



Forestry Administration



World Pheasant Association

Cambodian Galliformes Conservation Programme

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Monthly Report

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Summary

Cambodia is home to 14 species of Galliformes of which four are considered to be globally threatened. The most important areas for Galliformes within Cambodia are the Eastern Plains, Northern Plains and Southwest Cambodia. Between 21st and 28th February 2006, we undertook ornithological, trapping and questionnaire surveys to establish the status and threats to Galliformes, particular the Chestnut-headed Hill-partridge, in the Areng Valley area, Koh Kong Province within the Central Cardamom Mountains, Southwest Cambodia. We established the presence of seven galliform species by the ornithological and questionnaire surveys and by a trapping survey. All species occurred at low densities with Siamese Fireback, Silver Pheasant, Scaly-breasted Hill-partridge and Red Junglefowl being the most numerous.

1. Study areas

Between 21st and 28th February 2006 the study was based in the Areng Valley area which is located in Koh Kong province, within the Central Cardamom Mountain range in Southwest Cambodia. The area covers three communes and eight villages of Thma Bang District, Koh Kong Province. The area primarily consisted of rice fields around the villages, surrounded by dense forest. The valley area is mostly at low elevation of about 200 m a.s.l and is surrounded by high mountains.

2. Methods

Three methods were used to record the presence of Galliformes, assess their numbers and establish their threats. We surveyed all galliform species, but we were primarily concerned with collecting information on Chestnut-headed Hill-partridge and Green Peafowl. The methods used were ornithological and questionnaire surveys, and a trapping survey.

2.1 Ornithological surveys

Surveys were undertaken between 21st and 28th February 2006 using a combination of transect surveys (to establish presence) and point-count surveys (to measure abundance). Each transect took about 90 minutes to walk, started at 06:00 and 16:00 and finished at 07:30 and 17:30, respectively. When a bird was heard calling its direction and estimated distance from the observer was recorded. The location of record was recorded by a Geographical Positioning System (GPS). During the surveys, the presences of other important non-galliform bird species were also recorded.

Point-count methodology was used to record the wailing call of male Green Peafowl. Green Peafowl calls can be heard for up to 1km so point-count locations were situated at least 2 km apart along jungle trails. The location of each point count was recorded by a Geographical Positioning System (GPS). Each survey point was selected at random. The counting period lasted for two hours and was undertaken immediately after sunrise (05:30 to 07:30) and before sunset (16:30 to 18:30). When each call was heard, its direction and estimated distance from the observer was recorded. At each point-count location, a number of habitat variables were measured. These methods were developed by Nick Brickle and were successfully used to survey the species in Vietnam. During the point-count surveys, the presences of other galliform and important general bird species were recorded.

2.2 Questionnaire survey of local people and hunters

A questionnaire survey of local communities was also undertaken to collect information on their perceived status of Galliformes, their distribution and to ascertain their threats. The village elders and senior hunters specifically and more generally other village people and hunters were shown pictures of Galliformes in the Guide to Birds of Southeast Asia, and the Guide to Birds of Cambodia and asked the following questions:

- How many species of Galliformes are there in the area?
- How many individuals of each species are there in the area?
- How many individuals of each species are hunted in the area?
- How many hunters are there in the area?
- How many hunters come from outside area?
- What hunting methods do they use?
- How many traps are set in the area?
- How many traps did each hunter set in the area?
- Where did they sell hunted birds?
- When did hunters always hunt green peafowl and collect its chicks?
- How many days are traps set in the area?
- Would they hunt if alternative food were provided?
- What alternative food would they like?
- Do you think it is important to protect the wildlife around their village?
- Have you preferred Green Peafowl? Why?

2.3 Trapping surveys

A trapping survey, using lines of leg-hold snares, was undertaken. About 80 traps were set along trails and near water and were checked regularly.

3. Results

3.1 Information on Galliformes

The results from the ornithological and questionnaire surveys and trapping survey are summarised in Table 1, 2 and 3. Between 21st and 28th February 2006, we walked five transects and conducted six point-counts, during which four species of Galliformes were heard calling at 37 locations, and three individuals of Japanese Quail were observed directly along the transects and around the point-counts. Information from the questionnaires revealed that Green Peafowl were present near the ricefields, and were heard wailing from 16 locations during our surveys. The local population of Green Peafowl was thought to number around 95 individuals within many separate large groups. Chestnut-headed Partridge was not heard calling anywhere and was thought to be only present in small numbers on the high elevation mountains higher than 400 metre asl which was far from the villages. Siamese Fireback was thought to be more numerous than Chestnut-headed Partridge. Scaly-breasted Partridge were heard calling from six points and occurred at elevations lower than 420 metre asl. It was thought that this species was widespread and common. Red Junglefowl was heard calling from 15 points along transects and around point-counts. It was thought that species is common throughout the area. Japanese Quail was observed directly at four locations around point-count locations.



