute under the Council of Agriculture (COA) and the Department of Life Science at National Taiwan Normal University (NTNU).

Due to their melodious whistling, the Chinese Hwamei (*Leucodioptron canorum*) have been introduced to Taiwan as pets and competition birds. Some of them, either fled away or simply being abandoned by their owners, ended up breeding with their Taiwanese counterparts, the Taiwan Hwamei (*Leucodioptron taewanum*). The Endemic Species Research Institute first discovered the problem during its field trips. It then realized how serious the bird's genetic pollution has become after it monitored the bird's behavior and gathered molecular genetic evidences to confirm its observation.

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Starting from 2002, the institute has worked with Professor Li Shou-Hsien of Department of Life Science at NTNU, to closely monitor the hybridization of Taiwan Hwamei and Chinese Hwamei. Experts adopted DNA microsatellite, along with SNPs and mtDNA, as molecular genetic markers, to sieve through 69 specimens. They found out that at least 14 of them were hybrids. Among them, 12 were identified as “double cross hybrids.” However, only 8 could be identified, through their physical characteristics, as hybrid offspring. The study confirmed that some hybrid offspring still possessed breeding ability, which would make the threat appear more appalling.

Director of the Endemic Species Research Institute Tang Hsiao-yu urged the general public not to introduce exotic species into Taiwan, nor abandon them. Tang hoped to preserve Taiwan’s endemic Hwamei from hybridization which would dilute the gene pool of the bird and could be a disastrous long-term threat to the integrity of the species.



Indo-Pacific Humpback Dolphin Population Dwindles to 103 on the West Coast

The adult population of Taiwan Strait’s Indo-Pacific humpback (*Scousa chinensis*) has dwindled to 103 on Taiwan’s west coast, according to a survey conducted between 2006

and 2008 by Chou Lien-Siang, Professor of Department of Life Science at National Taiwan University. The survey was commissioned by the Taipower to raise public concerns over protection of the species.

Environmental groups raised their concerns about the impacts coastal development projects along the west coast have had on the Indo-Pacific humpback population in the area. In response, the Environmental Protection Administration (EPA) invited experts on June 1 to discuss the problem, and hopefully to reach consensus on the issue.

For the project, Professor Chou Lien-Siang conducted 45 round trips to the sea and 45 round trips, about 235 hours, on the shore. She witnessed 54 pods, a total of 259 dolphin appearances, during her sea trips. When watching at bay, she saw 20 pods, a total of 59 dolphin appearances, approaching 20 to 800 meters close to the shore.

One hundred and three adult Indo-Pacific humpbacks were identified along the west coastal Taichung and Chiayi Counties between 2006 and 2008, she said. She also found out, through questionnaires handed out to fishing individuals and vendors near Wuci, Lishuei and Lunwei harbors, that all of them had previously witnessed dolphin appearances. She concluded, through information compiled, that people basically see the Indo-Pacific humpback all year around, on monthly basis.

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For an Indo-Pacific humpback to become mature, it usually takes 10 to 12 years. And the dolphin breed on an interval of 3 to 4 years for only a single offspring. The dolphins are particularly vulnerable to human threats because they often live on offshore and shallow waters.



Lost Taiwan Endemic Appears Again 30 Years Later in Kenting

Myrmexocentrus quadrimaculatus, a Taiwan endemic longhorn beetle, lost for 30 years, appeared again in Kenting. According to existing record, the species was first discovered by a Japanese national K. Suzuki in Kenting in 1980. Followed by 1983 when a Japanese longhorn beetle expert Masao Hayashi declared it as a Taiwan endemic species. The one-centimetered spherical female beetle was later made into specimen and placed in Japan's national science museum. For more than 30 years on, there has not been another discovery dated. Jhong Yi-ting, a technical specialist working at Kenting National Park Headquarters' Conservation Research Section, when making the routine inspection rounds in the park, discovered an endemic male beetle which had just completed eclosion.

Compared with Hayashi, Jhong appeared to have more luck with the confirmed *Myrmexocentrus quadrimaculatus*. Jhong was able to make record of its characteristics by

observing the beetle while it was still alive. Hayashi, on the other hand, depended on specimen to make classification of the beetle because it had long been dead. Hayashi also concluded the beetle not having flying ability because the specimen was found to have retrograded hind wings.

However, the male beetle that Jhong discovered had longer legs and better abilities to move around. It climbed longer distances in shorter time span. It flew well and quickly. In addition, because it disliked strong light, it found shelters in withered leaves and cracks to timbers. It was said to be nocturnal and prone to phototaxis.

The beetle, after discovered dead following its normal life span of one month, was made into a specimen and preserved at the National Museum of Natural Science in Taichung. Jhong hoped that there will be systemic research in the future to discover and confirm the existence of those species that had existed in the literature but have not been found for quite some time. And hopefully, more conservation efforts will be made available to them.



Taiwan's Fairy Pitta Bird-watching Paradise Well-known to the World

The Fairy pitta (*Pitta nympha*) – living mainly on low-altitude forests – suffered from population loss because their habitats have been

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over-developed by humans. According to BirdLife International, the Fairy pitta is estimated to have a population of only a few hundreds around the globe. The birds' main habitats are in the Borneo, Malaysia. They fly over to Taiwan in summer and to Japan, Korea and eastern coast of China in winter, to breed.

