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Gurney's Pitta Pitta gurneyi Research in Tanintharyi Region, Myanmar

May - 2015

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Summary

This year survey was done in the proposed Lenya National Park, south Tanintharyi (Tenasserim) in degraded primary and bamboo forest in May 2015. Ten surveys transect and 71 points were completed in the survey sites. Gurney's Pittas were recorded in primary degraded (also which close to limestone), secondary and bamboo forest. A total of six were recorded during the survey: four from three survey points and two from forest near the camps were recorded. Total of 206 bird species including Gurney's Pitta were recorded. Shore bird survey was done briefly before the Gurney's Pitta survey started. One new recorded species for Myanmar, Spectacled Spiderhunter *Arachnothera flavigaster*, was recorded in Phayardan (Camp 1) and Hankapyu 13 Mile (Camp 2). One endangered species, two vulnerable species and 22 near threatened species were recorded during the survey.

Introduction

Tanintharyi (Tenasserim) Region located in southern part of Myanmar shares the border with Thailand on the east and south-east. Rich species diversity in Tanintharyi Region is due to the presence of different forest types like Tropical Evergreen forest, Sundaic lowland forest, Semi-evergreen forest, Mangrove forest etc., with the extent depending on topography, geological features and climatic factors. Tanintharyi has tropical monsoon type of climate. It is also known as home for great diversity of flora and fauna.

Gurney's Pitta *Pitta gurneyi* is the only bird species endemic to peninsular Thailand and Myanmar. It is designated as Endangered by IUCN Red List and it was initially thought to be extinct for some time after 1952, but was rediscovered in 1986 in Thailand. The last known birds in Thailand in 2013-2014 were three related individuals from an estimated population of 10-15 pairs in year 2000 and now, only 28 years later, this iconic species is functionally extinct in Thailand (Philip D. Round 2014). In Myanmar, the last sighting of Gurney's Pitta was in 1914 and it was rediscovered in 2003 after 89-year gap. A search for it in Myanmar in 2003 discovered that the species occurs at four sites with a maximum of 10-12 pairs at one location. The discovery of a population in Myanmar led to the down-listing of it status from "Critically Endangered" to "Endangered" in 2007 (BirdLife International 2008).

The Endangered species, Gurney's Pitta *Pitta gurneyi* is considered to be only found in Sundaic lowland forest. According to Lambert and Woodcock (1996), all records of the species since 1986 have been below 160 m a.s.l.

BANCA have been studying the species from 2003 to 2014 in different areas. One Gurney's Pitta was seen unexpectedly on the afternoon of 8 April 2011, at point 70 (12° 17' 39.3" N, 99° 13' 13.3" E) in elevation 259 m a.s.l. The location of that bird was higher than expected exceeding the highest elevation given for their occurrence. This record also exceed the northernmost limit of the Gurney's Pitta range at 12° 18' N, north of the most northerly record in Myanmar (Lay Win *et al.*, 2011). Its geographical range has been variously defined as 7° 25' N to 11° 50' N (Lambert and Woodcock 1996) and 7° N to 12° N (BirdLife International 2001).

During the month of May 2015, in accordance with FFI's environmental preservation programme for proposed Lenya National Park, our study team of BANCA and FFI had studied in low land forest and limestone forest slopes.

Objectives

The objectives of this research were to conduct research on Gurney's Pitta and other bird species in the proposed Lenya National Park in Tanintharyi (Tenasserim) Region. The specific objectives of the research were as bellow;

- To collect information on the population and distribution of Gurney's Pitta at a new location in south Tanintharyi Region.
- To collect current status of its habitats.
- To collect information on the distribution and status of other bird species.

Materials and Methods

This year survey began on 6 May 2015 for Gurney's Pitta survey in south Tanintharyi Region, Myanmar. The areas were selected based on the suitable and potential areas where the FFI's group, logistics – Saw Soe Aung, set a camp for other biodiversity survey.

Point transects were used in this survey. Efforts were made so as not to overlap with sites where survey had been done before, but in order to compare the time and situation some points and pitta search were done in the same areas which had been done in April 2011 and 2012. The team searched for birds on foot following old logging tracks and exiting trails navigating through the forest using a GPS and local guides. Prerecorded "lilip" and "skew" calls were broadcast regularly at every point, spaced at approximately between 100m and 300m intervals along the survey route by using OLYMPUS MP3 player connected with speakers. The team spent 20 minutes or more at each point.

The type of forest and habitat were also recorded. The type and number of calls were noted if there were responses or calls. The geographic coordinates for each point were documented using hand-held Global Positioning System – Garmin 60 Cx and GARMIN-*etrack* (GPS). Photos were taken by Canon EOS 7D (400mm focal length) and Canon IXUS 210 (4mm focal length) cameras.

All other bird species observed and heard were also recorded. Binoculars (Opticron & Nikon) and telescope (SWAROVSKI) are used for visual sighting. Bamboo flute were also used to attract the birds by owlet call. We used a field guide book from Robson, C. 2011(A Field Guide to the BIRDS of South-East Asia, New Holland).

Participants

Lay Win, Aung Myin Tun from BANCA and Saw Moses, Christoph Zockler from FFI.