Mr Chhum Samnang undertaking a point-count



Grassland is a key foraging habitat for Green Peafowl



A feather of Scaly-breasted Hill-partridge found during surveys



Scratching indicates the presence of feeding Galliformes, most likely Scaly-breasted Hill-partridge



Line of leg-hold traps set for catching partridges at the study site



Feathers of partridges plucked by hunter

Table 1 Summary information from the ornithological surveys undertaken in the Areng Valley area within the Central Cardamom Mountains during 21st to 28th February 2006

Species	Number of		Number of birds heard	Number of birds seen
	Transect	Point-count		
Chinese Francolin <i>Francolinus pintadeanus</i>	5	6	0	0
Orange-necked Hill-partridge <i>Arborophila davidi</i>	5	6	0	0
Chestnut-headed Hill-partridge <i>Arborophila cambodiana</i>	5	6	0	0
Scaly-breasted Hill-partridge <i>Arborophila chloropus</i>	5	6	6	0
Red Junglefowl <i>Gallus gallus</i>	5	6	15	0
Silver Pheasant <i>Lophura nycthemera</i>	5	6	0	0
Siamese Fireback <i>Lophura diardi</i>	5	6	0	0
Germain's Peacock Pheasant <i>Polyplectron germaini</i>	5	6	0	0
Grey Peacock Pheasant <i>Polyplectron bicalcaratum</i>	5	6	0	0
Green Peafowl <i>Pavo muticus</i>	5	6	16	0
Bar-backed Partridge <i>Arborophila brunneopectus</i>	5	6	0	0
Rain Quail <i>Coturnix coromandelica</i>	5	6	0	0
Japanese Quail <i>Coturnix japonica</i>	5	6	0	4
Blue-breasted Quail <i>Coturnix chinensis</i>	5	6	0	0

Table 2 Summary information from the questionnaire surveys undertaken in the Areng Valley area within the Central Cardamom Mountains during 21st to 28th February 2006

Species	Numbers thought to occur	Numbers hunted
Chinese Francolin <i>Francolinus pintadeanus</i>	0	0
Chestnut-headed Hill-partridge <i>Arborophila cambodiana</i>	2000	400
Orange-necked Hill-partridge <i>Arborophila davidi</i>	0	0
Scaly-breasted Hill-partridge <i>Arborophila chloropus</i>	10000	200
Red Junglefowl <i>Gallus gallus</i>	4000	18
Silver Pheasant <i>Lophura nycthemera</i>	6000	20
Siamese Fireback <i>Lophura diardi</i>	5000	14
Germain's Peacock Pheasant <i>Polyplectron germaini</i>	0	0
Grey Peacock Pheasant	0	0

<i>Polyplectron bicalcaratum</i>		
Green Peafowl <i>Pavo muticus</i>	95	0
Bar-backed Partridge <i>Arborophila brunneopectus</i>	0	0
Rain Quail <i>Coturnix coromandelica</i>	0	0
Japanese Quail <i>Coturnix japonica</i>	1000	0
Blue-breasted Quail <i>Coturnix chinensis</i>	0	0

Table 3 Summary information from the trapping survey undertaken in the Areng Volley area within the Central Cardamom Mountains during 21st to 28th February 2006

Species	Numbers of traps	Numbers of birds trapped
Chinese Francolin <i>Francolinus pintadeanus</i>	80	0
Orange-necked Hill-partridge <i>Arborophila davidi</i>	80	0
Chestnut-headed Hill-partridge <i>Arborophila cambodiana</i>	80	0
Scaly-breasted Hill-partridge <i>Arborophila chloropus</i>	80	0
Red Junglefowl <i>Gallus gallus</i>	80	0
Silver Pheasant <i>Lophura nycthemera</i>	80	0
Siamese Fireback <i>Lophura diardi</i>	80	0
Germain's Peacock Pheasant <i>Polyplectron germaini</i>	80	0
Grey Peacock Pheasant <i>Polyplectron bicalcaratum</i>	80	0
Green Peafowl <i>Pavo muticus</i>	80	0
Bar-backed Partridge <i>Arborophila brunneopectus</i>	80	0
Rain Quail <i>Coturnix coromandelica</i>	80	0
Japanese Quail <i>Coturnix japonica</i>	80	0
Blue-breasted Quail <i>Coturnix chinensis</i>	80	0

3.2 Threats to Galliformes

The information we collected on the numbers of Galliformes hunted in the study areas clearly show that illegal trapping is a major threat to the status and conservation of many species. Trapping is undertaken by some non-wood collectors who came from outside of the area, in order to provide supplementary food whilst they lived in the forest. This usually involved setting up to 200 traps per hunter along old trails and near water to opportunistically trap any ground dwelling animals or birds. Not all species are equally affected by hunting, with those that are easy to catch (Chestnut-headed Hill-partridge, Scaly-breasted Hill-

partridge and Red Junglefowl), or are desirable for meat, eggs and feathers (Green Peafowl) being especially targeted by hunters. The main purpose of this trapping is to provide food for the hunter and occasionally (especially in the case of Green Peafowl) for the pet trade.

