

CHAPTER 3

DIVERSITY OF HERPETOLOGY FAUNA

3.1 Introduction

Animal fauna is highly diverse organisms among living things. According to the global species diversity which is currently described by IUCN (2001) herpet fauna is nearly about 11645 species on the world. According to the currently recorded of C.A.S, Order Anura consists of frogs and toads which have 86 species, Order Caelilian (2 species), Order Caudata (1 species), and Order Serpentes, snakes (156 species), Order Lacertilia, Lizards (90 species), Order Chelonia, turtles and tortoises (36 species), Order Crocodilia, alligators (1 species) . So, C.A.S is currently recorded about 283 species of herpetofauna. Hence Myanmar is one of the areas of biodiversity richness in the world.

3.2 Observed herpet species

A total of 17 species representing 4 amphibian species (frog and toad) and 13 reptile species (lizard, snake and turtle) were recorded in Thilawa project area. Among them, four species are under Order Anura, five species are Order Lacertilia, seven species are Order Serpentes and one species under Order Chelonia. A total of 23 individuals were collected in present study area. Most of species were caught, identified and released to their original habitats after taking photographs while some species were from questionnaire survey (Table 3.1).

3.3 Habitat types and condition

Observed species were collected in different micro habitats. *Bufo melanostictus*, *Kaloula pulchra*, *Rana limnocharis* and *Polypedates leucomystax* were collected in different micro habitats such as (ground, under log, paddy field and tree trunk). *Calotes mystaceus* and *C.versicolor* of family Agamidae were found only tree trunk. *Hemidactylus frenatus* and *H.brookii* were observed in nearly human settlement (root of hut and ceiling). Under family Scincidae, only one species of *Mabuya multifasciata* was found in

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under the dry leaves. In Order Serpentes, *Hydrophis cyanocinctus*, *Cerberus rhychrops*, *Xenochropis piscator*, *Bungarus fasciatus*, *Naja kalouthia*, *Trimeresurus alboris* and *viper russelii* were collected in clay, creek, pond, paddy field, bamboo tree and bushes habitats. *Lissemys scutata* under Order Chelonia was found paddy field nearby stream. More habitat fragmentation was found in this project area, hence, more degradation of habitat types was found in the project area.

3.4 Discussion of habitat types and condition

A total of 16 species and 23 individuals are recorded in Thilawa Project area. In this area was assumed species rich diverse area in olden time (over 20 years before Project). Now, habitat fragmentation, tidal forest degradation and land cover changes were found in this area. Moreover, Some species may be hibernated in winter, So Four families (Bufonidae, Microhylidae and Rhacophoridae) of Order Anura were collected only one species respectively in this project area.

3.5 Mitigation measure and Management Plan

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Table 3.1 Different habitat types and species composition of Herpetofauna in the Area of Thilawa Project

Family		Scientific Name	Common Name	Habitat Types	Total
Bufonidae	1	<i>Bufo melanostictus</i>	Common Toad	on the ground	5
Microhylidae	2	<i>Kaloula pulchra</i>	Common Bull Frog	under log	4
Ranidae	3	<i>Rana limnocharis</i>	Paddy Frog	paddy field	2
Rhacophoridae	4	<i>Polypedates leucomystax</i>	Common Tree Frog	on the tree trunk	1
Agamidae	5	<i>Calotes mystaceus</i>	Blue Crested Lizard	tree trunk	1
	6	<i>Calotes versicolor</i>	Garden Fence Lizard	tree trunk	3
Gekkonidae	7	<i>Hemidactylus frenatus</i>	Common House Gecko	roof of hut	2
	8	<i>Hemidactylus brookii</i>	House gecko	ceiling	1
Scincidae	9	<i>Mabuya multifasciata</i>	Common Sun Skink	under the dry leaves	3
Hydrophiidae	10	<i>Hydrophis cyanocinctus</i>	Sea Snake	in the clay	
Homalopsidae	11	<i>Cerberus rhychrops</i>	Dog Face Water Snake	in the creek	
Natricidae	12	<i>Xenochropis piscator</i>	Chequered Keelback	in pond	
Elapidae	13	<i>Bungarus fasciatus</i>	Yellow Banded Krait	near pond	
Elapidae	14	<i>Naja kaouthia</i>	Monocellate cobra	paddy field	
Viperidae	15	<i>Trimeresurus albolaris</i>	White-Lipped Pit-Viper	on bamboo tree	
Viperidae	16	<i>Viper russelii</i>	Russell's viper	bushes	1
Trionychidae	17	<i>Lissemys scutata</i>	Flap shell turtle	near stream	
Total					23

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Table 3.2 List of Herpetofauna in the Area of Thilawa Project

Family		Scientific Name	Common Name	Habitat Types
Bufonidae	1	<i>Bufo melanostictus</i>	Common Toad	on the ground
Microhylidae	2	<i>Kaloula pulchra</i>	Common Bull Frog	under log
Ranidae	3	<i>Rana limnocharis</i>	Paddy Frog	paddy field
Rhacophoridae	4	<i>Polypedates leucomystax</i>	Common Tree Frog	on the tree trunk
Agamidae	5	<i>Calotes mystaceus</i>	Blue Crested Lizard	Tree trunk
	6	<i>Calotes versicolor</i>	Garden Fence Lizard	Tree trunk
Gekkonidae	7	<i>Hemidactylus frenatus</i>	Common House Gecko	Roof of hut
	8	<i>Hemidactylus brookii</i>	House gecko	ceiling
Scincidae	9	<i>Mabuya multifasciata</i>	Common Sun Skink	Under the Dry Leaves
Hydrophiidae	10	<i>Hydrophis cyanocinctus</i>	Sea Snake	in the clay
Homalopsidae	11	<i>Cerberus rhychrops</i>	Dog Face Water Snake	in the creek
Natricidae	12	<i>Xenochropis piscator</i>	Chequered Keelback	in pond
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Viperidae	15	<i>Trimeresurus albolaris</i>	White-Lipped Pit-Viper	on bamboo tree
Viperidae	16	<i>Viper russelii</i>	Russell's viper	bushes
Trionychidae	17	<i>Lissemys scutata</i>	Flap shell turtle	near stream

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3.6 References

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A. *Bufo melanostictus*



B. *Kaloula pulchra*



C. *Rana limnocharis*



D. *Polypedates leucomystax*

Plate 1. Amphibian fauna collected from the area of Thilawa Project



A. *Calotes mystaceus*



B. *Calotes versicolor*



D. *Hemidactylus frenatus*



C. *Hemidactylus brookii*

E. *Mabuya multifasciata*

F. *Viper russelli*

**Plate 2. Reptilian fauna collected from
the area of Thilawa Project**