Itinerary

May-	15		
3rd	Yangon to Myeik and birding at Kyun Sin Ye (Poor Islet)	by flight/ boat	N12.50903° E98.51704°/14m
4th	Birding along the Myeik costal	on foot	N12.44476° E98.61053°/
6th	Myeik to 27 Mile (Yatanarpon village)	by car	
7th	27Mile (Yatanarpon village) to Phayardan (Camp 1)	on foot	N11.22955° E99.17697°/41m
8th	Survey around Phayardan (Camp 1)	on foot	N11.23043° E99.17583°/72m
9th	Bird counting for Big Day Bird Counting	on foot	
10th	Survey around Phayardan (Camp 1)	on foot	N11.22150° E99.18058°/72m
11th	Survey around Phayardan (Camp 1)	on foot	
12th	Survey around Phayardan (Camp 1)	on foot	N11.23369° E99.17805°/63m
13th	Phayardan (Camp 1) to Lenya village	on foot/ by car	
14th	Lenya village to Hankapyu village (via Bokepyin)	by car	N11.03528° E98.77857°/16m
15th	Hankapyu village to 13 Mile (Camp 2)	by car	N11.06541° E98.91546°/37m
16th	Survey around Hankapyu 13 Mile (Camp 2)	on foot	N11.06627° E98.91679°/54m
17th	Survey around Hankapyu 13 Mile (Camp 2)	on foot	N11.06339° E98.91440°/34m
18th	Survey around Hankapyu u 13 Mile (Camp 2)	on foot	
19th	Survey around Hankapyu 13 Mile (Camp 2)	on foot	N11.05598° E98.90402°/104m
20th	Survey around Hankapyu 13 Mile (Camp 2)	on foot	N10.99479° E98.92015°/92m
21st	Survey around Hankapyu 13 Mile (Camp 2)	on foot	
22nd	Survey around Hankapyu 13 Mile (Camp 2)	on foot	
23rd	Survey around Hankapyu 13 Mile (Camp 2)	on foot	
24th	Survey around Hankapyu 13 Mile (Camp 2)	on foot	
25th	Survey around Hankapyu 13 Mile (Camp 2)	on foot	
26th	Hankapyu 13 Mile (Camp 2) to Ywar Hay Luu (Camp 3)	on foot	N10.88967° E98.94962°/73m
27th	Survey around Ywar Hay Luu (Camp 3)	on foot	N10.88536° E98.94599°/98m
28th	Survey around Ywar Hay Luu (Camp 3)	on foot	N10.95059° E98.94442°/63m
29th	Ywar Hay Luu (Camp 3) to Hankapyu 13 Mile (Camp 2)	on foot	
30th	Survey around Hankapyu 13 Mile (Camp 2)/ back to Bokepyin	on foot/ by car	
31st	Waiting flight at Bokepyin town		
Jun-15	5		
1st	Waiting flight at Bokepyin town		
2nd	Bokepyin town to Yangon	by flight	

A description of study areas

The study area consisted of three parts. There was Phayardan (Camp 1), Hankapyu 13 Mile (Camp 2) and Ywar Hay Luu (Camp 3).

Phayardan (Camp 1) N11.22955° E99.17697°/41m

Phayardan camp is on the south-west direction of Yadanarpone (old mining) village and exists on the right of main road from Pyigyi Mandai town. There were betel nut plantation and shifting cultivation along the side of the main road as well. All primary forest around this village had been replaced by betel. The mature betel nut plantations, newly establishments, freshly burnt and cleared, extended into the forest. Most of the men from the village were occasional hunters. The survey team used the three years old monastery building which is sitting on the bank of stream and huge lime stone as a camp. The degraded, secondary and degraded primary and bamboo forests could be seen along way to the camp. Surveys were conducted along the logged tracks and hunter's trails from each direction of the camp. Three transects and 16 points were completed.

Hankapyu 13 Mile (Camp 2) N11.06541° E98.91546°/37m

13 Mile camp is on the way from South Dagon oil palm plantation to Ywar Hay Luu humblest. The camp has been used by loggers and also used as a place for piling logs earlier this year. Degraded primary, secondary and bamboo forest can be seen around the area. Bamboos were more abundance and ground vegetation were covered much more by bamboo leaves than other sites. Four transects and 30 points were completed in this area.

Ywar Hay Luu (Camp 3) N10.88967° E98.94962°/73m

Ywar Hay Luu camp is located five miles from Ywar Hay Luu humblest, six household's settlement, which is near the Myanmar army (border guard) post at the border to Thailand. Survey team chose the hunter's house as a camp, where the mammal team has been staying before and the same place where GP was heard as well. There are some patches of forest around the camp that have been cleared for cultivation. Two transects and 17 points were completed in this area.

Results

In total we surveyed three sites and Gurney's Pittas were found at all these sites; around Phayardan (Camp 1), Hankapyu 13 Mile (Camp 2) and Ywar Hay Luu (Camp 3). It was recorded in primary degraded (also which close to limestone), secondary and bamboo forests in evergreen and semi- evergreen forest. Some transects and points in the areas where had been done before, except positive points, were not recorded. There are only 10 transects and 71 points were conducted. Among them six numbers of Gurney's Pitta from five points were recorded during the survey period.

- **8 May 2015**: Lilip calls were heard in primary degraded forest close to limestone before playback at Point 5, Transect 1 about 50m distance from team at 11:05 in Phayardan (Camp 1). Two Gurney's Pittas (male and female) responded to playback but not getting close.
- **10 May 2015**: Another two skew calls responded to playback in primary degraded and bamboo forest at Point 1, Transect 2 about 80m distance at 10:30 in the same camp 1.
- **24 May 2015**: Ten lilip calls were heard during the general birds counting around the 13 Mile (Camp 2) in primary degraded and bamboo forest about 15m distance from camp at 16:00. More than ten lilip calls were heard again from the same place at 05:00 on 28 May 2015.
- **27 May 2015:** Eight lilip calls were heard while sitting in the camp, Ywar Hay Luu (Camp 3) at 15:20 from about 15m distance in secondary and bamboo forest. It was sunny in the morning and rain started at 13:00 and stopped just before the bird called.
- **28 May 2015:** Lilip calls were heard before playback in primary degraded and bamboo forest at Point 4, Transect 9 about 10m distance at 10:25 in Ywar Hay Luu (Camp 3). Bird (male) was seen and responded to playback at 10:50, but it was not seen and gave no response for 2hrs, when the team walked back from the same trail.

The species seem to prefer the lowland forest not very far from the stream. Areas and all Gurney's Pitta contacts were show in Table 1 and Figure 1.

Table 1. Result of Gurney's Pitta during the survey

Date	Location	Coordinate	Ele: (m)	Seen/ Heard	Total Quant:	Time	Distan: (m)	Forest Type	Gurney's Pitta's contact
8/5/2015	Phayardan (Camp 1) Transect 1 Point 5	N 11.22181° E 99.17325°	67	Heard/ Seen	2	11:05	50	Primary degraded & Limestone	Lilip calls were heard before playback
10/5/2015	Phayardan (Camp 1) Transect 2 Point 1	N 11.22150° E 99.18058°	72	Heard	1	10:30	80	Primary degraded & Bamboo	2 Skew calls were heard afterplayback
24/5/2015	13 Mile (Camp 2) near camp	N 11.06541° E 98.91546°	37	Heard	1	16:00	15	Primary degraded & Bamboo	10 Lilip calls were heard during the bird counting around camp
27/5/2015	Ywar Hay Luu (Camp 3) near camp	N 10.88967° E 98.94962°	73	Heard	1	15:20	15	Secondary & Bamboo	8 Lilip calls were heard while sitting in the camp
28/5/2015	Ywar Hay Luu (Camp 3) Transect 9 Point 4	N 10.96125° E 98.94814°	58	Seen	1	10:25	10	Primary degraded & Bamboo	Lilip calls were heard before playback

Information from FFI's mammal team

Three Gurney's Pittas were heard before the survey started during the mammal survey by FFI's mammal team - Saw Soe Aung and Kyaw Naing Oo who had been working with BANCA bird team on Gurney's Pitta survey in 2012 and 2014.