Another threat to Galliformes in the area we surveyed is habitat degradation by forest clearance to provide area for cultivation. Possibly of more concern is that not only does clearing destroy habitats, but it also opens up access to the forest, causes disturbance and cultivators also hunt Galliformes for food and start cooking fires and burn the died trees, which may spread and cause further forest damage. The collection of non-timber products (bamboos, resins, fruits) and food (plants, fish, etc) principally causes disturbance but in addition these foraging parties hunt Galliformes for food whilst in the forest and start cooking fires. They are usually accompanied by dogs into the forest. This adds to the disturbance problems, may spread disease to wildlife.

3.3. Other Bird Species

In addition to recording galliform species, other important non-galliform bird species were also recorded and are summarised in Tables 4.

Table 4 Summary information of important general species observed within the Areng Volley area in the Central Cardamom Mountains, Southwest Cambodia, during 21st to 28th February 2006

Species	Scientific Names	Status
Great Hornbill	<i>Buceros bicornus</i>	Rare
Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>	Common
Coppersmite Barbet	<i>Megalaima haemacephala</i>	Very Common
Asian Emerald Cuckoo	<i>Chrysococcyx maculatus</i>	Common
Little Egret	<i>Egretta garzetta</i>	Rare
Ashy Drongo	<i>Dicrurus leucophaeus</i>	Rare
Dark-rumped Swift	<i>Apus acuticauda</i>	Very Common
Crested Treeswift	<i>Hemiprocne coronata</i>	Very Common
Lineated Barbet	<i>Megalaima lineata</i>	Common
Black Drongo	<i>Dicrurus macrocercus</i>	Common
Greater Coucal	<i>Centropus sinensis</i>	Common
White-crested Laughingthrush	<i>Garrulax leucolophus</i>	Very Common
Javan Pond Heron	<i>Ardeola speciosa</i>	Rare
Barred Cuckoo Dove	<i>Macropygia unchall</i>	Rare
Rock Pigeon	<i>Columba livia</i>	Very Rare
Mountain Imperial Pigeon	<i>Ducula badia</i>	Very Common
Green-billed Malkoha	<i>Phaenicophaeus tristis</i>	Common
Wedge-tailed Green Pigeon	<i>Treron sphenura</i>	Very Rare
Oriental-pied Hornbill	<i>Anthracoceros albirostris</i>	Very Common
Thick-billed Green Pigeon	<i>Treron curvirostra</i>	Very Rare
Common Kingfisher	<i>Alcedo atthis</i>	Very Rare
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	Rare
Woolly-necked Stork	<i>Ciconia episcopus</i>	Rare
Radde's Warbler	<i>Phylloscopus schwarzi</i>	Very Rare
Common Flameback	<i>Dinopium javanense</i>	Very Rare
Black-headed Bulbul	<i>Pycnonotus atriceps</i>	Common
Wreath Hornbill	<i>Aceros undulatus</i>	Very Common
Black Eagle	<i>Ictinaetus malayensis</i>	Very Rare
Silver Oriole	<i>Oriolus mellianus</i>	Very Rare

Changeable Hawk Eagle	<i>Spzaetus cirrhatus</i>	Very Rare
White-rumped Falcon	<i>Polihierax insignis</i>	Very Rare
Vinous-breasted Starling	<i>Sturnus burmannicus</i>	Common



Black-necked Stork



What is the species?



Common Kingfisher



Eggs of Barred Cuckoo Dove

4. Budget

Expenditure for the Areng Valley field work

Item	Number of personnel	Quantity	Unit	Total (US\$)
Travel				
Taxi (PP to Koh Kong)	2	2	7.50	30.00
Motorbike rental	2	8 days	8	128.00
Petrol	2	9 liters	0.95	17.10
Motorbike repairs	2			8.75
Subtotal				183.85
Subsistence				
Accommodation	2	2	10	40.00
Food & water	4	10 days		108.63
Subtotal				148.63
Equipment				
Map		3	3	9.00
Plastics for map		3	3	9.00
Small Batteries		6 pieces	1.80	10.80
Very Small Batteries		3 pieces	1.80	5.40
Subtotal				34.20
Staff costs				
Programme Leader	1	1 month	435	435.00
Programme Assistant	1	1 month	250	250.00
Local Guide	2	08 days	5	80.00
Subtotal				765.00
Communications				
Internet				0.00
Phone Card		1 month	10	10.00
Subtotal				10.00
Medicines				
				11.05
Miscellaneous				
Administration				5.00
Subtotal				5.00
TOTAL				US\$ 1157.73