

Low Key Monitoring in the Mbeliling forest

Five new routes laid out and tested
June 16th - 27th 2009

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Photo by Langgeng Arif Utomo, Tiwu Nampar, June 18th 2009.

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Background

Burung Indonesia and Dansk Ornitologisk Forening (DOF), with financial support from DANIDA, is implementing a program with an objective to construct a participatory forest management that improves local society livelihood in Mbeliling forest area, located in the western part of Flores Island.

One of the activities is building a Low Key Monitoring system (LKM, Pemantauan Hutan Bersama, or Laat Puar (Manggaraian)). The aim of this activity is to design a monitoring system able to detect any changes on the surrounding forest at an early stage that is jointly implemented by local communities and the officers of Dinas Kehutanan (The Forestry Department). The monitoring results are going to be used for the long-term management of the entire Mbeliling forest area.

A workshop was held in Labuan Bajo and Roe September 11th-15th 2008 with the purposes of:

- Collecting information on the extent and type of resource uses going on in the Mbeliling forest
- Listing relevant species of birds and other animals to monitor in the forest including estimates of their recent population changes
- Based on the above information building a low key monitoring to be used by locals and the forestry department in cooperation
- Testing the proposed LKM system in the field and making appropriate adjustments
- Making the following information stream and decision powers clear

The target groups of the workshop were the stakeholders in the forest use, e.g. local hunters/collectors and other village representatives, village facilitators in the project and representatives from the forestry department (Dinas Kehutanan).

5 staff members of Burung Indonesia attended as well as 2 persons from DOF/BirdLife Denmark. A report by Timme Nygaard summarizes the major findings and experiences of the workshop as well as the following implementation of the LKM system.

Based on the results from the 2008 workshop several LKM routes have been started, and a decision was taken to start new routes in June 2009 in 5 more villages: Golo Pongkor, Tiwu Nampar, Golo Kempo, Golo Mbu and Nunang. This report summarizes the proces of laying out and testing the new routes. All routes were installed and monitored by participants from the village and Pak Yon from Dinas Kehutanan, under supervision and instruction from Tibur, Langgeng and Wati (Burung Indonesia), supplemented by Mikkel Kure Jakobsen and Erik Buchwald (DOF).

Experiences with the setting up of new LKM routes

There was good and general backup for implementing the LKM routes from both locals and Dinas Kehutanan representatives.

The following LKM system was used:

- One line transect is established at each village
- The line transect starts at the official border of the protected forest and runs towards the deeper parts of the forest (avoiding following the edge of the forest)
- The routes were fixed geographically by GPS with both a starting and ending point
- Each count took 2-3 hours
- Every count started between 6:00 and 6:25, since activity is higher in the morning
- A count should be performed every 3 months, app. at the same time every year to ensure comparability
- 3-5 people is the minimum/maximum number of people being part of a count with at least one representative from Dinas Kehutanan and at least one representative from the local village
- Several extra trainees were taken along from the village on these first LKM-counts to ensure broader understanding and sustainability in the future counts

- Binoculars are not needed during the count, but were used if at hand
- One person is pointed out to write down all bird/animal observations during the monitoring and another to write down notes on forest uses
- Counting teams discussed and agreed upon all observations made and together produced a report on the count just after it was conducted
- A village log book was established in each village to be used for:
 - Writing in all results from the LKM following the guidelines given in the book
 - Adding relevant observations made in-between counts on resource uses and other changes in the forest
- Conservation Development Groups (CDG's) have been formed in several villages, where the data in the village log book will be discussed and taken to the stakeholder forum if needed
- The stakeholder forum can suggest management changes to Dinas Kehutahan based on this information

The following types of resource uses in Mbeliling were acknowledged and listed if found (no sign of traps or snares were found in any of the 5 villages):

Kayu	Logging
Kulit kayu du'ul	Bark collecting for medicine
Sita	Medicinal plant
Rotan	Rattan
Enau	Palm leaf collecting
	Animal traps
	Bird snares

All signs of resource uses encountered during a count was registered including species, number of specimens affected and age of the collection.

The following birds and animals were always included in the biological monitoring including clearly identifiable signs of presence, based on the list developed by the 2008 workshop. Because of identification problems for pigeons and parrots due to most individuals only being heard, and the voices not being sufficiently known, the list is a minimum list in order to ensure no major identification problems (e.g. by pooling pigeons into one) and to ensure that the species on the list are relevant to the forest (e.g. by deleting the drongo and friarbird, since they are also/mainly farmland species):

Babi hutan	Wild boar
Beco	Flores Giant Rat
Kera	Long-tailed macaque
Pergam	Pigeons and fruit-doves
	<i>Black-backed fruit-dove</i>
	<i>Black-naped fruit-dove</i>
	<i>Emerald dove</i>
	<i>Green imperial pigeon</i>
	<i>Dark-backed imperial pigeon</i>
	<i>Metallic pigeon</i>
Wontong	Orange-footed scrubfowl
Ayam hutan	Green junglefowl
*Keka	*Yellow-crested Cockatoo
Keling	Parrots and parakeets
	<i>Red-cheeked Parrot</i>
	<i>Flores Lorikeet</i>