- **2 Jan 2015:** More than five lilip calls were heard and one male bird was seen in secondary and bamboo forest at 09:21 about 50m distance from the team.
- **3 Jan 2015:** More than five lilip calls were heard from the camp, same as Ywar Hay Luu (Camp 3) in secondary and bamboo forest at 08:00 about 30m distance.
- **27 March 2015:** More than five lilip calls were heard in primary degraded and bamboo forest at 08:39 about 50m distance from the team. All information on Gurney's Pittas is shown in Table 2 and Figure 1.

Table 2. Gurney's Pitta were heard by FFI's mammal team before the survey started

Date	Location	Coordinate	Ele: (m)	Seen/ Heard	Total Quant:	Time	Distan: (m)	Forest Type	Gurney's Pitta's contact
2/1/2015	Ywar Hay Luu (Camp 3)	N 10.87756° E 98.93980°	67	Heard/ Seen	1	9:21	50	Secondary & Bamboo	5 to 10 Lilip call
3/1/2015	Ywar Hay Luu (Camp 3) near camp	N 10.88967° E 98.94962°	73	Heard	1	8:00	30	Secondary & Bamboo	5 to 10 Lilip call
27/3/2015	Phayardan (Camp 1)	N 11.25163° E 99.15226°	72	Heard	1	8:39	50	Primary degraded & Bamboo	5 to 10 Lilip call

Gurney's Pitta Recorded Sites in Tanintharyi Region

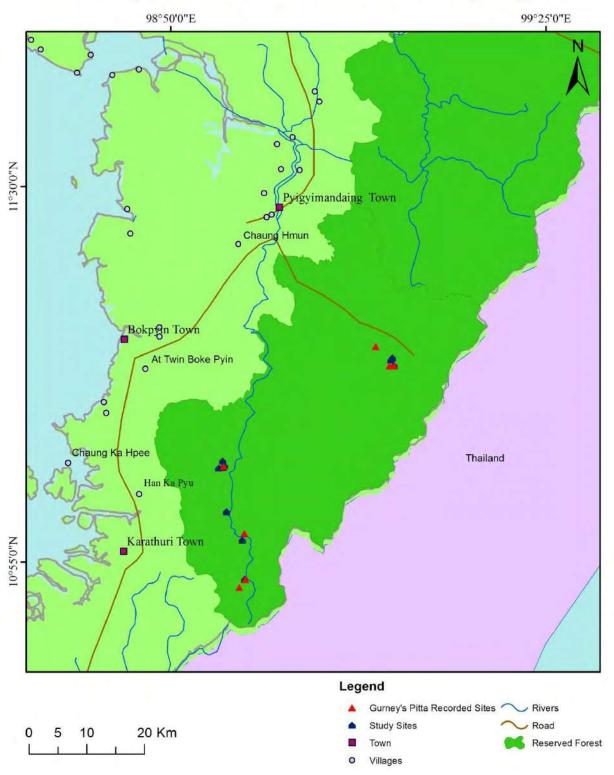


Figure 1.

Status of recorded bird species in Tanintharyi Region

A total of 206 species of birds belonging to 47 families were also documented during the survey period. One new recorded species for Myanmar, Spectacled Spiderhunter *Arachnothera flavigaster*, was recorded in Phayardan (Camp 1) and Hankapyu 13 Mile (Camp 2). Among them, one species was recorded as Endangered, two as Vulnerable and 22 as Near Threatened according to The IUCN Red list of Threatened Species 2015.2. (See Appendix)

Threats

Main threats found in Tanintharyi Region this year are natural forest being replaced by perennial crop betel nut. Forest near Phayardan (camp 1) has been cleared for shifting cultivation recently and extension seems to be continued. We noticed that the quality of forest in the survey areas was going down year by year, due to shifting cultivation and logging in these areas. Habitat of bird were lost and disturbed by human activities in the areas.

Hunting pressure is also a serious threat to some birds and other wildlife. Some species, such as Pangolin, Leopard and sometimes Tiger were hunted for trading at the border of Myanmar and Thailand. Most hunters are using the traps and nets (similar to fishing net) to catch the mammal especially Pangolin. Traps and nets were recorded in the survey areas. It has been noted that the excessive hunting for trade and meat is the single most important reason for the decline in fauna populations. During the survey period, the team was informed by local hunters that even the hunters from Thailand with snipers and powerful 4-wheel drive were crossing the border and did hunting in the survey areas. Hunting may be less harmful to forest then invasions of cultivations and village settlements, but if it is not prevented, killing of bigger mammals such as Gour, Sambar, Wild boar and Tigers may lead to their extinction and the presence of tiger is one of the main factors to name it a perfect forest.

Discussion

During our survey in proposed Lenya National Park, we observed more rare species of birds and mammals than in some others part of the country we have been. It looks like a perfect habitat for birds and mammals. Moreover, the bird families of Broadbill, Kingfisher, Treepie, Pitta, Bulbul and many species of bird family are observed.

Total of six Gurney's Pittas were recorded from five different places and most of them were calling (lilip call) before playback. The female birds seemed to be incubating their eggs because of only one female being observed during the survey. Most of the ground vegetation from second and third camp was thick covered by the bamboo leaves. Comparing to the previous year's survey, result of Gurney's Pitta was less than previous recorded. It does not mean the population of the bird is decline so rapidly due to this year result because this year and the previous year surveys have been done in different areas, especially, for understanding the distribution of this species. But, by looking at the forest fragmentation and disturbing, in the areas where the bird have been recorded, we were sure that the population of Gurney's Pitta is declining year after year.

