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PSITTACINE FEATHER AND BEAK DISEASE TESTING  
AND DNA SEXING OF WILD RED-VENTED  
COCKATOO CHICKS AT RASA ISLAND, PALAWAN

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## ABSTRACT

*The Philippine Cockatoo or Red-vented Cockatoo (Cacatua haematuropygia) is a critically endangered bird endemic to the country. Habitat destruction, extermination, poaching for the pet market, and potential diseases caused by the introduction of captive birds in wild populations were cited as the reasons for the decline.*

*One of projects of the Philippine Cockatoo Conservation Program is to determine if the wild population in Rasa Island carries the Psittacine Beak and Feather Disease (PBFD) virus. Blood and feather samples were collected and sent to a laboratory for the PBFD test and DNA sexing. Sixteen birds were ringed. Fifteen feather samples and six blood samples were collected and sent to France for PBFD test and DNA sexing. Among the 15 birds, eight cockatoo chicks were male and four were females. Two cockatoos were not tested due to insufficient samples and one had no result. Physical examination and blood testing showed that most of the cockatoo chicks sampled were apparently healthy and did not carry the PBFD virus.*

## Introduction

The Philippine Cockatoo or Red-vented Cockatoo (*Cacatua haematuropygia*) is a critically endangered bird endemic to the country (WCSP, 1997). The species was once found throughout the archipelago. However, a rapid decline in population has been observed in the past decades. Habitat destruction, extermination as crop pest, poaching for the pet market, and potential diseases caused by the introduction of captive birds in wild populations were cited as the reasons for the decline (EEP, 1999).

With the species being pushed to the brink of extinction, the Philippine Cockatoo Conservation Program (PCCP) was

established to help save the remaining bird populations. The PCCP embarked on various coordinated projects. One of these is to determine if the wild population on Rasa Island carries the Psittacine Beak and Feather Disease (Pbfd) virus.

In 1996, Dr. med. vet. Nicolas Richer conducted a study on wild as well as captive Philippine Cockatoos to determine the occurrence of the Pbfd virus, blood parasites, and to check their blood cell counts. Nineteen (19) feather pulp samples and eight (8) blood smears were submitted to VETGEN Laboratory (U.K.) for testing and examination.

Results showed that all samples were found to be Pbfd-free. All blood smears had normal blood values and were negative for any blood parasites.

#### SAMPLING SITE

Located offshore of the municipality of Narra, Palawan is the island of Rasa. This small coral island supports what is believed to be the highest density of wild Philippine Cockatoo. The latest count on the roosting site during this year's breeding season revealed that there are at least 60 birds on the island. Considering that these are still nestlings and breeding pairs guarding the nests, the number of birds could be higher.

A trip to Rasa was organized on May 22, 2000. Ringing and sampling were carried out from May 23-25, 2000 with the help of PCCP staff and wardens. A volunteer photographer documented the activities and was later joined by a TV crew from ABS-CBN in covering the sampling activity.

#### MATERIALS AND METHODS

Before the sampling was done, the wardens, who are expert tree climbers, had to climb the trees to reach the nests.

**Weighing.** A vertical, spring-mounted weighing scale was used. After weighing the chick contained in the cloth sack, the weight of the empty cloth sack was recorded.

The weight of the empty sack was then subtracted from the gross weight of the bird and the sack.

**Ringling.** Open aluminum bird rings were placed on the left leg of each cockatoo chick. Each ring was marked with DENR (Department of Environment and Natural Resources) initials, year 00 (yr. 2000), and a serial number. For example, DENR 00 0001.

**Blood Collection.** After applying a swab with alcohol, blood was collected from the brachial vein. Approximately 0.5 ml of blood was collected from each bird. After withdrawing the syringe from the vein, pressure was applied to the vein with a small piece of cotton wool soaked in liquid trexaminic acid. This effectively minimized the bleeding and hematoma from the collection site. After collection, the blood was transferred to a vial with anti-coagulant (EDTA). Gentle rolling of the vial on the hand facilitated a thorough mixing of the blood and anti-coagulant without damaging the blood cells.

**Feather Sampling.** Samples of blood quill feathers were taken either from the wing or tail. After taking the sample, the feather was air-dried for a while before putting it inside a clean plastic zip-lock bag. To avoid contamination of the feathers during collection, clean examination latex gloves were used and changed with each chick being sampled.

All samples (blood and feather) were properly labeled. After collecting the samples, a short clinical examination of each chick was done to assess its general health condition. The blood and feather samples were sent to the VETFRANCE Laboratory for the Pbfd test and DNA sexing.

Nesting PBF D Test Tree No.	Number of Hatchlings	Sample Taken	Ring No.	Weight (grams)	Date Ringed	Remarks	DNA Testing
negative		feather	DENR 00-0097	303	May 10	- do -	male
7-Bugo negative	1	feather & blood	DENR 00-0001	275	May 23	ready to fledge	male
5-Bugo negative	3	feather & blood	DENR 00-0002	349	May 24	> 50 days old	male
negative		feather & blood	DENR 00-0003	333	May 24	- do -	female
negative		feather & blood	DENR 00-0004	357	May 24	- do -	male
8-Pagatpat sample	1	none	DENR 00-0005	90	May 25	Approx. 2 weeks old too young for sampling, with few mites on skin	no sample
10-Pagatpat negative	2	feather & blood	DENR 00-0006	318	May 25	ready to fledge complete feathers	male
negative		feather & blood	DENR 00-0007	328	May 25	- do -	male
<b>TOTAL NUMBER OF HATCHLINGS RINGED</b>				<b>16</b>			

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