	<i>*Wallace's Hanging-Parrot</i>
	<i>Great-billed Parrot</i>
Leros	Black-naped oriole
Lawe lujang	Asian paradise-flycatcher
Lea	Flores crow
Kor puar	White-rumped kingfisher
Kaka ketok	Sunda pygmy woodpecker
*Punglor	*Thrushes
	<i>*Chestnut-capped Thrush</i>
	<i>*Chestnut-backed Ground-Thrush</i>

* means none found in any of the 5 routes

The workshop encouraged teams to include other species encountered during the monitoring. The following list shows other important species found during LKM, excluding a number of small passerines and non-forest species.

Landak	Porcupine
Beco	Flores Giant Rat
Ular	Snakes
	Flores Hawk Eagle
?Walik putih	?Black-backed fruit-dove
Walik kembang	Black-naped fruit-dove
?Mungke	?Emerald dove
Pergam hijau	Green imperial pigeon
	?Pinkheaded Imperial Pigeon
?Pergam punggung-hitam	?Dark-backed imperial pigeon
?Merpati-hutan metalik	?Metallic pigeon
	?Flores Green Pigeon
	?Barred Cuckoo Dove
	?Ruddy Cuckoo Dove
Perkici flores	Flores Lorikeet
Nuri pipi-merah	Red-cheeked Parrot
Betet-kelapa paruh-besar	Great-billed Parrot
Cerciak	Lesser wallacean drongo
Kokak	Helmeted friarbird
Kala ponto	Elegant pitta
	Flores Monarch
	Hill Myna
	Little (Flores) Minivet

? means uncertain possible call heard or uncertain identification of seen bird

For bird identification "A guide to the birds of Wallacea" 1997 was used. Many species were mostly heard and seldom or never seen, e.g. Pitta, Flores Crow, junglefowl and pigeons. Calling pigeons were usually very difficult to see, and several types of song were noted without ever seeing which species produced the song. Tentative identification above (?) and in annex 2 is based on members of the team with previous experience with some of the species and for the cuckoo doves on information from a local village participant who knew the voice from hunting experience and pointed out the birds picture in the book.

Evaluation and recommendations for LKM

The project team worked very well. Great interest and support was experienced from the villagers. The team leader Langgeng Arif Utomo, Burung Indonesia, was very efficient and a very keen birdwatcher, who knew large numbers of species by voice. This was a very important help due to the many species which are heard but very difficult to get to see.

Due to the importance of pigeons in the forest habitat, it is recommended to make notes of the different pigeon song types heard during LKM, and to try between LKM monitoring dates to get certain identification of the voices by making use of recordings and playback and specific searches for the singing birds. The data will be more relevant for detecting changes, if the pigeon group can be broken down to species level. The same goes for parrots, where the identification problems are smaller. Several of the voices can be found on the website www.xeno-canto.com, but not all.

At Nunang a pigeon with an extremely deep whooom-wup song was identified by voice as Darkbacked Imperial Pigeon by Langgeng and Mikkel from previous experience. The sound had a similar quality to the booming of European Bittern, but the rhythm was “backwards”. This voice does not match the voice of this species on xeno-canto or as described in the field guide, so it is recommended to make a recording of the song at Nunang and upload it on xeno-canto. Positive sight identification should be a priority. Other pigeons heard but not seen - see list above and annex 2 - should similarly be a priority to make identification possible by voice by recording them when seen and upload on xeno-canto.

Recommendations to Forestry department

The following recommendations were given to the Forestry Department at a meeting on June 26th 2009 in Labuan Bajo:

The invasive alien species longtailed macaque and wild boar were noted in all LKM routes. We were told by the villagers that they have been clearly increasing in abundance during the last decades. It is well-known from other islands with endemic bird species, that introduced mammals can be detrimental to the endemics. Both by predation and by competition. From our interviews in the villages and with staff at Komodo National Park we conclude that especially the macaque is an important factor in the decline of several endemics on Flores, e.g. Flores Crow and the Cockatoo. An outstanding example of this is the difference between Komodo and Rinca Islands in the population of cockatoo. Komodo has no macaques and many cockatoos, while Rinca has many macaques but no breeding cockatoos. Even though both islands have had national park protection for many years and the cockatoos from Komodo visit Rinca. The wild boar will similarly be a great predator of groundnesting birds, e.g. junglefowl and scrubfowl. So a strong recommendation is to hunt, trap and eat the macaque and wild boar, and try as far as possible to get rid of them.

Regarding forest use and access, it was noted that several of the villages were not precisely aware of what rules apply in the protected forest area. It is therefore recommended to disseminate more precisely and widely which rules apply. If the rules prohibit hunting of macaque or wild boar it is recommended to change this rule and make hunting and trapping of these invasive alien species legal. If the rules (as thought by Nunang village) prohibits visits to their ancestral burial place, this is recommended made legal.