Rufous-bellied Swallow *Cecropis badia* were recorded (have been described as a new record for Myanmar since 2011-2014 in Gurney's Pitta report) nearby rock cliff of limestone carrying the nest materials and this species is mention in (Craig Robson. A Field Guide To The Birds of Thailand and South-east Asia.2011) as the endemic species for south Thailand, Peninsular Malaysia and Singapore. There are remarkable species of birds in Tanintharyi (Tenasserim) which are not found in every parts of the forest there and we spotted almost all birds species in the region.

To preserve important bird species such as rare Gurney's Pitta (endemic species of south Tanintharyi now), Hornbills and large mammal – Tigers, Asian Elephants urgently conservation measures are needed.

The conservation should be done in these areas as quick as possible to push the government to designate the proposed Lenya National Park into Lenya National Park. The action should be done in cooperation with Karen National Union (KNU), local villages and to encourage

the oil-palm growers and villages to establish the community forestry (CF) for protecting Gurney's Pitta and other species.

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Appendix-

Table 3. The study sites and Forest types in Tanintharyi Region

Date	Camp	Transect	Point	Coordinate	Ele: (m)	GP	Forest Type
			1	N 11.23043° E 99.17583°	72		Primary degraded & Limestone
			2	N 11.23222° E 99.17429°	42		Primary degraded & Limestone
8/5/2015		1 (5 points)	3	N 11.23059° E 99.17303°	71		Primary degraded & Limestone
			4	N 11.22440° E 99.17327°	80		Primary degraded & Limestone
			5	N 11.22181° E 99.17325°	67	2	Primary degraded & Limestone
			1	N 11.22150° E 99.18058°	72	1	Primary degraded & Bamboo
10/5/2015 1 (Phayardan)			2	N 11.21816° E 99.18067°	61		Primary degraded & Bamboo
	1	2 (5 points)	3	N 11.21574° E 99.18044°	64		Primary degraded & Bamboo
	(Phayardan)		4	N 11.21248° E 99.18040°	76		Primary degraded & Bamboo
			5	N 11.21017° E 99.17571°	47		Primary degraded & Bamboo
			1	N 11.23369° E 99.17805°	63		Primary degraded
		3	2	N 11.23459° E 99.17667°	63		Primary degraded
12/5/2015			3	N 11.23446° E 99.17260°	76		Primary degraded
12/3/2013		(6 points)	4	N 11.23553° E 99.16931°	74		Primary degraded
			5	N 11.23896° E 99.16859°	62		Primary degraded
			6	N 11.24135° E 99.16798°	78		Primary degraded
			1	N 11.06627° E 98.91679°	54		Primary degraded
			2	N 11.06789° E 98.91748°	20		Primary degraded
16/5/2015	2	4 (5 points)	3	N 11.07050° E 98.91628°	92		Primary degraded
	(13 Mile)		4	N 11.07238° E 98.91562°	120		Primary degraded
			5	N 11.07515° E 98.91570°	55		Primary degraded
17/5/2015		5 (8 points)	1	N 11.06339° E 98.91440°	34		Secondary & Bamboo

		2	N 11.06148° E 98.91647°	66	Secondary & Bamboo
		3	N 11.05911° E 98.91652°	51	Secondary & Bamboo
		4	N 11.05507° E 98.91632°	57	Secondary & Bamboo
		5	N 11.05301° E 98.91637°	64	Secondary & Bamboo
		6	N 11.05007° E 98.91730°	71	Secondary & Bamboo
		7	N 11.04730° E 98.91674°	79	Secondary & Bamboo
		8	N 11.04408° E 98.91627°	56	Secondary & Bamboo
		1	N 11.06244° E 98.90791°	60	Secondary & Bamboo
19/5/2015		2	N 11.06109° E 98.90349°	71	Secondary & Bamboo
	6	3	N 11.05865° E 98.89852°	75	Secondary & Bamboo
	(6 points)	4	N 11.05598° E 98.90402°	104	Secondary & Bamboo
		5	N 11.05428° E 98.89070°	85	Secondary & Bamboo
		6	N 11.05531° E 98.88812°	36	Secondary & Bamboo
		1	N 10.99479° E 98.92015°	92	Secondary & Bamboo
		2	N 10.99715° E 98.92063°	81	Secondary & Bamboo
		3	N 10.99849° E 98.91929°	52	Secondary & Bamboo
		4	N 11.00139° E 98.91847°	71	Secondary & Bamboo
		5	N 11.00459° E 98.91695°	58	Secondary & Bamboo
	7 (11 points)	6	N 11.00702° E 98.91656°	68	Secondary & Bamboo
		7	N 11.01343° E 98.91658°	81	Secondary & Bamboo
		8	N 11.01648° E 98.91713°	65	Secondary & Bamboo
		9	N 11.02061° E 98.91689°	75	Secondary & Bamboo
		10	N 11.02459° E 98.91749°	57	Secondary & Bamboo
		11	N 11.02756° E 98.91672°	77	Secondary & Bamboo
3 (V.v.or Hov.	8	1	N 10.88945° E 98.94843°	88	Secondary & Bamboo
(Ywar Hay Luu)	(9 points)	2	N 10.88536° E 98.94599°	98	Secondary & Bamboo
	(Ywar Hay	(6 points) 7 (11 points) 3 (Ywar Hay 8 (9 points)	3 4 5 6 7 8 8 1 2 3 (6 points) 4 5 6 1 2 3 (1 points) 7 (11 points) 6 7 8 9 10 11 3 (Ywar Hay (9 points)	2 E 98.91647°	2 E 98.91647° 66 3 N 11.05911° 51 4 E 98.91652° 57 5 N 11.05507° 67 6 E 98.91637° 64 6 N 11.05007° 71 7 E 98.91637° 70 8 N 11.0408° 70 8 N 11.0408° 56 1 N 11.06109° 71 2 N 11.05865° 75 3 N 11.05865° 75 4 E 98.90349° 71 3 N 11.05598° 60 4 N 11.05598° 75 6 E 98.89852° 75 7 E 98.89070° 85 6 N 11.05531° 86 7 E 98.90402° 104 8 E 98.90402° 104 9 E 98.90402° 104 1 E 98.92015° 92 2 N 10.99479° 92 2 N 10.99479° 92 2 N 10.99479° 52 3 E 98.91629° 52 4 E 98.91630° 58 7 N 11.00459° 58 8 N 11.01343° 81 8 E 98.91658° 81 8 N 11.01648° 65 9 N 11.02061° 75 10 N 11.02756° 77 11 N 11.02756° 77 11 N 11.02756° 77 12 E 98.91632° 78 3 (Ywar Hay 10 10 10 10 1 N 10.88945° 88 3 (Ywar Hay 10 10 10 10 1 E 98.94845° 88 1 E 98.9484

