

The Amphibian Fauna of Bala Forest Reported from Southernmost Thailand in 2011

Siriporn Thong-aree^{*1}, Tanya Chan-ard², Michael Cota²
and Sunchai Makchai²

¹ *Department of National Parks, Wildlife and Plants, Bangkok 10900 Thailand*

² *Natural History Museum, National Science Museum, Thailand,*

Technopolis, Khlong 5, Khlong Luang, Pathum Thani 12120 Thailand

ABSTRACT: Short survey of amphibians was carried on by the methods of stream inventory and observation at night, bring to a total 33 species reported from the Bala Forest, Narathiwat Province, Thailand.

KEY WORDS: amphibians, diversity, Narathiwat Province, southernmost Thailand.

INTRODUCTION

When an inventory of amphibians and reptiles was compiled from August 2001 to August 2002 by Tanya Chan-ard, Yodchai Chuaynkern and Siriporn Thong-aree, 49 species of amphibians were reported from the Hala-Bala Wildlife Sanctuary in Yala and Narathiwat Provinces (Chan-ard *et al.*, 2003). In 2011 (eight years later), 33 species of amphibian were observed or collected from the Bala Forest, Waeng and Sukirin Districts, Narathiwat Province, on two visits between 20-25 June 2011 and 19-24 September 2011. The survey areas covered the main camp of Narathiwat Wildlife Research Station near Ban Bala, Klong I-Kading in Waeng District, Klong Tharn Thong in Sukirin District and streamlets along road-sides. Most adult anuran were collected at night using head lamps

and captured by hand. Only species collected or seen by reliable observers or photographed with digital cameras have been included in the following list. The nomenclature follows Frost (2010), and the identification follows Taylor (1962) and Chan-ard (2003). Specimens will be deposited at the Narathiwat Wildlife Research Station but have been on loan to THNHM for determination in the laboratory.

MATERIALS AND METHODS

Species which were collected were fixed in formalin and 70% buffered alcohol then preserved in 70% buffered alcohol until the completion of field work. Specimens were shipped in airtight packs and again preserved in 70% buffered alcohol at the Natural History Museum, National Science Museum, Thailand.

*Corresponding author.

E-mail: siriporn_thong@yahoo.com

Specimens that were not collected, were photographed with a Nikon D40 or Nikon D5100 digital single reflex cameras or captured temporarily. Temporarily captured specimens were identified at the site and released or kept overnight, then identified with the aid of references and better lighting then released.

Systematic Account of the Anurans in the Bala Forest

Megophryidae

Leptobrachium hendricksoni

Taylor, 1962

Material examined: four specimens with Fd. No. 4033-4034, 4040, 4041.

Remarks: two specimens were captured on forest ground in a shallow peat swamp in the leaf-litter and the others were captured at the edge of a stream. Many spotted tadpoles were found in the leaf-litter beds of small, quiet streams.

***Leptotalax solus* Matsui, 2006**

Material examined: one specimen with Fd. No. 4037.

Remarks: a specimen was captured on the steep bank of a stream.

***Megophrys nasuta* (Schlegel, 1858)**

Material examined: two specimens with Fd. No. 17996, 17997.

Remarks: the species is usually found on the forest floor or on a stream bank. One pair was found in September.

***Xeophrys aceras* (Boulenger, 1903)**

Material examined: one specimen with Fd. No. 4024.

Remarks: a male specimen was found on forest ground close to stream banks or to temporary roads in the forest.

Bufonidae

Duttaphrynus melanostictus

(Schneider, 1799)

Material examined: a few specimens were observed in the vicinity of the research station which is located 2 km from the village of Ban Bala.

***Ingerophrynus divergens* (Peters, 1871)**

Material examined: three specimens with Fd. No. 4057, 17773-17774.

Remarks: the pairs were found at the edge of side-pools along streams.

***Leptophryne borbonica* (Tschudi, 1838)**

Material examined: three specimens with Fd. No. 4046-4048.

Remarks: a few adult males were found on steep stream banks.

