



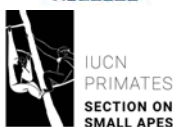
Hainan Gibbon Case Study

Effectively Saving a Critically Endangered Species – *Nomascus hainanus*

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HAINAN GIBBON



The Hainan Gibbon Case Study

Effectively Saving a Critically Endangered Species

Background:

Gibbons are the smallest and fastest of all the apes. Like all apes, they're extremely intelligent, with distinct personalities and strong family bonds. Unfortunately, the current conservation status of gibbon species is alarming, all 20 species have a high risk of extinction. Hainan Gibbon (*Nomascus hainanus*), Critically Endangered on the IUCN Red List, is a distinct species to Hainan, where it survives only within Bawangling National Nature Reserve (BNNR).

With the increasing awareness of global ecological conservation, BNNR was established in 1980 to rescue and revival Hainan Gibbon, and in 1988, the gibbon was listed as First Class National Protected Animals in China. After decades of unremitting efforts, especially with less manual intervention and fully based on its own naturally recovery, in the absence of local catastrophe (such as disease, typhoon etc.) the population has grown to more than 30 individuals now. The remarkable conservation efforts allow this small ape to show a slight increase population, while the other 19 Gibbon species are declining.

Hainan Gibbon International Conservation Symposium was held on Aug 20-21, 2020 and forged an ambitious, scientific and widely recognized goal----double the population of the species within 15-20 years mainly based on nature solutions and supplemented by scientific technology, under the premise of strengthening conservation and no major natural disasters, to further reached the estimated Minimum Viable Population sizes. On the opening ceremony, Dr. Jane Smart, Global Director of IUCN's Biodiversity Conservation Group and Director of IUCN's Global Species Programme, proposed that Hainan Gibbon should be regard as an international case study and exhibit in CBD COP 15 or IUCN WCC to contribute to the recovery of other Gibbons, primates and even all critical endangered mammals.

In the end of 2020, the idea of initiating a case study on Hainan Gibbon was in its embryo stage between Eco Foundation Global (EFG) and Hainan Institute of National Park (HINP). Early 2021, EFG; HINP and IUCN SSC PSG Section on Small Apes (SSA) officially started to prepare the case study project. Experts from China Exploration & Research Society, Guizhou Normal University, Kadoorie Fram and Botanical Garden, Re: Wild, Sun-Yat Sen University, Wild Foundation and Zoological Society of London joined the drafting team. Ms. Li Cong, Dr, Martin Holdgate; Mr.Vance G. Martin; Dr. Jane Smart, Prof. Jiang Zhou also made a crucial contribution to this report.

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Note: Names and logos are in alphabetical order

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Hainan Gibbon Case Study: Effectively Saving a Critically Endangered Species – *Nomascus hainanus*

Summary

The Hainan Gibbon (*Nomascus hainanus*) is the most endangered of all the gibbons and is the world's rarest primate; from 7-9 individuals remaining at Bawangling in 1980, and the population gradually grew to 5 families with 35 individuals in 2021. It is endemic to the island of Hainan and is currently found only in a single forest patch in a single protected area, the Bawangling sector of the Hainan Rainforest National Park. The story of decline of the species, the efforts to save it and its recent start on a possible path to recovery may serve as an informative case study for efforts to save other species on the brink.

The Hainan Gibbon is one of 20 remaining species of gibbons that have been recognized by science. Gibbons are found only in Asia in a total of 11 countries: Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Lao PDR, Malaysia, Myanmar, Thailand, and Vietnam. Gibbons are among the groups of primates of highest conservation priority. All gibbon species are threatened with extinction, and 5 species are considered to be Critically Endangered, including the Hainan Gibbon. Habitat destruction (including habitat deterioration and fragmentation) are the highest threats to the survival of gibbons. In addition, gibbons are hunted for meat and to capture infants for the pet trade. Their loud calls make their presence obvious to hunters, so they are easy prey. Since gibbons hardly ever travel on the ground, they require dense forests for their survival, and even narrow gaps in the canopy can fragment populations into isolated patches. Gibbons are highly dependent on pulpy forest fruits, which means they can only survive if they have access to mature forests with high plant diversity. Gibbons are a slow breeding species and populations take decades to recover from losses. A single incident of hunting or destruction of a key patch of forest can be the beginning of the end for a small population.

Yet gibbon species are well-worth saving. They are remarkable animals in many ways. Gibbons are Small Apes (the family Hylobatidae), not monkeys, and are relatives of the more familiar Great Apes. They live exclusively in the tree tops of tropical and sub-tropical forests in Asia, although historically gibbons were recorded from as far north as the Yellow River in China and perhaps beyond. Gibbons are highly territorial and typically live in small monogamous family groups with a single adult female and single adult male. Among the Crested Gibbons (genus *Nomascus*), which includes the Hainan Gibbon, males and females have very different coloration. All gibbon species also produce remarkably loud and complex songs, different in males and females and typically delivered as a morning duet with well-coordinated male and female contributions.