			3	N 10.88427° E 98.94416°	92		Secondary & Bamboo
			4	N 10.88279° E 98.94447°	88		Secondary & Bamboo
			5	N 10.88050° E 98.94398°	94		Secondary & Bamboo
			6	N 10.88031° E 98.94151°	91		Secondary & Bamboo
			7	N 10.88034° E 98.94103°	98		Secondary & Bamboo
			8	N 10.88471° E 98.94266°	81		Secondary & Bamboo
			9	N 10.88775° E 98.94459°	52		Secondary & Bamboo
			1	N 10.95059° E 98.94442°	63		Primary degraded & Bamboo
28/5/2015		2	N 10.95348° E 98.94449°	58		Primary degraded & Bamboo	
			3	N 10.95852° E 98.94711°	48		Primary degraded & Bamboo
		9	4	N 10.96125° E 98.94814°	58	1	Primary degraded & Bamboo
28/3/2013		(8 points)	5	N 10.96404° E 98.94762°	73		Primary degraded & Bamboo
			6	N 10.96725° E 98.94773°	59		Primary degraded & Bamboo
			7	N 10.96813° E 98.94894°	90		Primary degraded & Bamboo
			8	N 10.96843° E 98.95169°	81		Primary degraded & Bamboo
			1	N 11.07339° E 98.91396°	29		Primary degraded & Bamboo
			2	N 11.07393° E 98.91285°	43		Primary degraded & Bamboo
			3	N 11.07428° E 98.91182°	70		Primary degraded & Bamboo
30/5/2015	2	10	4	N 11.07329° E 98.91123°	39		Primary degraded & Bamboo
30/3/2013	(13 Mile)	(8 points)	5	N 11.07299° E 98.90945°	77		Primary degraded & Bamboo
			6	N 11.07201° E 98.90762°	60		Primary degraded & Bamboo
			7	N 11.07245° E 98.90624°	97		Primary degraded & Bamboo
			8	N 11.07286° E 98.90457°	157		Primary degraded & Bamboo
~~	or of Curnox?	D					

GP- number of Gurney's Pitta

Gurney's Pitta research in Taninthary	yi Region, Myanmar

Table 4 Recorded bird species in proposed Lenya National Park, Tanintharyi Region in May 2015

No.	Common New Name	Scientific name	IUCN	Camp 1	Camp 2	Camp 3
1	Red Junglefowl	Gallus gallus		x	x	8
2	Great Argus	Argusianus argus	NT		killed	
3	Black-headed Ibis	Threskiornis melanocephalus	NT			
4	Indian Pond-Heron	Ardeola grayii		x	x	
5	Chinese Pond-Heron	Ardeola bacchus			x	
6	Javan Pond-heron	Ardeola speciosa				
7	Eastern Cattle Egret	Bubulcus coromandus			x	
8	Great Egret	Ardea alba				
9	Little Egret	Egretta garzetta			x	
10	Little Cormorant	Phalacrorax niger		x	x	
11	Black-thighed Falconet	Microhierax fringillarius		x	x	
12	Oriental Hobby	Falco severus		x		
12	Oriental Honey-Buzzard				x	
				r		
	·				v	1
		1				1
16	Crested Goshawk	Accipiter trivirgatus		X	X	
15	W/I: 1 4 1 W/ 4 1			r		
17	White-breasted Waterhen	Amaurornis phoenicurus		λ		
10	D 1 D. # 4	T		r		
18	Barred Buttonquail	1 urnix suscitator		A		
	2 3 4 5 6 7 8 9	3 Black-headed Ibis 4 Indian Pond-Heron 5 Chinese Pond-Heron 6 Javan Pond-heron 7 Eastern Cattle Egret 8 Great Egret 9 Little Egret 10 Little Cormorant 11 Black-thighed Falconet 12 Oriental Hobby Oriental Honey-Buzzard (subspecies) 14 Brahminy Kite 15 Crested Serpent-Eagle 16 Crested Goshawk 17 White-breasted Waterhen	2 Great Argus Argusianus argus 3 Black-headed Ibis Threskiornis melanocephalus 4 Indian Pond-Heron 5 Chinese Pond-Heron 6 Javan Pond-heron 7 Eastern Cattle Egret 8 Great Egret 9 Little Egret 10 Little Cormorant 11 Black-thighed Falconet 12 Oriental Hobby Palacrorax niger 13 Greated Serpent-Eagle 14 Brahminy Kite 15 Crested Goshawk Argusianus argus Argusianus argus Threskiornis melanocephalus Ardeola grayii Ardeola bacchus Ardeola speciosa Bubulcus coromandus Ardea alba Egretta garzetta Phalacrorax niger Microhierax fringillarius Falco severus Pernis ptilorhynchus torquatus Haliastur indus Spilornis cheela Accipiter trivirgatus	2 Great Argus Argusianus argus NT 3 Black-headed Ibis Threskiornis melanocephalus NT 4 Indian Pond-Heron Ardeola grayii 5 Chinese Pond-Heron Ardeola bacchus 6 Javan Pond-heron Ardeola speciosa 7 Eastern Cattle Egret Bubulcus coromandus 8 Great Egret Ardea alba 9 Little Egret Egretta garzetta 10 Little Cormorant Phalacrorax niger 11 Black-thighed Falconet Microhierax fringillarius 12 Oriental Hobby Falco severus 13 Oriental Honey-Buzzard (subspecies) Pernis ptilorhynchus torquatus 14 Brahminy Kite Haliastur indus 15 Crested Gerpent-Eagle Spilornis cheela 16 Crested Goshawk Accipiter trivirgatus 17 White-breasted Waterhen Amaurornis phoenicurus	2 Great Argus Argusianus argus NT 3 Black-headed Ibis Threskiornis melanocephalus NT 4 Indian Pond-Heron Ardeola grayii x 5 Chinese Pond-Heron Ardeola bacchus 6 Javan Pond-heron Ardeola speciosa 7 Eastern Cattle Egret Bubulcus coromandus 8 Great Egret Ardea alba 9 Little Egret Egretta garzetta 10 Little Cormorant Phalacrorax niger x 11 Black-thighed Falconet Microhierax fringillarius x 12 Oriental Hobby Falco severus x 13 (subspecies) Pernis ptilorhynchus torquatus 14 Brahminy Kite Haliastur indus x 15 Crested Serpent-Eagle Spilornis cheela x 16 Crested Goshawk Accipiter trivirgatus x 17 White-breasted Waterhen Amaurornis phoenicurus x	2 Great Argus

