



# Checklist of endemic amphibians of Northeast India

Bhaskar Saikia\* and Ilona Jacinta Kharkongor

North Eastern Regional Centre, Zoological Survey of India, Shillong, India; bhaskarsaikia7@gmail.com

## Abstract

A checklist pertaining to the endemic amphibians of Northeast India is compiled. As of 2016, the Northeast India harbours 53 endemic species of Amphibians represented by 11 species of Order Gymnophiona and 42 species of Order Anura. There is no endemic amphibian of Order Caudata from Northeast India.

**Keywords:** Biodiversity hotspot, Endemic amphibia, Northeast India, ZSI Shillong, etc

## Introduction

The Class Amphibia is represented by three living orders, viz. Anura, Caudata and Gymnophiona. The global amphibian species diversity of 7,504 species (Frost, 2016), is composed of 6,601 species from Order Anura, 698 species from Order Caudata and 205 species from Order Gymnophiona. The Indian Amphibian diversity is represented by 405 species (Frost, 2016) which is divided into 363 species from Order Anura, 2 species from Order Caudata and 40 species from Order Gymnophiona.

Nestled in the lap of Eastern Himalaya, the North-Eastern States of India are located at the heart of two biodiversity hotspots of the world; the Himalaya and the Indo-Burma (out of the total 35 biodiversity hotspots) (Conservation International, 2016). Biodiversity hotspots are characterized by a high level of endemism, and so is the case of amphibians.

There has been a study on the distributions of the endemic amphibian fauna of the Western Ghat of India – another biodiversity hotspot – which is represented by 181 species out of which 159 species are endemic (Subramanian *et. al.* 2013). Except for a distributional

study on the amphibians of Northeast India by Mathew and Sen (2010), no comprehensive studies on the distribution of the endemic amphibian fauna have been carried out in this region.

The amphibian fauna of North-Eastern India, comprising of the States of Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram, Tripura, Meghalaya and Sikkim, is represented by 146 species out of which 53 are endemic (Frost, 2016). In this regard, the authors felt the need for a checklist of the endemic amphibian fauna of this region to facilitate any worker willing to take up further studies on the distributional patterns of the various endemic species of amphibians from these two biodiversity hotspots of the world.

## Methods and Methodology

This present paper is a product of extensive literature studies carried out by the authors. Classification was followed after Frost (2016). Each species were checked for their current distributional status and accordingly put under the endemic list after Frost (2016) and Mathew & Sen (2010).

**Table 1.** Checklist of the endemic amphibians of the Northeast India

Sl. No.	Endemic Amphibians of Northeast India	Distribution	
<b>Order: Gymnophiona</b>			
<b>Family: Chikilidae</b>			
1	<i>Chikila alcocki</i> Kamei, Gower, Wilkinson & Biju, 2013	Nagaland	Frost (2016)
2	<i>Chikila darlong</i> Kamei, Gower, Wilkinson & Biju, 2013	Arunachal Pradesh	Frost (2016)
3	<i>Chikila fulleri</i> (Alcock, 1904)	Arunachal Pradesh, Meghalaya, Assam, Tripura	Frost (2016)

