



Projet Varibolomavo: Saving Prolemur simus Objectives and proposed actions



The Aspinall Foundation – Madagascar Programme August 2008

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Projet Varibolomavo: Saving *Prolemur simus* The Aspinall Foundation Madagascar Programme

The overall mission of The Aspinall Foundation's proposed Madagascar Programme is to work with local partners in Madagascar for the conservation of endangered species and their habitats. The initial focus of the programme will be saving the critically endangered greater bamboo lemur *Prolemur simus*, one of the rarest primates in the world. Known locally as Varibolomavo, a multidisciplinary project called "Projet Varibolomavo" will be the flagship project of our Madagascar programme as we establish ourselves in-country. Once installed, further projects with other endangered lemurs and habitats can be developed. Below we present a first summary of the aims, objectives and activities of the proposed Projet Varibolomavo, to save the greater bamboo lemur.

Justification

The greater bamboo lemur *Prolemur simus* is the only recognised species within the *Prolemur* genus, and current scientific knowledge indicates that it is the most endangered of all lemurs. The global primatological community consider the species to be one of the most endangered primates in the world. The greater bamboo lemur is endemic to Madagascar, and whilst fossil records show it was once widely distributed across the island, it is now restricted to a small part of the remaining eastern rainforest belt, and a handful of outlying degraded forest fragments. A recent paper by Pat Wright et al. (2008) highlighting the crisis of the greater bamboo lemur shows that only 60 individuals are currently known in the wild. To compound the critical situation, only 22 are known in captivity, in seven institutions, and almost all captive individuals outside Madagascar are descendants of just two wild-born founders. Within the framework of its proposed Madagascar Programme, The Aspinall Foundation can play a lead role in ensuring that effective actions are implemented as a matter of urgency to save this critically endangered species from imminent extinction.

Aims and Objectives

The aim of Projet Varibolomavo is to ensure the long-term persistence of the critically endangered greater bamboo lemur.

To achieve this aim, the project has the following objectives:

1. To play a key role in coordinating an urgent, collaborative response to the current crisis facing the greater bamboo lemur in the wild and in captivity;
2. To organise as a matter of urgency a rapid but extensive survey of greater bamboo lemur distribution and abundance in the wild;
3. To ensure that all known sites within the remaining rainforest corridors that support greater bamboo lemurs are effectively managed for their conservation;
4. To develop management mechanisms for all small, isolated populations in habitat fragments outside the main rainforest corridors, for their persistence and their potential role as sources for future captive-breeding, translocation, reinforcement or reintroduction strategies;
5. To ensure the survival of any greater bamboo lemur groups or individuals restricted to sites or habitats that can not be protected.

1. To play a key role in coordinating an urgent, collaborative response to the current crisis facing the greater bamboo lemur in the wild and in captivity

As Wright et al. (2008) point out, there is a need for coordination of efforts between all parties implicated in the crisis facing the greater bamboo lemur in the wild and in captivity. The Aspinall Foundation is in an ideal position to take on this role, as it bridges the divide between captive-breeding institutions and conservation management organisations. We can undertake this in two ways: a) continuing to facilitate ongoing communication between all interested parties from our proposed office in Antananarivo; and b) arranging a workshop in Madagascar to develop a collaborative action plan for the survival of the species in the long-term.

Ideal time frame: the first action is immediate and ongoing; the workshop in Madagascar is an urgent priority but to be most effective should probably wait until more extensive field surveys have been undertaken (see objective 2); therefore early 2009 seems like the best time.

2. To organise as a matter of urgency a rapid but extensive survey of greater bamboo lemur distribution and abundance in the wild

The Wright et al. (2008) paper gives the results of past survey efforts. They report confirmed sightings at only 11 of 70 sites surveyed. Large areas within the species range remain unsurveyed however, and more extensive surveys are clearly required with the aim of locating currently unknown groups or populations.

Unhabituated greater bamboo lemurs are considered very shy and hard to see. Therefore the most effective way of surveying their presence is to look for feeding signs within stands of giant bamboo. Given the difficulties of access within and around the mountainous rainforest habitats where they occur, the use of local indigenous knowledge would be a sensible way of identifying where large bamboo stands exist, and probably also which of these stands support bamboo lemurs. Any such survey would also record the presence or absence of other bamboo lemurs, such as the endangered golden bamboo lemur *Hapalemur aureus* and the vulnerable lesser bamboo lemur *Hapalemur griseus*.

The initial survey will be carried out in and around the SE rainforest corridor in collaboration with a research NGO called ValBio, whose staff are experienced in differentiating between the feeding remains of the different species. This survey should probably take several months. This can then be followed by further surveys in and around the remaining rainforest belt, including to the north of Torotorofotsy.

Ideal time frame: Oct to Dec 2008 (for the SE region); to avoid the next cyclone season in Jan/Feb/Mar

3. To ensure that all known sites within the remaining rainforest corridors that support greater bamboo lemurs are effectively managed for their conservation

The core range of the greater bamboo lemur is the southern third of the long but narrow remaining rainforest corridor that runs the length of eastern Madagascar.