It is recommended that non-timber use of the protected forest can continue at a level compatible with protecting the watershed. This means that paths must not develop in a way which leads to erosion.

It is recommended to have the authorities develop a water-saving campaign in Labuan Bajo and other relevant towns.

Conclusion

The great interest in the LKM system from both villagers and the forestry department is promising for the future of the system. It is fortunate that both parties already at this early stage can see the great advantages in cooperation on protecting the forest. Watershed and biodiversity protection are two main objectives of the protection forest. Non-timber use and hunting invasive alien species (macaque and wild boar) is compatible with these objectives. Legalisation of these uses will help the villagers see a benefit from the protected forest.

Erik Buchwald/ July 6th 2009

- Annex 1 Realised itinerary for DOF volunteer Erik Buchwald and Mikkel Jakobsen
- Annex 2 Species list
- Annex 3 Hawks & Eagles (documentation photos): separate file “Hawks-and-eagles.doc”
- Annex 4 Pigeons (photos & discussion of identifications): separate file “Pigeons.doc”

Realised itinerary for Low Key Monitoring, DOF Volunteer Erik Buchwald and Mikkel Kure Jakobsen

Date	Time	Location	Activity
16-jun-09	13.00	Komodo Airport	Arrive at Komodo Airport (1½ hours delayed)
	13.30 - 14.30	Gardena Restaurant	Lunch
	15.00 - 16.30	Mess Burung Indonesia	Mbeliling project profiles presentation and discussion
	16.35 - 17.30	L.bajo-Golo Pongkor	Trip to Golo pongkor
	17.30	Golo Pongkor	Arrive at Golo pongkor village
	17.30 - 20.00	Golo Pongkor	Customary ceremony & discussions
	20.00 - 20.30	Golo Pongkor	Dinner
	20.30 - 22.00	Golo Pongkor	Discussion to prepare the LKM
	22.00 - 23.00	Golo Pongkor	Prepare to get to sleep. People left and were quiet from 23.00
17-jun-09	05.00 - 05.40	Golo pongkor	Wake up and prepare for LKM
	05.40 - 06.20	Golo pongkor	Walk to starting point of LKM
	06.20 - 11.30	Golo pongkor	Laat Puar until about 09.30 (LKM) and return walk
	11.30 - 12.00	Golo pongkor	rest
	12.00 - 13.00	Golo pongkor	Lunch
	13.00 - 15.00	Golo pongkor	Discussion, review, evaluation
	15.00 - 16.30	Golo Pongkor - Tiwu Nampar	Trip to Tiwu Nampar via Lemes
	16.30 - 17.00	Tiwu Nampar	Arrive at Tiwu nampar village
	17.00 - 20.30	Tiwu Nampar	Customary ceremony & discussions
	20.30 - 21.00	Tiwu Nampar	Dinner
	21.00 - 22.00	Tiwu Nampar	Discussion to prepare the LKM
	22.00 - 23.00	Tiwu Nampar	Prepare to get to sleep. People left and were quiet from 23.00
18-jun-09	05.00 - 05.50	Tiwu Nampar	Wake up and prepare for LKM
	05.50 - 06.10	Tiwu Nampar	Walk to starting point of LKM
	06.10 - 08.40	Tiwu Nampar	Laat Puar until about 08.40 (LKM)
	09.00 - 11.30	Tiwu Nampar	Return walk
	11.30 - 12.00	Tiwu Nampar	Rest
	12.00 - 12.30	Tiwu Nampar	Lunch
	12.30 - 13.30	Tiwu Nampar	Discussion, review, evaluation
	13.30 - 15.30	Tiwu Nampar-LBJ	Trip to LBJ
	15.30 - 16.30	LBJ	Take a bath for all at Burung office
	16.30 - 18.30	LBJ-Golo Kempo	Trip to Golo Kempo
	18.30 - 20.00	Golo Kempo	Customary ceremony & discussions
	20.00 - 20.30	Golo Kempo	Dinner
	20.30 - 22.00	Golo Kempo	Discussion to prepare the LKM
	22.00 - 22.30	Golo Kempo	Prepare to get to sleep. People left and were quiet from 22.30
19-jun-09	05.05 - 06.00	Golo Kempo	Wake up and prepare for LKM, but the locals were late, so waiting ½ hour
	06.00 - 06.23	Golo Kempo	Car to starting point of LKM
	06.25 - 09.30	Golo Kempo	Laat Puar until 09.30 (LKM)
	09.30 - 10.30	Golo Kempo	Return walk until 10.30
	10.30 - 12.00	Golo Kempo	Visit local handycraft maker (baskets) at LKM start point and return
	12.00 - 12.30	Golo Kempo	Lunch
	12.30 - 14.00	Golo Kempo	Discussion, review, evaluation
	14.00 - 14.30	Golo Kempo	Walk in village to viewpoint over Werang Valley
	14.30 - 15.15	Golo Kempo-Werang	Trip to Werang Burung Office
	15.15 - 16.40	Werang	Bath at Burung office
	16.40 - 17.00	Werang-Golo Mbu	trip to Golo Mbu
	17.00 - 18.00	Golo Mbu	Customary ceremony
	18.00 - 20.00	Golo Mbu	Informal discussion with local people & Discussion to prepare the LKM
	20.00 - 20.30	Golo Mbu	dinner
	20.45 - 21.30	Golo Mbu	Owl searching walk in village with the villagers
	21.30 - 22.00	Golo Mbu	Prepare to get to sleep. People left and were quiet from 22.00

