

THE SINGAPORE HORNBILL PROJECT: A GREAT BUT SIMPLE IDEA

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ABSTRACT. – The conservation of Singapore’s hornbills, in particular the Oriental Pied Hornbill *Anthracoceros albirostris*, has been a great success. From the few birds in 1994, more than 50 hornbills have been spotted in Pulau Ubin. The number is increasing due primarily to the efforts of a collaborative project between the National Parks Board, Wildlife Reserves Singapore, CVM Pte. Ltd., National University of Singapore, Nanyang Technological University and many other partners. Five years after the project began, hornbill progeny have spread to Changi Village and are slowly spreading to other parts of mainland Singapore. It is amazing that today, at least five technical papers and posters on the breeding and conservation of the Oriental Pied Hornbill are being presented and shared by our researchers, bird curators and hornbill enthusiasts

This paper was presented at the 5th International Hornbill Conference jointly organised by the National Parks Board (Singapore) and the Hornbill Research Foundation (Thailand), in Singapore on 22nd–25th March 2009.

KEYWORDS. – Singapore, hornbills, reintroduction, conservation, breeding.

INTRODUCTION

This paper introduces a group of contributions from Singapore-based researchers on the Oriental Pied Hornbill *Anthracoceros albirostris*, which are published in the following pages of the conference proceedings. This work has been done under the umbrella of the Singapore Hornbill Project.

Apart from the technical aspects of the research, various logistic and administrative factors have been important. Various groups of people have come together to make the Singapore Hornbill Project successful; the project would not have been possible without these people. This paper shares the management decisions and activities that led to the success of this unique Singapore project. It would be encouraging if this management model can be replicated elsewhere, just like the many hornbill research projects that have been replicated in many countries, to enhance the conservation of our magnificent wildlife.

BACKGROUND

In Singapore, the southern subspecies of the Oriental Pied Hornbill (*Anthracoceros albirostris convexus*) was formerly a native resident. The last breeding records were in the nineteenth century; for many years after the 1920s, no hornbills were spotted and it was thought that the species had become locally extinct. In 1994, more than 130 years after the last officially recorded breeding, a pair was spotted

in Pulau Ubin, north of Singapore in the Johor Straits. The pair is assumed to have crossed this narrow sea crossing from neighbouring mangroves, which are less than 2km away. Breeding began in 1997. However, not much was known about these locally endangered birds until 2004.

Today, the conservation of Singapore’s hornbills, in particular the Oriental Pied Hornbill, has been a great success. From the few birds in 1994, more than 40 hornbills had been seen in Pulau Ubin by 2008, and the number today in the whole of Singapore may be over 60. The number is increasing and their progeny have spread to Changi village, on the coast of mainland Singapore opposite Pulau Ubin, and are slowly spreading.

Five years after the beginning of our research, at least five technical papers and posters on the breeding and conservation of the Oriental Pied Hornbill were presented at the 5th International Hornbill Conference by our researchers, bird curators and hornbill enthusiasts. These included:

- Reintroduction of the Oriental Pied Hornbill and the Rhinoceros Hornbill (*Buceros rhinoceros*) in Singapore;
- Artificial nests for the Oriental Pied Hornbill;
- Infanticide-cannibalism by Oriental Pied Hornbill;
- GPS tracking of Oriental Pied Hornbill;
- DNA study of Oriental Pied Hornbill and Rhinoceros Hornbill.

FACTORS FOR SUCCESS

With this background information in mind, what contributed to the success of our Hornbill Project within five years, from 2004 to 2009? From the perspective of the National Parks Board (NParks) there were three key contributing factors:

a) **Strong 3P (People, Private, Public) Partnership**

The Singapore Hornbill Project is a good example of the strong partnership between the people, private and public sectors. This project started off in early 2004 as a simple idea or request from a French bird breeder and researcher (Marc Cremades), and a leading obstetrician and gynaecologist (Ng Soon Chye), who is also a keen birdwatcher. They approached NParks for a research permit to study the ecology of the Oriental Pied Hornbill in Pulau Ubin, as NParks is the scientific authority for nature conservation in Singapore. In this capacity, we advised, monitored and co-ordinated measures to conserve and safeguard our biodiversity. We were so inspired by their work and dedication that besides issuing the research permits, we decided to partner and collaborate with them. Initially, we facilitated the installation and management of their equipment and provided logistical support on the island. As the project progressed, and in the last two years, NParks provided financial support and purchased much of the high tech equipment.