VANELLIDAE: Lapwings & allies	19	Red-wattled Lapwing	Vanellus indicus		x	x	
COLUMBIDAE: COLUMBINAE: Typical pigeons & doves	20	Rock Pigeon	Columba livia		x		
	21	Spotted Dove	Streptopelia chinensis		x	x	
	22	Emerald Dove	Chalcophaps indica		х	x	15
COLUMBIDAE: TRERONINAE: Green-pigeons, fruit-doves, imperial-pigeons & allies	23	Ashy-headed Green -Pigeon	Treon phayrei		x		
	24	Thick-billed Green-Pigeon	Treon curvirostra			x(sitting on nest)	
	25	Large Green-Pigeon	Treon capellei	VU			
PSITTACIDAE: LORICULINAE: Hanging-parrots	26	Vernal Hanging-Parrot	Loriculus vernalis		x	x	8
	27	Blue-Crowned Hanging- Parrot	Loriculus galgulus		x		
PSITTACIDAE: PSITTACINAE: Parrots & parakeets	28	Blue-rumped Parrot	Psittinus cyanurus	NT	х	x	80
CUCULIDAE: CUCULINAE: Old World cucukoos	29	Moustached Hawk-Cuckoo	Hierococcyx vagans	NT	x	x	
	30	Indian Cuckoo	Cuculus micropterus		x		
	31	Plaintive Cuckoo	Cacomantis merulimus		x	x	
	32	Violet Cuckoo	Chrysococcyx xanthorhynchus		x	x	
	33	Drongo Cuckoo	Surniculus lugubris		x	x	
				NIT			
CUCULIDAE: PHAENICOPHAEINAE: Malkohas & allies	34	Black-bellied Malkoha	Rhopodytes diardi	NT	х	x	
	35	Chestnut-bellied Malkoha	Rhopodytes sumatranus	NT	х	x	
	36	Raffles's Malkoha	Rhinortha chlrophaeus		х	x	,
	37	Chestnut-breasted Malkoha	Zanclostomus curvirostris		х	x	4
CUCULIDAE: CENTROPODINAE: Coucals	38	Greater Coucal	Centropus sinensis		x	x	2

STRIGIDAE: Typical owls	39	Collared Scops-Owl	Otus lettia		x	x	1
	40	Brown Fish-Owl	Ketupa zeylonesis		х		
	41	Collared Owlet	Glaucidium brodiei		x		
	42	Brown Boobook	Ninox scutulata		x	x	1
APODIAE: APODINAE: Typical swifts	43	Edible-Nest Swiftlet	Aerodramus fuciphaga		x	x	
	44	Germain's Swiftlet	Aerodramus germani			x	
	45	Brown-backed Needletail	Hirundapus giganteus			x	
	46	Asian Palm-Swift	Cypsiurus balas		x	х	16
	47	House Swft	Apus affinis		х		
APODIDAE: HEMIPROCNINAE: Treeswifts	48	Grey-rumped Treeswift	Hemiprocne longipennis		x	x	?
	49	Whiskered Treeswift	Hemiprocne comata		x	x(with chick)	3
TROGONIDAE: Trogons	50	Orange-breasted Trogon	Harpactes orekios		x	x	
CORACIIDAE: Rollers	51	Indian Roller	Coracias benghalensis		х		
	52	Dollarbird	Eurystomus orientalis		х	x	2
ALCEDINIDAE: HELCYONINAE: Larger kingfishers	53	Banded Kingfisher	Lacedo pulchella		х	x	
	54	Stork-billed Kingfisher	Pelargopsis capensis		х	x	
	55	White-throated Kingfisher	Halcyon smyrnensis		х		
	56	Collared Kingfisher	Todiramphus chloris				
ALCEDINIDAE: ALCEDININAE: Smaller kingfisher	57	Black-backed Kingfisher	Ceyx erithaca		х		
	58	Rufous-backed Kingfiher	Ceyx rufidorsa			x	
	59	Blue-banded Kinfisher	Alcedo euryzona	NT	х		
	60	Blue-eared Kingfisher	Alcedo meninting		x	x	

	61	Common Kingfisher	Alcedo atthis		x		1
MEROPIDAE: Bee-eaters	62	Red-bearded Bee-eater	Nyctornis amictus		x	x	4
	63	Blue-throated Bee-eater	Merops viridis		x		
BUCEROTIDAE: Hornbills	64	Oriental Pied Hornbill	Anthracoceros albirostris		x	x	6
	65	Great Hornbill	Buceros bicornis	NT	x	x	
	66	Helmeted Hornbill	Rhinoplax vigil	NT		x	
	67	Plain-pouched Hornbill	Aceros subruficollis	VU		x	
	68	Wreathed Hornbill	Aceros undulatus		x	x	
RAMPHASTIDAE: MEGALAIMINAE: Asian barbets	69	Lineated Barbet	Megalaima lineata		x		
	70	Gold-whiskered Barbet	Megalaima chrysopogon		x	x	
	71	Red-crowned Barbet	Megalaima raffesii	NT	x	x	
	72	Red-throated Barbet	Megalaima mystacophanos	NT	x	x	
	73	Blue-throated Barbet	Megalaima asiatica		x	x	
	74	Blue-eared Batbet	Megalaima australis		x(nesting)	x	1
	75	Coppersmith Barbet	Megalaima haemaccephala		x		
	76	Brown Barbet	Calorhamphus fuliginosus		x		
PICIDAE: PICUMNIMAE: Piculets	77	White-browed Piculet	Sasia ochracea		x	x	2
PICIDAE: PICINAE: Typical woodpeckers	78	Rufous Woodpecker	Micropternus brachyurus		x	x	
	79	White-bellied Woodpecker	Dryocopus javensis		x	x	
	80	Banded Woodpecker	Chrysophlegma miniaceus		x	x	
	81	Greater Yellownape	Chrysophlegma flavinucha		x		
	82	Crimson-winged Woodpecker	Picus puniceus			x	
	83	Common Flameback	Dinopium javanese		x		