It has never been easy to watch the bird closely because, first of all, they are few in number and often live on the lower part of forests. People, however, find a bird watching paradise in Hu-ban Village, Linnei Township, Yunlin County. Hu-ban Village boasts one of the most popular breeding sites for the Fairy pitta. The Endemic Species Research Institute has previously set up a station for research there.

Last year alone, about 80 Fairy pittas flew over to Hu-ban Village. Between May and July, the village attracted more than 300 global bird watchers from Great Britain, Canada, Netherlands, Chile and Japan.



***Varicorhinus Alticorpus* Not Listed as the Protected Species**

Varicorhinus alticorpus and the marbled eel (*Anguilla marmorata*) had their status removed from the Council of Agriculture's (COA) recent amended List of Protected Species.

The COA makes revisions every 2 years on its List of Protected Species. In March, a committee formed by a group of scholars, experts and conservationists discussed the wildlife status and made revisions to the list.

Following conclusions made in the committee, the COA declared, starting from April 1, to remove *Varicorhinus alticorpus*, also known as the deep-body shovelnose minnow, the sharp-jaw barbell, or Taiwan Ku fish and the marbled eel from the list. The Forestry Bureau, which has overseeing duty of the list, pointed out that the two species have undergone tremendous growth in population in eastern part of Taiwan and in rivers down south under competent authorities' effort to protect the rivers and establish refuge sites. The decision was made following experts' assessment into the species' habitats and their population number.



2009 National Energy Conference to Implement More Efficient CO₂ Cut

The 2009 National Energy Conference invited 205 representatives from sectors of traditional industries, new energy industry, important think tanks, environmental groups, social groups and the administration in Taipei on April 16 to discuss how to limit greenhouse gas emission to 2008 annual level in the following 7

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to 10 years, and to lower gas emission to that of 2000 level by 2025.

According to a study of the Industrial Technology Research Institute, the CO₂ emission in Taiwan, from 1990 to 2006, has increased at an annual 5.4% growth rate to 133%, accounting for 1% of the global emission. In 2006, the average emission of Taiwan was 13.9 tons per person, tripling the global average emission of 4.48 tons. These facts have led Taiwan to decide on lowering its overall CO₂ emission. As international meetings on global climate change continue to make progress, Taiwan will need measures to adjust its goal on CO₂ cut.

In the conference, 4 conclusions were reached. First of all, on levying energy tax under the neutral tax revenue principle. In Taiwan, the electricity price is the third lowest in the world, and the oil price is far lower than its neighboring Asian countries. Only by levying tax on energy will make sure that pollutants pay for the costs. It will also allow oil and electricity prices to stay at reasonable level, and pave the way to develop renewable energies and related energy saving technologies.

Second, on applying market mechanism of Cap & Trade for more efficient CO₂ cut. The Greenhouse Gas Emission Reduction Act, which has been under review in the Legislative Yuan, however, was not able to meet public

expectation. Participants to the conference, therefore, urged to enact a basic act on sustainable energies, which is expected to top the legal hierarchy in relation to the Greenhouse Gas Emission Reduction Act. In addition, participants proposed to make a binding package of the Greenhouse Gas Emission Reduction Act, the Energy Management Act, the Energy Tax Act, the Statute for Renewable Energy Development so that the government will be able to implement its CO₂ cut policy.

Third, on investing new energies and establishing a low carbon infrastructure. The government previously promised to mobilize its administrative and legislative branches to pass the Statute for Renewable Energy Development in this session. It had also declared its policy on implementing rooftop solar energy for around 100,000 households, building intelligent network, and developing lithium battery technology. However, in the meeting, there was still no consensus reached on the exact ratio the renewable energy shall account for Taiwan's overall electricity power supply.

Last but not least, on adopting more strict energy saving standards. It will include issuing a energy saving passport to housing project and establishing power cost standards, which will go in sync with the world by 2015. As for vehicle and motorcycle power cost standards, the figure

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is expected to increase by 15% to 30% by 2015. For industries as a whole, they are expected to increase work efficiency by 2% to lead revolution on energy saving for a far lower energy density of less than 50% by 2005.

Thus, 4 conclusions were reached in the meeting, which included raising energy saving standards, providing incentives for use of renewable energies, putting greenhouse emission under control, and levying energy tax under the neutral tax revenue principle. Two issues, however, remained unsettled in the meeting. First of all, should Taiwan change its current industrial structure to meet changes to its energy supply? Second, should nuclear power be served as an option to Taiwan's energy supply?

Daigee Shaw, President of the Chung-Hua Institution for Economic Research, said there were 11,900 L oil equivalent of total energies consumption in Taiwan, 51% on industrial sector, 12% on transportation, 11% on service-providing sector and 11% on housing sector. The industrial sector, he pointed out, had topped on energy consumption, but only accounted for 31% of the overall GDP in Taiwan.

Lin Sheng-chong, former councilor of National Council for Sustainable Development, said the government will need to carry out environmental assessment on high energy-density sectors. He also proposed to

implement energy management plan on big energy consumers.

As for nuclear issue, Premier Liu Chao-shiuan stressed, in his closing speech, for the nuclear power plants already in operation and for those which will soon be operating, they are options for Taiwan to put in its bid to cut CO₂ emission. Regarding the nuclear issue, there was no consensus, except with regards to nuclear safety, reached in the meeting.



International Conservation Newsletter

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Publisher & Editorial Office:

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