Date	Time	Location	Activity
20-jun-09	04.20 - 05.00	Golo Mbu	Wake up and prepare for LKM
	05.00 - 06.00	Golo Mbu	Walk to starting point of LKM, 636 meters up the mountainside
	06.00 - 08.23	Golo Mbu	Laat Puar until 08.23 (LKM) at mountain top 819 meters
	08.23 - 11.15	Golo Mbu	Return walk
	11.15 - 12.20	Golo Mbu	Bath in river and repacking
	12.20 - 13.30	Golo Mbu	Lunch
	13.30 - 14.50	Golo Mbu	Discussion, review, evaluation
	14.55 - 15.15	Golo Mbu - Werang	Trip to Burung office, Werang
	15.15 - 17.10	Werang	Visit BI office in Werang
	17.10 - 18.20	Werang	Birdwatching along river, Werang
	19.30 - 21.00	Werang	Dinner
	21.00	Werang	Over night
21-jun-09	06.25 - 08.15	Werang	Birdwatching along river, Werang
	08.15 - 09.45	Werang	Breakfast, Morning activity
	09.45 - 11.00	Werang	Trip to Cunca Rami waterfall
	11.00 - 12.00	Werang	back to BI office
	12.00 - 13.30	Werang	Lunch and rest
	13.30 - 15.00	Werang-Nunang	trip to Nunang
	15.00 - 17.00	Nunang	birdwatching from road along Sano Nggoang lake
	17.00 - 18.30	Nunang	Welcome coffee and mixed fruits ("Kola")
	18.30 - 22.00	Nunang	Customary ceremony, discussions & Discussion to prepare the LKM
	22.00 - 22.25	Nunang	dinner
22.25 - 22.35	Nunang	Prepare to get to sleep. People left and were quiet from 22.35	
22-jun-09	05.25 - 05.50	Nunang	Wake up and prepare for LKM
	05.50 - 06.19	Nunang	Walk to starting point of LKM, mountainside at about 650 meters
	06.19 - 09.10	Nunang	Laat Puar until 09.10 (LKM), top elevation about 850 meters
	09.10 - 11.45	Nunang	Return walk to village edge
	11.45 - 12.10	Nunang	Tee, coffee, cocosmilk refreshments at village edge
	12.10 - 12.30	Nunang	Remaining return walk to lunch house
	12.45 - 13.05	Nunang	Lunch
	13.05 - 15.05	Nunang	Discussion, review, evaluation
	15.15 - 16.30	Nunang	birdwatching from road along Sano Nggoang lake
	16.30 - 17.30	Nunang-werang	trip to werang
	17.50 - 18.30	Werang	Birdwatching along river, Werang
	18.30 - next morning	Werang	rest, overnight in Werang
23-jun-09	06.15 - 07.10	Werang	Wake, Breakfast, bath and pack
	07.10 - 11.20	Werang-Cecer	Trip to Cecer, including three stops to check for hanging parrot
	11.20 - 12.20	Cecer	whip dance & ceremony
	12.20 - 13.20	Cecer	Lunch & discussions with caretaker group
	13.20 - 15.20	Cecer	Short trekking to Liang Kantor cave and back
	15.20 - 16.00	Cecer-LBJ	trip to LBJ
	16.00 - 16.50	LBJ	Burung office discussions and planning next days
	16.50 - 18.15	LBJ - Goron Talo - LBJ	Visit fishponds at Goron Talo, birdwatching
	18.30 - 19.00	LBJ	Check in hotel, bath
	19.00 - 21.15	LBJ	Dinner with BI staff in Philemon restaurant
21.15 - 21.30	LBJ	back to hotel and overnight	
24-jun-09	06.00 - 07.30	LBJ	Breakfast at hotel
	08.35 - 11.10	LBJ - Rinca	Chartered boatrip to National Park Komodo
	11.10 - 14.30	Rinca	Bird- and dragon-watching
	14.30 - 17.00	Rinca - Komodo	Whale, turtle and seabird-watching
	17.00 - 18.15	Komodo	Bird- and dragon-watching
18.15 - night	Komodo in the bay with bats	Sleeping on the boat	