***Pedostibes hosei* (Boulenger, 1892)**

Material examined: no specimens were collected.

Remarks: the breeding calls of an adult male were heard from a tree 15 m above a stream bank, on a branch of Klong Tharn Thong.

***Phrynoidis aspera* (Gravenhorst, 1829)**

Material examined: no specimens were collected.

Remarks: young toads were found on rocks or big roots in the vicinity of stream banks. Adult males are found

on rocks in fast flowing streams and make calls to claim territory.

Microhylidae

***Kaloula pulchra* Gray, 1831**

Material examined: no specimens were collected.

Remarks: the frogs were observed in an artificial pond in the vicinity of the research station.

***Microhyla berdmorei* (Blyth, 1856)**

Material examined: no specimens were collected.

Remarks: the frogs were observed on the forest trails in the vicinity of Klong Tharn Thong.

***Microhyla butleri* Boulenger, 1900**

Material examined: no specimens were collected.

Remarks: the frogs were observed at the edge of an artificial ponds in the vicinity of the research station.

***Microhyla fissipes* Boulenger, 1844**

Material examined: no specimens were collected.

Remarks: the frogs were observed at the edge of an artificial pond in the vicinity of the research station.

***Microhyla heymonsi* Vogt, 1911**

Material examined: no specimens were collected.

Remarks: the frogs were observed on the lawn in the vicinity of the research station and in leaf litter on the stream banks at the Sirindhorn Falls.

***Phrynella pulchra* Boulenger, 1887**

Material examined: six specimens with Fd. No. 17758-17760, 4071-4073.

Remarks: adult males were captured in two artificial fish ponds enclosed within circular walls, 2 m in diameter, in shallow water with aquatic plants. Their breeding calls “tung tung tung ...” were heard.

Dicroglossidae

***Fejervarya limnocharis* (Boie, 1835)**

Material examined: no specimens were collected.

Remarks: the frogs were observed at the edge of an artificial pond in the vicinity of the research station.

***Limnonectes blythii* (Boulenger, 1920)**

Material examined: no specimens were collected.

Remarks: an adult male was observed at the edge of a side pool in a slow flowing stream.

***Limnonectes hascheanus* (Stoliczka, 1870)**

Material examined: no specimens were collected.

Remarks: one specimen was found in a small stream flowing at a steep angle.

***Limnonectes kuhlii* (Tschudi, 1838)**

Material examined: one specimen with Fd. No. 4053.

Remarks: an adult male was captured in an elevated slow-flowing stream.

***Limnonectes laticeps* (Boulenger, 1882)**

Remarks: the frogs found in steep streams going down hillsides.

***Limnonectes plicatellus* (Stoliczka, 1873)**

Material examined: two specimens with Fd. No. 17775, 17776.

Remarks: the frogs were found in streams on steep hillsides.

***Occidozyga laevis* (Günther, 1859)**

Material examined: four specimens with fd. No. 4035, 4036, 4059, 4060.

Remarks: several specimens were found in shallow pools in leaf-litter beds in lowland areas including a small, shallow peat swamp.

Rhacophoridae

***Philautus* sp.**

Material examined: no specimens were collected.

Remarks: callings, from which determining the exact location was difficult, were heard from dense ferns on steep hillside areas.

***Polypedates macrotis* (Boulenger, 1891)**

Material examined: three specimens with Fd. No. 17770-17772.

Remarks: one adult female and a few adult males were found in a streamlet on the forest floor and in the vegetation up to 2 m high.

***Polypedates leucomystax* (Gravenhorst, 1829)**

Material examined: one specimen with Fd. No. 4021.

Remarks: this species was very abundant in artificial ponds and rain-pools.

***Rhacophorus prominanus* Smith, 1924**

Material examined: three specimens with Fd. No. 4016-4017.

Remarks: a few specimens were found in bushes above rock pools near waterfalls. A pure white foam nest was found attached to a rock near that pool.

Ranidae

***Amolops larutensis* (Boulenger, 1899)**

Material examined: two specimens with Fd. No. 4023, 4050.