	84	Greater Flameback	Chrysocolaptes lucidus		x	x	2
	85	Bamboo Woodpecker	Gecinulus viridis		x	x(nesting)	4
	86	Maroon Woodpecker	Blythipicus rubiginosus		x		
	87	Buff-rumped Woodpecker	Meiglyptes tristis		x	x	2
	88	Buff-nacked Woodpecaker	Meiglyptes tukki	NT		x	2
	89	Heart-spotted Woodpecker	Hemicircus canente		x	x	
	90	Great Slaty Woodpecker	Mulleripicus pulverlintus			x(chick in nest)	2
EURYLAIMIDAE: CALYPTOMENINAE: Asian green broadbills	91	Green Broadbill	Calyptomena viridis	NT	x	x	2
EURYLAIMIDAE: EURYLAIMINAE: Typical broadbills	92	Dusky Broadbill	Corydon sumatranus		x	x(1-chick in nest)	
	93	Silver-breasted Broadbill	Serilophus lunatus		x	x	1(nesting)
	94	Black-And-Red Broadbill	Cymbirhynchus		x	x	
	95	Banded Broadbill	Eurylaimus javanicus		x	x(building nest)	
	96	Black-And-Yellow Broadbill	Eurylaimus ochromalus	NT	x	x	
PITTIDAE: Pittas	97	Hooded Pitta	Pitta sordida		x	x	20
	98	Blue-winged Pitta	Pitta moluccensis		х	x	
	99	Gurney's Pitta	Pitta gurneyi	EN	3	1	2
CAMPEPHAGIDAE: Cuckooshriles, trillers, minivets & allies	100	Indochinese Cuckooshrike	Coracina polioptera		x	x	
	101	Black-winged Cuckooshrike	Coracina melaschistos		x	x	
ORIOLIDAE: Orioles & allies	102	Dark-throated Oriole	Oriolus xanthonotus	NT	x	x	
	103	Black-hooded Oriole	Oriolus xanthornus		x		
GENERA INCERTAE SEDIS: Woodshrikes, flycatcher-shrikes	104	Large Woodshrike	Tephrodornis gularis		x	x	
& philentomas	105	Common Woodshrike	Tephrodornis pondicerianus		x		

	106	Bar-winged Flycatcher- Shrike	Hemipus picatus		x	x	
	107	Rufous-Winged Philentoma	Philentoma pyhoptera		x	x	
	107	Maroon-Breasted Philentoma	Philentoma velata	NT	x	x	
	108	Waroon-Breasted Pilitentoma	Pritentoma vetata	1,1			
AEGITHINIDAE: Ioras	109	Green Iora	Aegithina viridissima	NT	x		
	110	Great Iora	Aegithina lafresnayei		x	x	1
DICRURIDAE: Drongos	111	Ashy Drongo	Dicrurus leucophaeus		x		
	112	Bronzed Drongo	Dicrurus aeneus		х	x(2-chick in nest)	6
	113	Greater Racket-tailed Drongo	Dicrurus paradiseus		x	x	8+1(juv)
MONARCHIDAE: Monarchs, paradise-flycatchers & allies	114	Black-nape Monarch	Hypothymis azurea		х	x	10
	115	Asian Paradide-Flycatcher	Terpsiphone paradisi			x(+white)	6
CORVIDAE: Crows, nutcrackers, magpies, jays, treepies & allies	116	House Crow	Corvus splendens		х		
	117	Eastern Jungle Crow	Corvus levaillantii		х		
	118	Southern Jungle Crow	Corvus macrorhynchos			?	
	119	Black Magpie	Platysmurus leucopterus	NT	х	x	1
	120	Crested Jay	Platylophus galericulatus			x	
LANIIDAE: Shrikes	121	Tiger Shrike	Lanius tigrinus		x		
	122	Brown Shrike	Lanius cristatus		х		
NECTARINIIDAE: Sunbirds & spinderhunters	123	Brown-throated Sunbird	Anthreptes malacensis			x	
	124	Van Hasselt's Sunbird	leptocoma brasiliana		х		
	125	Olive-backed Sunbird	Cinnyris jugularis		х		
	126	Crimson Sunbird	Aethopyga siparaja		х	x	2
	127	Ruby-cheeked Sunbird	Chalcoparia singalensis		x	x	4

	128	Purple -nape Sunbird	Hypogramma hypogrammicum			x(building nest)	
	129	Grey-breasted Spiderhunter	Arachnothera affinis			x	
	130	Streaked Spiderhunter	Arachnothera magna		x	x	
	131	Little Spiderhunter	Arachnothera longirostra		x	x	5
	132	Yellow-eared Spiderhunter	Arachnothera chrysogenys		x	x	
	133	*Spectacled Spiderhunter	Arachnothera flavigaster		x	3-(new record)	
DICAEIDAE: Flowerpeckers	134	Yellow-breasted Flowerpecker	Dicaeum maculatus		x	х	
	135	Crimson-breasted Flowerpecker	Dicaeum percussus			?	
	136	Yellow-vented Flowerpecker	Dicaeum chrysorrheum		х		
	137	Scarlet-backed Flowerpecker	Dicaeum cruentatum			x	
) III			
CHLOROPSEIDAE: Leafbirds	138	Lesser Green Leafbird	Chloropsis cyanopogon	NT		x	6
	139	Blue-winged Leafbird	Chloropsis cochinchinesis		x	x	
IRENIDAE: Fairy-bluebirds	140	Asian Fairy-Bluebird	Irena puella		x	x	3
ESTRILDIDAE: LONCHURINAE: Java Sparrow, munias, parrotfinches & allies	141	White-rumped Munia	Lonchura striata			x	20
	142	White-bellied Munia	Lonchura leucogastra		x	x	2
	143	Pin-tailed Parrotfinch	Erythrura prasina		x	x(nesting)	30
SITTIDAE: Nuthatches	144	Velvet-fornted Nuthatch	Sitta frontalis		x	x	2
CTUDNIDAE, CTUDNINAE, Managa atauliana 9 all'ann	145	Lungle Memo	A ani da thannas fus ana		x		
STURNIDAE: STURNINAE: Mynas, starlings & allies	145	Jungle Myna	Acridotheres fuscus		x	x	
	146	Common Myna	Acridotheres tristis		λ	λ	4
	147	Asian Glossy Starling	Aplonis panayenis				4
	148	Common Hill-Myna	Gracula religiosa			x	