Date	Time	Location	Activity
25-jun-09	05.55 - 06.40	Komodo in the bay with bats	Breakfast and birdwatching from boat
	07.07 - 09.50	Komodo	Bird- and dragon-watching
	09.50 - 11.30	Komodo, Pantai Merah Beach	Sail to Pantai Merah & Snorkling there
	11.30 - 14.00	Komodo - Kanawa Island	Whale, turtle and seabird-watching
	14.00 - 16.15	Kanawa Island reef	Snorkling
	16.15 - 17.45	Kanawa - LBJ	Whale, turtle and seabird-watching
	17.45	LBJ	back to hotel and overnight
26-jun-09	07.00 - 08.00	LBJ	Breakfast at hotel
	08.00 - 09.30	LBJ	Debriefing meeting with Forestry official Pak Edward and his staff
	09.30 - 12.30	LBJ	Meeting, presentation and discussion with caretaker group
	12.30 - 13.30	LBJ	Lunch
	13.50 - 17.45	Goron Talo ponds + estuary	Birdwatching
	17.45	Goron Talo - LBJ	back to hotel and overnight
27-jun-09	05.20 - 07.45	Goron Talo estuary	Birdwatching
	07.45 - 9.00	LBJ	Breakfast and packing
	09.00 - 11.15	Komodo Airport	Check in and waiting for flight
	11.15	Komodo Airport	Depart to Denpasar

Name	Latin	G. Pongkor	T. Nampar	G. Kempo	G. Mbu	Nunang	Werang	Puarlolo	Goron Talo	Komodo	Other place
White-faced Storm-Petrel	<i>Pelagodroma maritima</i>										Kanawa-LBJ 1
Little Grebe	<i>Tachybaptus ruficollis</i>					18					
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>										
Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>										
Greater Frigatebird	<i>Fregata minor</i>										
Lesser Frigatebird	<i>Fregata ariel</i>		1							c.5	8 Kanawa
Great-billed Heron	<i>Ardea sumatrana</i>								1	2	
Purple Heron	<i>Ardea purpurea</i>	1							1		
Great Egret	<i>Ardea alba</i>								1		
Intermediate Egret	<i>Egretta intermedia</i>								2		
White-faced Egret	<i>Egretta novaehollandiae</i>										
Little Egret	<i>Egretta garzetta</i>								5		
Pacific Reef-Egret	<i>Egretta sacra</i>									3	Kom.Nat.Park
Javan Pond-Heron	<i>Ardeola speciosa</i>	3					3		5		
(Eastern) Cattle Egret	<i>Bubulcus ibis coromandus</i>	10									
Striated Heron	<i>Butorides striata</i>						2		2	1	
Rufous Night-Heron	<i>Nycticorax caledonicus</i>						3				
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>								1		
Woolly-necked Stork	<i>Ciconia episcopus</i>										
Wandering Whistling-Duck	<i>Dendrocygna arcuata</i>					? 15 ?					30 Bali, airport
Lesser Whistling-Duck	<i>Dendrocygna javanica</i>					7					
Sunda Teal	<i>Anas gibberifrons</i>								150		
Pacific Black Duck	<i>Anas superciliosa</i>					216 counted on lake					
Hardhead	<i>Aythya australis</i>										
Osprey	<i>Pandion haliaetus</i>								2	2	Kom.Nat.Park
Pacific Baza	<i>Aviceda subcristata</i>										
Oriental Honey-Buzzard	<i>Pemis pitlorhynchus</i>										
Black-shouldered Kite	<i>Elanus caeruleus</i>										
Brahminy Kite	<i>Haliastur indus</i>									4	Watu Ngaleng 2
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>								2	2	Kom.Nat.Park
Short-toed Eagle	<i>Circaetus gallicus</i>							6 together!			Watu Ngaleng 2
Chinese Goshawk	<i>Accipiter soloensis</i>										
Variable Goshawk	<i>Accipiter hiogaster</i>		2				1 imm M				
Brown Goshawk	<i>Accipiter fasciatus</i>	1ad+1 imm									
Japanese Sparrowhawk	<i>Accipiter gularis</i>										
Besra	<i>Accipiter virgatus</i>										
Bonelli's Eagle	<i>Hieraaetus fasciatus</i>			2							
Rufous-bellied Hawk-Eagle	<i>Hieraaetus kienerii</i>					1					Eagle sp LBJ 23/6
Flores Hawk-eagle	<i>Spizaetus floris</i>	1 adult						1ad+1imm			Cecer 1 ad
Spotted Kestrel	<i>Falco moluccensis</i>				1	2	1				LBJ airport
Australian Kestrel	<i>Falco cenchroides</i>										
Australian Hobby	<i>Falco longipennis</i>										1? Cecer
Peregrine Falcon	<i>Falco peregrinus ernesti</i>					1 pair chasing eagle away over Nunang					
Orange-footed Scrubfowl	<i>Megapodius reinwardt</i>	nest seen	nest seen						2 seen+ nests	nest seen	Liang Kantor +Rinca
Brown Quail	<i>Coturnix ypsilophora</i>										

