GLOBAL RE-INTRODUCTION PERSPECTIVES

Re-introduction case-studies from around the globe

Edited by

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Cover photo: Clockwise starting from top-left:

- Formosan salmon stream, Taiwan
- Students in Madagascar with tree seedlings
- Virgin Islands boa

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The Kalaweit Gibbon Re-habilitation Project: rescue, re-introduction, protection and conservation of Indonesia's gibbons

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Introduction

Gibbons are the smallest of the apes and are widely distributed from Assam and Bangladesh in the north-west, Southern China, Vietnam, across the Malay Peninsula, Thailand, Sumatra (including the Mentawai Islands), Java and Borneo. The long arms and legs of the gibbons make them excellent climbers and they can swing through the upper canopy at great speed. Gibbons can be described by five characteristics: (socially) monogamous, territorial, duetting, suspensory and frugivorous. Gibbons are threatened throughout their range, all species are listed on CITES Appendix I and have various listings on the IUCN Red List.

Kalaweit works to protect:

Common name	Scientific name	IUCN listing	CITES listing	Location of project
Bornean agile gibbon	***Hylobates albibarbis***	Low risk/nationally threatened	App. II	Kalimantan
Müeller's gibbon	***Hylobates muelleri***	Low risk/nationally threatened	App. II	Kalimantan
Sumatran agile gibbon	***Hylobates agilis***	Low risk/nationally threatened	App. II	Sumatra
Lar or white-handed gibbon	***Hylobates lar***	Low risk/nationally threatened	App. II	Sumatra
Siamang	***Symphalangus syndactylus***	Low risk/nationally threatened	App. II	Sumatra
Javan or silvery gibbon	***Hylobates moloch***	Critically endangered	App. II	Java
Kloss gibbon	***Hylobates klossi***	Vulnerable	App. II	Mentawi Islands

Goals

Gibbon with young © Chanee

- Goal 1: To combat the illegal pet trade in gibbons.
- Goal 2: To carry out effective and assessable rehabilitation and re-introduction of rescued gibbons into areas of forest where they are no longer present (but within their historical range).
- Goal 3: To facilitate the involvement of local people in the conservation and protection of gibbons and their habitat.
- Goal 4: To carry out education both in Indonesia and abroad on the impacts of the illegal pet trade on gibbons.
- Goal 5: To provide adequate welfare and care for all gibbons and to ensure that gibbons which cannot be released have the best possible care in captivity.
- Goal 6: To work with researchers to learn more about gibbon behavior.
- Goal 7: To provide employment and training for local people.

Success Indicators

- Indicator 1: To follow all IUCN guidelines and medical tests and follow a behavioral check-list for assessing the suitability of a pair of gibbons for release.
- Indicator 2: That released gibbons demonstrate levels of behavior similar to wild gibbons.
- Indicator 3: The released gibbons will establish territories and successfully raise offspring.
- Indicator 4: That through the efforts of Kalaweit the illegal pet trade will decrease as awareness grows, both in Indonesia and aboard.

Project Summary

Feasibility: Gibbons have been in decline over the past 30 - 40 years, primarily due to habitat destruction and fragmentation through timber felling, charcoal burning, encroachment cultivation, general bush burning for hunting, rubber plantations and tea and pine plantations. Other factors contributing to their demise include the illegal wildlife trade (which involves capturing infant gibbons by shooting the mother), the use of their body parts in the manufacture of traditional medicines, and poaching for sale as pets or to bar owners for the purpose of being tourist attractions. The forest fires of 1997 - 1998 also devastated a large part of the gibbons' natural home range in Sumatra and Borneo: it is estimated that 4,000,000 ha of land comprising various different vegetation types, were destroyed by these fires. Conservation of the gibbons requires two approaches: i) management and protection of wild populations and ii) rehabilitation and management of the wild-born, captive-raised population. Due

Field staff at the release site

to gibbons' decline, several gibbon conservation projects have been established in South-east Asia, all with the aim of rescuing and rehabilitating gibbons. Gibbons are brought to centers when their owners become aware that the gibbon can become too aggressive, or when the owners become aware of the disease risks or when the gibbon is confiscated by local police/forestry officials. These centers also provide a sanctuary for abandoned gibbons that may never be rehabilitated, but can no longer be kept with humans.