Gibbons have been important in Chinese culture for millennia, appearing in art as far back as the Eastern Zhou period (4th-3rd century BCE). Their hauntingly beautiful calls were often mentioned in Chinese poetry, especially during the high classical period. Yet, despite the cultural importance, gibbons and their habitat gradually disappeared from northern and eastern

China. This must have meant the extinction of several gibbon species, at least one of which has been identified and named from archaeological material.

The Hainan Gibbon is different from all other gibbons in its song, colouration and appearance. It deserves to be protected as a unique evolutionary lineage. There is also increasing understanding of practical reasons to support gibbon conservation as well. As global attention turns to the need to restore tropical forests for the biodiversity and ecological services they provide, including carbon storage, the ecological role of gibbons as key dispersers of seeds of large fruit trees has taken on even more importance. The Hainan Gibbon is also Hainan's most important flagship species, a symbolic species for the island, comparable to the Giant Panda for the whole of China. It is truly "The Giant Panda of Hainan."

In the late 1970s, pioneering researcher Liu Zhenhe alerted authorities that there was only a tiny surviving population of Hainan Gibbon remaining, isolated in remote mountain forests. To protect the gibbons, the Bawangling Provincial Nature Reserve was established in 1980 on about 21.39 km² and was promoted to a National Nature Reserve in 1988 and expanded to 66.26 km². The Hainan Gibbon was also listed as a Class I Nationally Protected Species under the Chinese Wildlife Protection Law in 1988, which made it a crime to hunt it. To protect the remaining tropical forests, a ban on commercial logging was established throughout Hainan in 1994. The Nature Reserve was expanded again in 2003 reaching 299.8 km². In 2000, the implementation of the Natural Forest Conservation Program allowed wood-cutters to transform into forest guards and rangers, improving surrounding communities' livelihoods. An intensive survey in 2003, however, found only 13 individuals of Hainan Gibbon remaining and only in Bawangling National Nature Reserve. Scientists predicted that the Hainan Gibbon could be the next primate to go extinct, but by then the species had also become the subject of intense local, national and international attention. Over the past 40 years, going back to the very first edition in 2000, the Hainan Gibbon appeared five times on the list of the World's Top 25 Most Endangered Primates (prepared every two years by the IUCN SSC Primate Specialist Group, the International Primatological Society and now Re:wild). (The 2006-2008 Top 25 List was even officially launched in Hainan.) The 2003 gibbon survey was followed by the first conservation planning meeting for the species, which was held at Bawangling and attended by Chinese and international gibbon experts, nature reserve staff and local government policy-makers. The meeting led to the first conservation action plan for the species, which was endorsed by the government, as was a second action plan resulting from a second meeting in 2014. In 2020, Zhang Xinsheng, President of IUCN, Founding President of Eco Foundation Global and Chairman of the Hainan Institute of National Park, organized an international online & offline combined conference that attracted even more international attention to the Hainan Gibbon.

Considerable scientific research has guided decision-making for conservation of the Hainan Gibbon. Researchers from the Beijing Institute of Zoology of the Chinese Academy of Sciences, the Chinese Academy of Forestry, Chinese Academy of Tropical Agricultural Sciences, Guizhou Normal University, Beijing Forestry University, Hainan University, Hainan Normal University, Kadoorie Farm and Botanic Garden in Hong Kong, Eco Foundation Global and, most recently, the Hainan Tropical Rainforest National Park Administration Bawangling

Branch and Hainan Institute of National Park have all contributed research results that furthered conservation efforts. International experts from organizations such as the Zoological Society of London with support from the Arcus Foundation, the IUCN SSC Primate Specialist Group, and Fauna & Flora International have supported local and international researchers and have been directly involved with research on key topics such as gibbon ecology and conservation biology, habitat mapping, monitoring and restoration, and local mechanisms for community co-management. Student researchers have been particularly important in all of these efforts, conducting long-term field work on the gibbons and carrying out studies on the effectiveness of conservation interventions like awareness-building campaigns and on the complex social and ecological environment of the nature reserve and surrounding communities, including indigenous minority villages.

Government at all levels, from central to provincial to local, has given great attention and support to Hainan Gibbon conservation in the past 40+ years. Conservation activities on the ground were led by the Bawangling National Nature Reserve's management office, now the Bawangling Branch of the Hainan Tropical Rainforest National Park. This has been largely in line with the conservation action plans and with support from the government and many external organizations. Efforts have utilized public sector resources, with in-depth and dynamic collaboration between local, national and international conservationists. The efforts have embraced science and nature-based solutions to protect original habitat and restore degraded habitats while strengthening local community awareness and willingness to accept conservation of the gibbons. Recently, management of Hainan Gibbon conservation efforts, of their current habitat and of their potential future habitat has been consolidated within the 4,400 km² Hainan Tropical Rainforest National Park.

Chinese and the international conservation communities have made a great commitment to conservation of the Hainan Gibbon, and these efforts deserve to be recognized and studied. While it is still too soon to declare the Hainan Gibbon to be saved from extinction, there are signs that it may have begun to come away from the brink. It is still the most endangered primate species in the world, but there is widespread understanding of the threats to the species and the will exists to take the actions needed to save it. The population continues to grow. We can still get it right this time and save the Hainan Gibbon.



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