Name	Latin	G. Pongkor	T. Nampar	G. Kempo	G. Mbu	Nunang	Werang	Puarlolo	Goron Talo	Komodo	Other place
Blue-breasted Quail	<i>Coturnix chinensis</i>								3		
Green Junglefowl	<i>Gallus varius</i>	Heard 3		4 seen +Heard	Heard	Seen 2			1M+3F seen		
Redbacked Buttonquail	<i>Tumix maculosa</i>								1 seen		
Barred Buttonquail	<i>Tumix suscitator</i>										
Red-legged Crake	<i>Rallina fasciata</i>										
Buff-banded Rail	<i>Gallirallus philippensis</i>						1 seen		1 seen		
White-breasted Waterhen	<i>Amauromis phoenicurus</i>								3 seen		
Ruddy-breasted Crake	<i>Porzana fusca</i>										
White-browed Crake	<i>Porzana cinerea</i>								7 seen		
Common Moorhen	<i>Gallinula chloropus</i>	5							3		
Comb-crested Jacana	<i>Irediparra gallinacea</i>										
Greater painted snipe	<i>Rostratula benghalensis</i>	1 flying M in ricefield									
Beach Thick-knee	<i>Burhinus magnirostris</i>									3	
Australian Pratincole	<i>Stiltia isabella</i>										
White-headed Stilt	<i>Himantopus leucocephalus</i>										
Pacific Golden-Plover	<i>Pluvialis fulva</i>										
Javan Plover	<i>Charadrius javanicus</i>								2		
Malaysian Plover	<i>Charadrius peronii</i>									1 pair + 2juv	
Greater Sandplover	<i>Charadrius leschenaultii</i>										
Bar-tailed Godwit	<i>Limosa lapponica</i>										
Whimbrel	<i>Numenius phaeopus</i>										
Far-eastern Curlew	<i>Numenius madagascariensis</i>										
Common Redshank	<i>Tringa totanus</i>										
Marsh Sandpiper	<i>Tringa stagnatilis</i>										
Common Greenshank	<i>Tringa nebularia</i>										
Wood Sandpiper	<i>Tringa glareola</i>										
Terek Sandpiper	<i>Xenus cinereus</i>										
Common Sandpiper	<i>Actitis hypoleucos</i>										
Grey-tailed Tattler	<i>Tringa brevipes</i>										
Great Knot	<i>Calidris tenuirostris</i>										
Red-necked Stint	<i>Calidris ruficollis</i>										
Long-toed Stint	<i>Calidris subminuta</i>										
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>										
Greater Crested Tern	<i>Sterna bergii</i>										Sailing 24- 25/6
Black-naped Tern	<i>Sterna sumatrana</i>										Sailing 24- 25/6
Feral pigeon	<i>Columba livia</i>										LBJ 7
Metallic Pigeon	<i>Columba vitiensis</i>		? heard?			? heard?					
Island Collared-Dove	<i>Streptopelia bitorquata</i>								8	10	Rinca
Spotted Dove	<i>Streptopelia chinensis</i> Common in all places in cultivation and villages. Not seen in forest.								3		
Barred Cuckoo-Dove	<i>Macropygia unchall</i>			? heard?							
Ruddy Cuckoo-Dove	<i>Macropygia emiliana</i>			? heard?							
Little Cuckoo-Dove	<i>Macropygia ruficeps</i>										
Emerald Dove	<i>Chalcophaps indica</i>		1 seen (+heard?)				3 seen				Seen roads
Barred Dove	<i>Geopelia maugei</i>		3 seen singing		1 seen		3 seen singing		5	25	Roads +Rinca
Nicobar Pigeon	<i>Caloenas nicobarica</i>										
Flores Green Pigeon	<i>Treron floris</i>	? 1 seen ?				?1 heard?					
Black-backed Fruit-Dove	<i>Ptilinopus cinctus</i>		?1 heard?			?1 heard?		1 heard (identified by James Eaton)			