Some small groups occur in two national parks at either end of this strip, the Ranomafana and Andringitra National Parks, both parks well managed by ANGAP and not in particular need of extra support. Connecting these national parks is the 500,000 ha Fandriana-Vondrozo corridor, an area granted temporary protection within the new SAPM framework, and which is under the provisional responsibility of Conservation International (CI). The corridor is in the process of being zoned into many smaller (but continuous) management units, most of which will be managed by local communities, with “conservation agreements” that reward management that benefits conservation.

Further north, the species has recently been discovered at Torotorofotsy, a RAMSAR site benefiting from conservation management activities led by an NGO called Mitsinjo. The forest corridor adjacent to Torotorofotsy is known as the Ankeniheny-Zahamena corridor, from which there are some unconfirmed greater bamboo lemur sightings, and again is under the responsibility of CI with a similar management plan being developed to that described for the Fandriana-Vondrozo corridor.

The Ranomafana, Andringitra and Torotorofotsy sites are already benefiting from major management activities and support, and so are a low priority for further support from The Aspinall Foundation. However, while CI is responsible for the two large forest corridors connecting these sites, if the surveys identify specific zones within them that contain greater bamboo lemurs, then these zones can be prioritised for additional support from The Aspinall Foundation. If no greater bamboo lemur groups are identified, but instead areas of suitable but vacant habitat are found, these could be managed as possible reintroduction sites. Clearly the specifics of site selection will depend on the results of the surveys.

Ideal time frame: CI hopes to finalise zonation of the Fandriana-Vondrozo corridor by Dec 2008. If some results from the surveys show some important sites within this corridor by then that would help prioritise these areas for focussed support.

4. To develop management mechanisms for all small, isolated populations in habitat fragments outside the main rainforest corridors, for their persistence and their potential role as sources for release stock for potential future translocation, reinforcement or reintroduction strategies

There are so few groups of greater bamboo lemurs in the wild that the effective management of each and every group is a priority for the survival of the species. Whilst several known groups utilise bamboo stands within the remaining rainforest belt as described above, some groups occur in isolated habitat fragments that are in effect islands within a deforested agricultural landscape. Therefore, in addition to the protection of the rainforest corridor, an urgent complementary strategy is to secure the long-term persistence of the habitat fragments, and intensively manage the small, isolated populations within them in what could best be described as a semi-captive breeding programme. These controlled isolated populations would then be ideal for providing stock for any future efforts for reinforcement, reintroduction or translocation strategies.

Two principle sites have so far been identified, although the surveys will hopefully find others. One of the identified sites is the Kianjavato coffee plantation, managed by

a semi-autonomous government agricultural research organisation called FOFIFA. This has long been known as an important site for the species, and has provided most, if not all, of the captive stock currently in Europe. The most recent published sightings, in July 2007, were of two groups each containing seven individuals. The second is the Mahasoa agricultural plantation, presumably privately-owned, either legally or at least simply through occupation. A group of around 17 individuals was discovered here in 2007. The Malagasy NGO MICET is looking at the possibilities of how this site could be managed, but are still in the early stages of their enquiries.

The Aspinall Foundation will negotiate with relevant authorities and NGOs to ensure that these two isolated populations, plus any others identified through the surveys, are managed for their long-term persistence. Once the sites are legally secured, the possibilities of using these populations as the source for potential captive-breeding, translocation, reinforcement or reintroduction will be investigated, in accordance with IUCN guidelines. Genetic issues can be explored through collaboration with E. E. Louis Jr. from Henry Dorly Zoo, who is already working on the conservation genetics of the species (and many other lemurs). Socioecological data concerning the species is currently limited, so studies of intra- and inter-group dynamics, and natural inbreeding avoidance and dispersal strategies, should also be a priority within these closed populations. These studies can be undertaken in collaboration with various research organisations, such as GERP, ValBio and MICET amongst others. Captive-breeding techniques can be learnt from collaboration with Paris Zoo (particularly Delphine Roulet) and Parc Ivoloina in Madagascar, while some other European Zoos have also had some captive-breeding success, including Port Lympne.

Ideal time frame: If effective management mechanisms are to be developed for the two sites already known to support isolated groups (which between them hold over half the known wild population of the species), then it would be good to get them included on the government's map of potential protected areas. This map will be finalised before the 18 October 2008, when the previous map expires. This will then be followed by a series of negotiations and consultations with all relevant stakeholders, following government guidelines for the creation of protected areas, to develop a provisional management plan for submission to the government.

5. To ensure the survival of any greater bamboo lemur groups or individuals restricted to sites or habitats that can not be protected

This is a kind of last-chance saloon for any groups or even individuals identified during the surveys that are stuck in habitats that simply don't have a future. This would need to be undertaken within a strict, legal framework, but such animals should be captured and cared for at suitable sites. Currently the best captive facilities in Madagascar are Parc Ivoloina near Tamatave and the Zoo in Antananarivo. If we can secure management of suitable isolated habitat nearer the species ranges, as part of objective 4 above, then captive facilities for such animals could be developed there as well. Any animals found in illegal captivity would also fall into this category, although current information suggests that this is not a major issue.