At the same time, Jurong Bird Park – the local expert in breeding, husbandry and management of birds – joined the partnership. They provided the first set of nest boxes and equipment to monitor the nesting behaviour of the wild hornbills in Pulau Ubin. In 2009, they donated the best breeding pair of Oriental Pied Hornbills in their collection for the project, despite knowing that once breeding was successful at a new site in the wild, they would lose their prized hornbills. This project is thus unique as the adults and progeny are being released to the wild, to re-populate and improve the bloodline of the Oriental Pied Hornbill.

These three parties came together to form the foundation of the partnership. As the project progressed, and throughout the five year period, more people and organizations joined in to sponsor and make contributions to the project. Since 2004, at least ten different groups, including researchers, students, academics, bird lovers and individuals, and in their own ways have played significant roles and contributed towards the success of the Singapore Hornbill Project. These partners include NParks, Jurong Bird Park, CVM Pte Ltd (Marc Cremades), Nature Society (Singapore) (Bird Ecology Study Group), National University of Singapore, National Technological University, Nikon, Carl-Zeiss, Sony, Asian Geographic, Lady Y. P. McNeice and the Cheng Kim Loke Foundation, and the Marina Country Club and Resort @ Ubin.

b) **Dedicated Champions**

The Singapore Hornbill Project has greatly benefited from the existence of a core group of very dedicated researchers and enthusiasts who have acted as the project champions.

Their continuous presence has given stability, continuity, and inspiration for other people's interest in their research work. Without their resourcefulness in solving difficult problems, the project would not have continued for so long. Since 2004, the project has expanded from Pulau Ubin to mainland Singapore. In these new areas, there are local champions too. For example, the conservation officers and park managers employed by NParks are the champions for the hornbill project at their respective areas of management. Each location, for example at Pulau Ubin, the Nature Reserves and the Bukit Timah area, has at least one champion who works very closely with the two researchers.

c) **Common goal and clear objectives**

Having a common goal and clear objectives is another important factor that has contributed to the success of the Singapore Hornbill Project. All the parties involved have a common goal "to enhance the bird life (in this case, the hornbill population) in our urban city". This goal is also in alignment with our recently formulated Bird Conservation Strategy (BCS) where we wish to bring back more desirable birds to the City. Besides the common goal, clear objectives and outcomes were set at the beginning of each project cycle as there are limited resources. This is to ensure that the research activities stay on track and are within the allocated budget. There is always a tendency to do a little bit more, and if this is not managed well, it can affect the project budget. This would be detrimental to the whole project as some important work might then have to be sacrificed to offset the budget deficit.

With the Bird Conservation Strategy in place, NParks could take on a more active role and make more significant contributions in terms of resources (funds, staff, logistical support) in bird conservation related projects. This has helped to propel the Singapore Hornbill Project forward to the next phase. In 2004, we were a relatively small and passive player. Now, we are taking a leading role in strategizing the key bird research projects. Our contributions have included logistical support and staff time, the purchase of equipment: such as nest boxes, high definition cameras, batteries, hard disks, GPS tracking units, solar power system, bird rings, setting up of two aviaries, and laboratory fees for DNA testing.

It is with this need in mind that we are now studying the Rhinoceros Hornbill (*Buceros rhinoceros*) in the Nature Reserves. This hornbill is also one of our native hornbill species, last recorded wild in 1899. It is a big and spectacular bird, much bigger and also internationally rarer than the Oriental Pied Hornbill. If in the future we are able to establish a population of Rhinoceros hornbills, they will increase the chance of sightings of these rare birds.

Hopefully, this will lead to conservation benefits, and more awareness and appreciation of the beauty of our biodiversity and that we can co-exist in harmony with the birdlife in our natural areas. This is an exciting challenge for all of us.