Name	Latin	G. Pongkor	T. Nampar	G. Kempo	G. Mbu	Nunang	Werang	Puarlolo	Goron Talo	Komodo	Other place
Rose-crowned Fruit-Dove	<i>Ptilinopus regina</i>										
Black-naped Fruit-Dove	<i>Ptilinopus melanospilus</i>	2 heard	3 sing/seen	2 sing/seen	3 heard	2 heard					
Green Imperial Pigeon	<i>Ducula aenea</i>	>1 seen sing	heard&seen			?seen fly?				>10 seen	Rinca
Pinkheaded Imperial Pigeon	<i>Ducula rosacea</i>		>=3 seen?							>5 seen?	
Pied Imperial Pigeon	<i>Ducula bicolor</i>									2 seen	
Dark-backed Imperial Pigeon	<i>Ducula lacemulata</i>					Heard 3					
Yellow-crested Cockatoo	<i>Cacatua sulphurea</i>									c. 30	
Flores Lorikeet	<i>Trichoglossus weberi</i>					> 4					
Red-cheeked Parrot	<i>Geoffroyus geoffroyi</i>	>= 2 at nest		> = 2	> = 2	> = 2			> = 2	> = 2	Rinca
Great-billed Parrot	<i>Tanygnathus megalorhynchus</i>		> = 2								
Wallace's Hanging-Parrot	<i>Loriculus flosculus</i>					locals saw 3					
Oriental/Sunda Cuckoo	<i>Cuculus saturatus/lepidus</i>										
Rusty-breasted Cuckoo	<i>Cacomantis sepulcralis</i>		1 heard	2 heard	1 heard	1 heard					
Horsfield's Bronze-Cuckoo	<i>Chrysococcyx basalus</i>										
Gould's Bronze-Cuckoo	<i>Chrysococcyx russatus</i>								2 ad +1imm		
Common Koel	<i>Eudynamys scolopaceus</i>									1M seen call	
Lesser Coucal	<i>Centropus bengalensis</i>						1 heard		1 heard		
Flores Scops Owl	<i>Otus alfredi</i>										
Wallace's Scops Owl	<i>Otus silvicola</i> (4 -5 pohs in a quick series with less than 1 sec between each poh)				1 heard						
Moluccan Scops Owl	<i>Otus magicus</i> (OOR with > 5 - 6 seconds between each)					1 heard					
Large-tailed/Mees's Nightjar	<i>Caprimulgus macrurus/meesi</i>										
Savanna Nightjar	<i>Caprimulgus affinis</i>										
Glossy Swiftlet	<i>Collocalia esculenta</i>	> 10	> 50	> 10	> 10	> 50	> 10	> 100	> 100	> 10	
Edible-nest Swiftlet	<i>Aerodramus fuciphagus</i>										
Fork-tailed Swift	<i>Apus pacificus</i>										
Little Swift	<i>Apus affinis</i>					10					
Common Kingfisher	<i>Alcedo atthis</i>						2		5		
Small Blue Kingfisher	<i>Alcedo coerulescens</i>								2		
Oriental Dwarf Kingfisher	<i>Ceyx erithaca</i>										
Stork-billed Kingfisher	<i>Pelargopsis capensis</i>						1		2		
Collared Kingfisher	<i>Todiramphus chloris</i>						1		3	10	1 LBJ
Sacred Kingfisher	<i>Todiramphus sanctus</i>	2					1		3		
White-rumped Kingfisher	<i>Caridonax fulgidus</i>	2	3	7	1	1					
Blue-tailed Bee-eater	<i>Merops philippinus</i>	3	> 100 at 5pm	heard	heard				>200 at 5 pm	10	Lemes 15
Rainbow Bee-eater	<i>Merops ornatus</i>	1				5	3	5	5		
Dollarbird	<i>Eurystomus orientalis</i>										
Sunda Pygmy Woodpecker	<i>Dendrocopos moluccensis</i>	2						1			Liang Kantor 1
Elegant Pitta	<i>Pitta elegans</i>	3	5	3	3	2			2		Lemes 1
Australasian Bushlark	<i>Mirafrja javanica</i>										
Tree Martin	<i>Petrochelidon nigricans</i>										
Barn Swallow	<i>Hirundo rustica</i>										
Pacific Swallow	<i>Hirundo tahitica</i> Rather commonly 2 - 25 seen over villages and cultivation, most at Nunang (at the lake) and Goron Talo.										
Striated Swallow	<i>Cecropis striolata</i>		3								Lemes 1