MUSCICAPIDAE: SAXICOLINAE: Shortwings, robins, redstarts, rock-thrushes, chats, forktails, whistling-thrushes & allies	149	Blue Rock-Thrush	Monticola solitarius		x		
room an assess, charis, rooming an assess to annes	150	Chestnut-naped Forktail	Enicurus ruficapillus	NT		x	
	151	White-crowned Forktail	Enicurus leschenaulti			4	6
	152	White-crowned Forktail (subspecies)	E.l.frontalis			2	
	153	Blue Whistling-Thrush	Myophonus caruleus		х		
MUSCICAPIDAE: MUSCICAPINAE: Old World flycatchers & allies	154	Pale Blue Flycatcher	Cyornis unicolor			x	
	155	Hill Blue Flycatcher	Cyornis banyumas			x	6
	156	Tickell's Bule Flycatcher	Cyornis tickelliae		х	x	
	157	Verditer Flycatcher	Eumyias thalassinus		х	x	
	158	Oriental Magpie-Robin	Copsychus saularis		х	x	2
	159	White-rumped Shama	Copsychus malabaricus		x	x	20
PARIDAE:Typical tits	160	Sultan Tit	Melanochlora		х	x	2
STENOSTIRIDAE: Canary-flycatchers & allies	161	Grey-headed Canary- Flycatcher	Culicicapa ceylonensis		x	x	5
PYCNONOTIDAE: Bulbuls	162	Black-headed Bulbul	Pycnonotus atriceps		x	x	
	163	Black-crested Bulbul	Pycnonotus flaviventris		x	x	2
	164	Grey-bellied Bulbul	Pycnonotus cyaniventris	NT		x	
	165	Stripe-throated Bulbul	Pycnonotus finlaysoni		x	x	6
	166	Yellow-vented Bulbul	Pycnonotus goiavier				
	167	Red-eyed Bulbul	Pycnonotus brunneus		x	x	1
	168	Spectacled Bulbul	Pycnonotus erythropthalmos			x	
	169	Olive Bulbul	Iole virescens		x	x	
	170	Grey-eyed Bulbul	Iole propinqua		x	x	

	171	Buff-vented Bulbul	Iole olivacea	NT		x	
	172	Hairy-backed Bulbul	Tricholestes criniger		x	х	
	173	Grey-cheeked Bulbul	Alophoixus bres			?	
	174	White-throated Bulbul	Alophoixus flaveolus			х	
	175	Puff-throated Bulbul	Alophoixus pallidus		х	x(+2-eggs)	6
	176	Ochraceous Bulbul	Alophoixus ochraceus		х	х	
HIRUNDINIDAE: HIRUNDININAE: Martins, swallows & allies	177	Barn Swallow	Hirundo rustica			х	
	178	Red-rumped Swallow	Cecropis daurica			х	
	179	Rufous- bellied Swallow	Cecropis badia		4(nesting)		
CETTIIDAE: Abroscopus warblers, Mountain Tailorbird, Broad-billed Warbler, Cettia bush-warblers, tesias & allies	180	Yellow-bellied Warbler	Abroscopus superciliaris		x	x(+chick)	
PHYLLOSCOPIDAE: Seicercus & Phylloscopus warblers	181	Artic Warbler	Phylloscopus borealis		x		
TIMALIIDAE: Babblers	182	Brown-cheeked Fulvetta	Alcippe poioicephala		х	х	
	183	Spot-necked Babbler	Stachyris strialata		х	х	
	184	Grey-throated Babbler	Stachyris nigriceps		x	x	
	185	Chestnut-winged Babbler	Stachyris erythroptera		x	x	
	186	White-browed Scimitar- Babbler	Pomatorhinus schisticeps		x	х	1
	187	Orange-billed Scimitar- Babbler	Pomatorhinus ochraceiceps			х	
	188	Golden Babbler	Stachyridopsis chrysaea		x		
	189	Rufous-capped Babbler	Stachyridopsis ruficeps			x	
	190	Rufous-fronted Babbler	Sachyridopsis rufifrons		х	х	
	191	Pin-Striped Tit-Babbler	Macronus gularis		x	x	30
	192	Chestnut-capped Babbler	Timalia pileata		x		
	193	Buff-breasted Babbler	Pellorneum ticklli			x	

	194	Black-capped Babbler	Pellorneum capistratum	x		
	195	Puff-throated Babbler	Pellorneum ruficeps	x	x	
	196	Abbott's Babbler	Malacocincla abbotti	x	x	20
	197	Ferruginous Babbler	Trichastoma bicolor	x		
	198	Streaked Wren-Babbler	Napothera brevicaudata	x		
MEGALURIDAE: Grasshopper warblers, <i>Bradypterus</i> bush-warbler, Striated Grassbird & allies	199	Lanceolated Warbler	Locustella lanceolata	x		
CISTICOLIDAE: Cisticolas, tailorbirds, prinias & allies	200	Zitting Cisticola	Cisticola juncidis			
	201	Ashy Tailorbird	Orthotomus ruficeps	x	x	
	202	Rufous-tailed Tailorbird	Orthotomus sericeus	x	x	
	203	Dark-necked Tailorbird	Orthotomus atrogularis	x	x(+juvnile)	3
	204	Common Tailordbird	Orthotomus sutorius	x	x	
	205	Rufescent Prinia	Prinia rufescens	x	x	
	206	Yellow-bellied Prinia	Prinia flaviventris	x		4

^{*} New recorded species

Recorded Photos

(All photos by Lay Win)



Gurney's Pitta Pitta gurneyi (EN)



Plain-pouched Hornbill Aceros subruficollis (VU)





Blue-rumped Parrot Psittinus cyanurus (NT)

Black-bellied Malkoha Rhopodytes diardi (NT)





Oriental Honey-buzzard P.p.torquatus (dark morph)

Oriental Honey-buzzard P.p torquatus (pale morph)

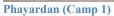






 ${\bf Spectacled\ Spiderhunter\ } {\it Arachnothera\ flavigaster}$







Hankapyu 13 Mile (Camp 2)



Ywar Hay Luu (Camp 3) GP was heard on the backyard GP habitat near the limestone near Camp 1



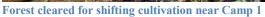


Riverain forest near 13 Mile (Camp 2)



Parts of primary forest are converted into plantation







Turtle was caught for meat near Camp 1



Biodiversity Survey team from BANCA and FFI