Remarks: an abundant species found on rocks forming cascades of water and tree roots along the fast flowing streams.

***Hylarana erythraea* (Schlegel, 1837)**

Material examined: No specimens were collected.

Remarks: the frogs were observed in artificial ponds in the vicinity of research station.

***Hylarana eschatia* (Inger, Stuart and Iskandar, 2009)**

Material examined: five specimens with Fd. No. 4022, 4039, 4044, 4049, 4054.

Remarks: individuals were frequently found on leaves of low lying vegetation on the edge of streamlets.

***Hylarana glandulosa* (Boulenger, 1882)**

Material examined: three specimens with Fd. No. 4055, 4056, 4061.

Remarks: adult males were found calling in quiet stream in the transitional area between the forest

Material examined: three specimens with Fd. No. 4055, 4056, 4061.

Remarks: adult males were found calling in quiet stream in the transitional area between the forest and rubber plantation, near Gruesor substation in Sukirin District.

***Hylarana laterimaculata* (Barbour and Noble, 1916)**

Material examined: five specimens with Fd. No. 4030-4032, 4042, 4043.

Remarks: breeding calls of adult males were heard from dense vegetation in wet areas.

***Hylarana nigrovittata* (Blyth, 1856)**

Material examined: one specimen with Fd. No. 4019.

Remarks: adult males were frequently found in rock pools on rocky banks close to waterfalls.

***Hylarana signata* (Günther, 1872)**

Material examined: no specimens were collected.

Remarks: two adult males were found in a shallow hole at the base of stream bank. Breeding calls were heard, pointing out their location.

***Odorrana hosii* (Boulenger, 1891)**

Material examined: one specimen with Fd. No. 4045.

Remarks: pairs were found on fallen logs that lay across fast flowing streams, especially in September. Each adult female was carrying matured eggs in its body.

RESULTS

Thirty-four species of frogs in the six families of Megophryidae, Bufonidae, Microhylidae, Dicroglossidae, Rhacophoridae and Ranidae recorded at the beginning of the rainy season in the area. Some species: *Phrynella picta* and *Hylarana laterimaculata*, were in the first step of breeding season, producing breeding calls. Some species, such as *Leptobrachium hendricksoni*, *Rhacophorus prominanus*, *Odorrana hosei* etc., were found in pairings and were laying eggs. Many tadpoles of *Leptobrachium hendricksoni* were frequently found in streams.

The number of species is approximately 69% of the total number of 49 species earlier reported by Chan-ard *et al.* (2003).



Leptobrachium hendriksoni



Megophrys nasuta



Xenophrys acera



Phrynomorphus aspera



Phrynomorphus picta



Limnonectes hascheanus



Limnonectes kuhlii



Limnonectes laticeps



Limnonectes plicatellus



Occidozyga laevis



Polypedates macrotis



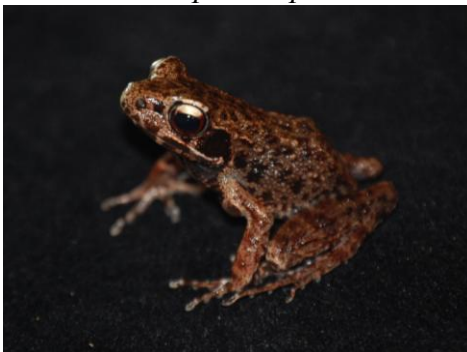
Polypedates leucomystax



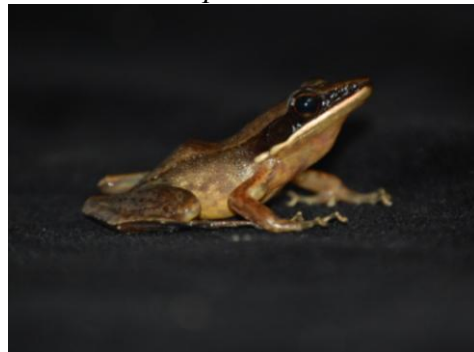
Rhacophorus prominans



Amolops larutensis



Hylarana laterimaculata



Hylarana nicobariensis

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