Name	Latin	G. Pongkor	T. Nampar	G. Kempo	G. Mbu	Nunang	Werang	Puarlolo	Goron Talo	Komodo	Other place
Yellow Wagtail	<i>Motacilla flava</i>										
Grey Wagtail	<i>Motacilla cinerea</i>										
Richard's/Paddyfield Pipit	<i>Anthus novaeseelandiae</i>		1						6		LBJ+roads
Wallacean Cuckooshrike	<i>Coracina personata</i>		1								
Black-faced Cuckooshrike	<i>Coracina novaehollandiae</i>					2					
Pale-shouldered Cicadabird	<i>Coracina dohertyi</i>	1F									
White-shouldered Triller	<i>Lalage sueurii</i>										
Little (Flores) Minivet	<i>Pericrocotus lansbergei</i>	1M									1 or 2 others
Chestnut-capped Thrush	<i>Zoothera interpres</i>										
Chestnut-backed Ground-Thrush	<i>Zoothera dohertyi</i>										
Sunda Thrush	<i>Zoothera andromedae</i>										
White-browed (Flores) Shortwing	<i>Brachypteryx montana/floris</i>					?glimpse?					?Liang Kantor?
Zitting Cisticola	<i>Cisticola juncidis</i>									2	
Golden-headed Cisticola	<i>Cisticola exilis</i>										
Russet-capped Tesia	<i>Tesia everetti</i>	2 sing		4 sing	4 sing	4 sing	1 sing				
Mountain Tailorbird	<i>Orthotomus cuculatus</i>										
Arctic Warbler	<i>Phylloscopus borealis</i>										
Timor (Flores) Leaf-warbler	<i>Phylloscopus presbytes/floris</i>										
Yellow-breasted Warbler	<i>Seicercus montis</i>										
Russet-backed Jungle-Flycatcher	<i>Rhinomyias oscillans</i>					4 sing					
Grey-streaked Flycatcher	<i>Muscicapa griseisticta</i>										
Snowy-browed Flycatcher	<i>Ficedula hyperythra</i>										
Rufous-chested Flycatcher	<i>Ficedula dumetoria</i>					1 seen sing					
Little Pied Flycatcher	<i>Ficedula westermanni</i>										
Grey-headed Canary Flycatcher	<i>Culicicapa ceylonensis</i>			1 sing/seen							
Pied Chat	<i>Saxicola caprata</i>	1 sing							1 F		Lemes 1 sing
Brown-capped Fantail	<i>Rhipidura diluta</i>		1			1 pair					
Rufous/Arafura Fantail	<i>Rhipidura rufifrons/dryas</i>										
Black-naped Monarch	<i>Hypothymis azurea</i>				2M	2M sing	1M incub				Sing+1F
Asian Paradise-Flycatcher	<i>Terpsiphone paradisi</i>	1M	2 sing/seen	2 sing/seen		2M+1F					
Spectacled Monarch	<i>Monarcha trivirgatus</i>										
Flores Mountain Monarch	<i>Monarcha sacerdotum</i>			1 pair scold				1 sing			
Golden Whistler	<i>Pachycephala pectoralis</i>	3 sing	12 sing	5 sing	1 sing	2 sing	2 sing		1	2	
Bare-throated Whistler	<i>Pachycephala nudigula</i>										
Pygmy Wren-Babbler	<i>Pnoepyga pusilla</i>										
Flyeater	<i>Gerygone sulphurea</i>		2 sing				2 sing		4 sing		Lemes 1 sing
Grey Tit	<i>Parus cinereus</i>						1		2	2	Rinca 2
Brown-throated Sunbird	<i>Anthreptes malacensis</i>	1 pair	1M					1M	1 M	Sing+1 F	
Olive-backed Sunbird	<i>Cinnyris jugularis</i>	1				1 pair		Nest+pair	4	4	+ more unnoted
Flame-breasted Sunbird	<i>Cinnyris solaris</i>	2	4 sing	4 sing	5 sing	4 sing	6 sing		2	2	+ more unnoted
Golden-rumped Flowerpecker	<i>Dicaeum annae</i>			1		1					
Thick-billed Flowerpecker	<i>Dicaeum agile</i>			1							LBJ 1
Black-fronted Flowerpecker	<i>Dicaeum igniferum</i>	1F					1M	1 pair			LBJ 2M
Blood-breasted Flowerpecker	<i>Dicaeum sanguinolentum</i>										
Oriental White-eye	<i>Zosterops palpebrosus</i>						2	2			
Mountain White-eye	<i>Zosterops montanus</i>										
Yellow-bellied White-eye	<i>Zosterops chloris</i>			1					1		1 Rinca

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Yellow-spectacled White-eye	<i>Zosterops wallacei</i>		1			5	1	1	2		1 Rinca
Yellow-browed Dark-eye	<i>Lophozosterops superciliaris</i>										
Crested Dark-eye	<i>Lophozosterops dohertyi</i>					5 sing seen		1 sing			
Thick-billed Dark-eye	<i>Heleia crassirostris</i>	1 sing			2 sing/seen	1 sing		1 sing			
Scaly-crowned Honeyeater	<i>Lichmera lombokia</i>										
Brown Honeyeater	<i>Lichmera indistincta</i>										
Helmeted Friarbird	<i>Philemon buceroides</i>	6	2	4	6	3			2	4	
Black-naped Oriole	<i>Oriolus chinensis</i>	6	2	4	2	8	1			3	
(Lesser) Wallacean Drongo	<i>Dicrurus densus/bimaensis</i>	4	8	4	5	8	4	4	3	10	From road
White-breasted Woodswallow	<i>Artamus leucorhynchus</i>		1								
Flores Crow	<i>Corvus florensis</i>	4	2	2		4					
Large-billed Crow	<i>Corvus macrorhynchos</i>									3	2 LBJ, 3 Rinca
Short-tailed Glossy-Starling	<i>Aplonis minor</i>										
Hill Myna	<i>Gracula religiosa</i>	3				5					
Javan Myna	<i>Acridotheres javanicus</i>										
Eurasian Tree Sparrow	<i>Passer montanus</i>										10 LBJ airport
Red Avadavat	<i>Amandava amandava</i>										
Zebra Finch	<i>Taeniopygia guttata</i>								9	15 Kanawa	4 LBJ airport
Tawny-breasted Parrotfinch	<i>Erythrura hyperythra</i>										
Black-faced Munia	<i>Lonchura molucca</i>	5					30		7		5 LBJ airport
Scaly-breasted Munia	<i>Lonchura punctulata</i>		5				3				Bali
Five-coloured Munia	<i>Lonchura quincolor</i>				1						
Pale-headed Munia	<i>Lonchura pallida</i>										Bali