Implementation: When the literature on rehabilitation and re-introduction is reviewed, it is clear that many projects have not achieved successful rehabilitation and/or re-introduction of gibbons. Critics of rehabilitation suggested 20 years ago that there is little justification for the continuation of these projects because they are expensive, have limited (documented) success and that conservation efforts should focus on preserving the remaining habitat and populations of wild primates and that the bulk of the available funding should be redirected to these causes. Much of the failure of rehabilitation and re-introduction stems from the lack of knowledge about the specific requirements of the focal species i.e. social, behavioral and nutritional needs. A lack of information about basic husbandry is also a problem. Gibbons can contract humans diseases e.g. hepatitis B and tuberculosis, thus they can act as reservoirs and transmit the diseases to other gibbons, humans and wildlife. To ensure that human diseases are not being released into the wild, all gibbons must undergo extensive medical testing as soon as they arrive at a centre.

We recognize that medical testing can be expensive, but six tests that should be mandatory are:

- Haematology for malaria (Supriatna ***et al.***, 1994).
- Tuberculin test for TB.
- Serology for HepBsAb and HepBsAg (though this needs further study), there is now some evidence that the gibbon Hepadnavirus may have come initially from humans. The risk of zoonosis from Hepatitis is still unclear, but this is one of the biggest problem diseases facing re-introduction of gibbons.
- Fecal examination: Direct analysis, Baerman analysis and a flotation analysis to look for gastro-intestinal parasites. An amoeba culture and sensitivity for pathogenic bacteria e.g. Salmonella, Shigella, etc.. This should also be carried out after the gibbons have been released.
- Herpes simplex: Test for anti-HSV1 and anti-HSV2 antibodies. Gibbons can be infected with HSV: without showing clinical symptoms. Once the symptoms do

manifest, often triggered by an intense period of stress, the onset of cortical neuronal necrosis and degeneration is rapid and irreversible. Gibbons infected with HSV should never be released.
- Worms: De-worming should be carried out every three months.

Post-release monitoring: Gibbons can be relocated by learning their ranging patterns and following them out to where they were seen to bed down for the night. Duetting can also be used to estimate where the gibbon groups are, but many pairs do not sing every day, so there are limits to this method. Since the gibbons will be semi-habituated, it is hoped that after a short space of time, the released gibbons' home ranges and daily travel routes will be known, thus making the following and observing easier than if the gibbons were fully wild. Without adequate post-release monitoring, rehabilitation projects have no way of determining scientifically if the rehabilitation process is adequately preparing the gibbons for a life in the wild. Post-release monitoring requires the collection of data on the gibbons' behavior, ranging, ecology, socialization and on the gibbons' interactions with other animals in the release area e.g. macaques and birds. The importance of daily post-release monitoring, involving observations of the gibbons for the full active period, cannot be overemphasized.

Major difficulties faced

- Lack of detailed information on gibbon rehabilitation and re-introduction, thus Kalaweit has had to tread carefully to ensure welfare of the gibbons at all times.
- Identification of sub-species has proved difficult.
- Lack of suitable habitat into which re-introduced gibbons can be released.
- Lack of knowledge regarding wild gibbon diseases, thus when gibbons test positive for diseases Kalaweit must assume that these animals cannot be released. More research is needed on disease to help Kalaweit make the most informed choice for sick gibbons.

Major lessons learned

- The gibbons need at least 24 hrs to recover from the stress of transport and should be released together from a single cage.
- Gibbons are most vulnerable immediately after release and are likely to flee the release area. Thus the gibbons should be released in an area where they can be easily located.
- Clearly defined procedures and well-trained staff are essential. Staff who are involved in the pre-release, rehabilitation phase should be different from those who carry out post-release monitoring.
- Only one pair should be released at a time and there must be adequate staff to conduct post-release monitoring.
- Only mature (sub-adult or adult) gibbons should be considered for release and single gibbons should not be released: pairs only. Pairs with infants should only be released when the infants are independent of the mother and can travel alone.

- Intensive monitoring is recommended in the initial months post-release, this can be reduced as the gibbons are seen to adapt to the forest.

Success of project

Highly Successful	**Successful**	Partially Successful	Failure
	√		

Reasons for success/failure:

- Kalaweit is at the forefront of gibbon rehabilitation and reintroduction and we are still learning, thus mistakes were made. These have been corrected and Kalaweit is always seeking to improve the release management.
- Ensuring gibbons are ready for release is a long process, thus relatively few pairs have been released. This will change now that Kalaweit has established dedicated release areas
- Finding suitable habitat for release is very difficult, especially in more populated islands e.g. Sumatra and Java.

References

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