\* Author for correspondence

4	<i>Chikila gaiduwani</i> Kamei, Gower, Wilkinson & Biju, 2013	Meghalaya, Assam	Frost (2016)
<b>Family: Ichthyophiidae</b>			
5	<i>Ichthyophis alfredii</i> Mathew & Sen, 2009	Meghalaya	Frost (2016)
6	<i>Ichthyophis daribokensis</i> Mathew & Sen, 2009	Meghalaya	Frost (2016)
7	<i>Ichthyophis garoensis</i> Pillai & Ravichandran, 1999	Meghalaya, Assam	Frost (2016)
8	<i>Ichthyophis khumhzi</i> Kamei, Wilkinson, Gower & Biju, 2009	Manipur	Frost (2016)
9	<i>Ichthyophis moustakius</i> Kamei, Wilkinson, Gower & Biju, 2009	Manipur	Frost (2016)
10	<i>Ichthyophis nokrekensis</i> Mathew & Sen, 2009	Meghalaya	Frost (2016)
11	<i>Ichthyophis sendenyu</i> Kamei, Wilkinson, Gower & Biju, 2009	Nagaland	Frost (2016)
<b>Order: Anura</b>			
<b>Family: Bufonidae</b>			
12	<i>Bufoides meghalayanus</i> (Yazdani & Chanda, 1971)	Meghalaya	Frost (2016)
13	<i>Duttaphrynus chandai</i> Das, Chetia, Dutta & Sengupta, 2013	Nagaland	Frost (2016)
14	<i>Duttaphrynus kiphirensis</i> (Mathew & Sen, 2009)	Nagaland	Frost (2016)
15	<i>Duttaphrynus mamitensis</i> (Mathew & Sen, 2009)	Mizoram	Frost (2016)
16	<i>Duttaphrynus manipurensis</i> (Mathew & Sen, 2009)	Manipur	Frost (2016)
17	<i>Duttaphrynus mizoramensis</i> (Mathew & Sen, 2009)	Mizoram	Frost (2016)
18	<i>Duttaphrynus nagalandensis</i> (Mathew & Sen, 2009)	Nagaland	Frost (2016)
19	<i>Duttaphrynus wokhaensis</i> (Mathew & Sen, 2009)	Nagaland	Frost (2016)
20	<i>Pedostibes kempfi</i> (Boulenger, 1919)	Meghalaya	Frost (2016)
<b>Family: Dicroglossidae</b>			
21	<i>Euphlyctis ghoshi</i> (Chanda, 1991)	Manipur	Frost (2016)
22	<i>Fejervarya sengupti</i> Purkyastha & Matsui, 2012	Meghalaya	Frost (2016)
23	<i>Nanorana mokokchungensis</i> (Das & Chanda, 2000)	Nagaland	Frost (2016)
<b>Family: Megophryidae</b>			
24	<i>Leptobrachium bompu</i> Sondhi & Ohler, 2011	Arunachal Pradesh	Frost (2016)
25	<i>Leptolalax khasiorum</i> Das, Tron, Rangad & Hooroo, 2010	Meghalaya	Frost (2016)
26	<i>Leptolalax nokrekensis</i> (Mathew & Sen, 2009)	Meghalaya	Frost (2016)
27	<i>Leptolalax tamdil</i> Sengupta, Sailo, Lairemsanga, Das & Das, 2010	Mizoram	Frost (2016)
28	<i>Megophrys ancræ</i> Mahony, Teeling & Biju, 2013	Arunachal Pradesh	Frost (2016)
29	<i>Megophrys megacephala</i> Mahony, Sengupta, Kamei & Biju, 2011	Meghalaya	Frost (2016)
30	<i>Megophrys oropedion</i> Mahony, Teeling & Biju, 2013	Meghalaya	Frost (2016)
31	<i>Megophrys serchhipii</i> (Mathew & Sen, 2007)	Mizoram	Frost (2016)
32	<i>Megophrys vegrandis</i> Mahony, Teeling & Biju, 2013	Arunachal Pradesh	Frost (2016)
33	<i>Megophrys zunheboensis</i> (Mathew & Sen, 2007)	Nagaland	Frost (2016), Saikia (2012)
<b>Family: Ranidae</b>			
34	<i>Hylarana garoensis</i> (Boulenger, 1920)	Assam, Meghalaya, Mizoram, Manipur, Nagaland & Arunachal Pradesh	Frost (2016)
35	<i>Amolops assamensis</i> Sengupta, Hussain, Choudhury, Gogi, Ahmed & Choudhury, 2008	Assam, Meghalaya	Frost (2016), Saikia (2012)
36	<i>Amolops kohimaensis</i> Biju, Mahony & Kamei, 2010	Nagaland	Frost (2016)
37	<i>Amolops nidorbellus</i> Biju, Mahony & Kamei, 2010	Nagaland	Frost (2016)
<b>Family: Rhacophoridae</b>			
38	<i>Chiromantis cherrapunjiae</i> (Roonwal & Kripalani, 1966)	Meghalaya, Arunachal Pradesh	Frost (2016)
39	<i>Chiromantis senapatiensis</i> (Mathew & Sen, 2009)	Manipur	Frost (2016)
40	<i>Chiromantis shyamrupus</i> (Chanda & Ghose, 1989)	Arunachal Pradesh	Frost (2016)
41	<i>Philautus garo</i> (Boulenger, 1919)	Meghalaya, Nagaland, Assam	Frost (2016)
42	<i>Philautus kempiae</i> (Boulenger, 1919)	Meghalaya	Frost (2016)
43	<i>Philautus kempii</i> (Annandale, 1912)	Arunachal Pradesh	Frost (2016)

44	<i>Philautus microdiscus</i> (Annandale, 1912)	Arunachal Pradesh	Frost (2016)
45	<i>Philautus namdaphaensis</i> Sarkar & Sanyal, 1985	Arunachal Pradesh, Assam, Meghalaya	Frost (2016), Mathew & Sen (2009a)
46	<i>Polypedates assamensis</i> Mathew & Sen, 2009	Assam, Meghalaya	Frost (2016), Saikia (2012)
47	<i>Polypedates subansiriensis</i> Mathew & Sen, 2009	Arunachal Pradesh	Frost (2016)
48	<i>Raorchestes manipurensis</i> (Mathew & Sen, 2009)	Manipur	Frost (2016)
49	<i>Raorchestes sahai</i> (Sarkar & Ray, 2006)	Arunachal Pradesh	Frost (2016)
50	<i>Raorchestes shillongensis</i> (Pillai & Chanda, 1973)	Meghalaya	Frost (2016)
51	<i>Rhacophorus subansiriensis</i> Mathew & Sen, 2009	Arunachal Pradesh	Frost (2016)
52	<i>Rhacophorus suffry</i> Bordoloi, Bortamuli & Ohler, 2007	Assam, Arunachal Pradesh, Nagaland	Frost (2016), Bordoloi <i>et. al.</i> (2008)
53	<i>Theloderma nagalandense</i> Orlov, Dutta, Ghate & Kent, 2006	Nagaland	Frost (2016)

## Discussion

The recent descriptions of many new species of the Order Gymnophiona (Mathew & Sen, 2009b; Kamei *et. al.* 2009 & 2013) has increased the endemic species count of Caecilians to 11 species. Order Anura has 42 endemic species from this region. However, there is not a single endemic species under Order Caudata.

Mathew and Sen (2010) reported 119 species of

amphibians from the region. Now, the total number of amphibians from Northeastern India has increased to 146 species (as per Frost, 2016).

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