



Assessment of the Reptilian Fauna in the Brahmaputra Plains of Two Districts in Assam, India

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India is one of the top twelve nations of the world in terms of mega-biodiversity, boasting a rich reptilian fauna represented by 506 currently recognized species (Das 2003), of which 199 are lizards (Venugopal 2010). Reptiles occupy a

diverse range of both natural and human-altered habitats and microhabitats.

Seven states in northeastern India are popularly known as the “seven sisters.” The total forest cover in this region is

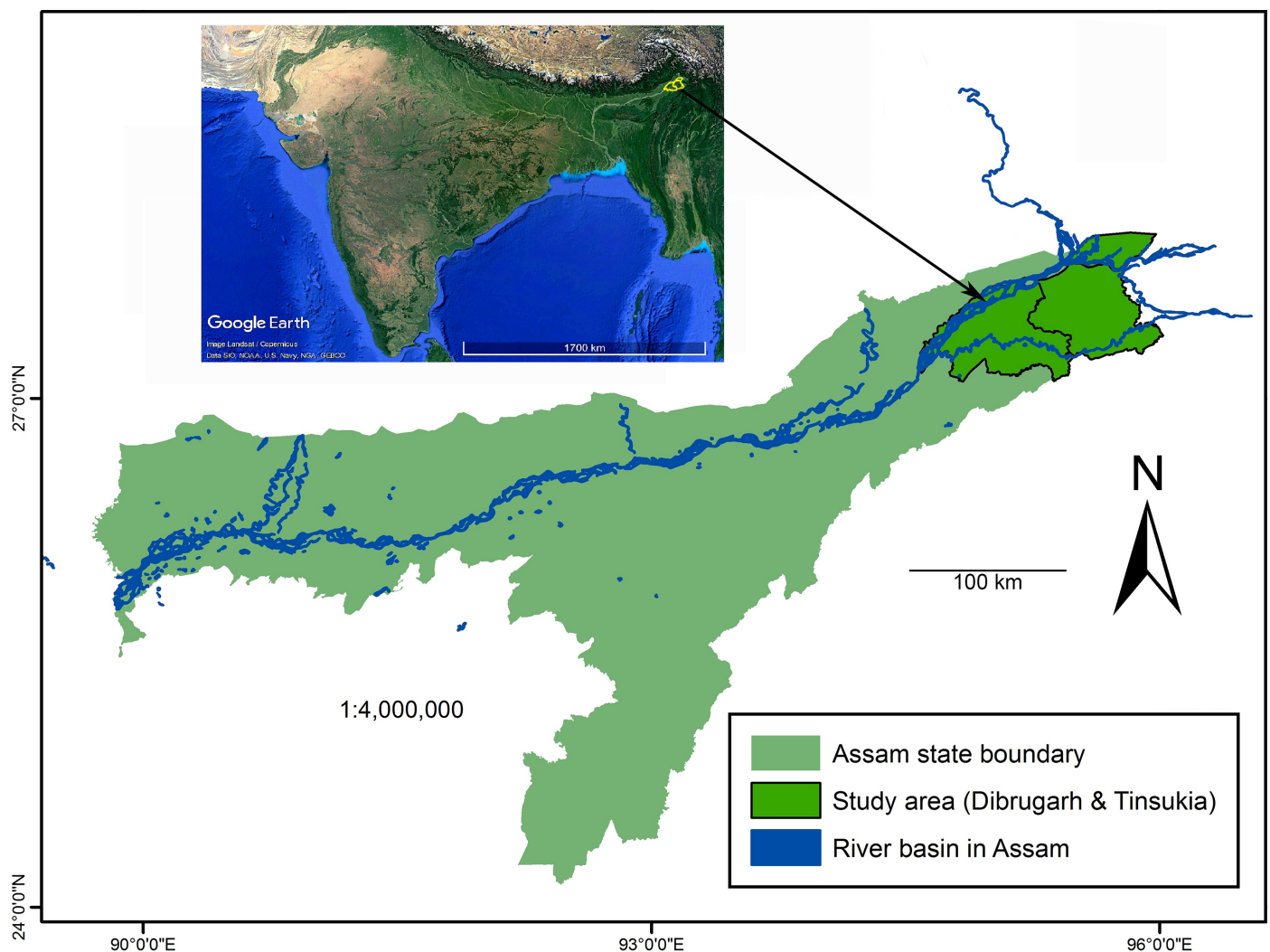


Fig. 1. The study area in the Dibrugarh and Tinsukia Districts of Assam, India.

Table 1. Species recorded during the survey period with IUCN Red List status (IUCN) and national status according to the Wildlife Protection Act of 1972 (WPA).

Family	Scientific Name and Authority	Common Name	IUCN	WPA
Agamidae	<i>Calotes versicolor</i> (Daudin 1802)	Indian Garden Lizard	Not Assessed	Not Listed
	<i>Calotes jerdoni</i> Gunther 1870	Jerdon's Forest Lizard	Not Assessed	Not Listed
	<i>Cristidorsa planidorsata</i> (Jerdon 1870)	Smooth-scaled Mountain Lizard	Not Assessed	Not Listed
Gekkonidae	<i>Hemidactylus frenatus</i> Dumeril & Bibron 1836	Common House Gecko	Not Assessed	Not Listed
	<i>Hemidactylus brookii</i> Gray 1845	Brook's House Gecko	Not Assessed	Not Listed
	<i>Hemidactylus flaviviridis</i> Rüppell 1835	Northern House Gecko	Not Assessed	Not Listed
	<i>Gekko gecko</i> (Linnaeus 1758)	Tokay Gecko	Not Assessed	Schedule-IV
Mabuyidae	<i>Eutropis multifasciata</i> (Kuhl 1820)	Many-lined Sun Skink	Not Assessed	Not Listed
	<i>Eutropis macularia</i> (Blyth 1853)	Bronze Skink	Not Assessed	Not Listed
Sphenomorphidae	<i>Sphenomorphus maculatus</i> (Blyth 1853)	Spotted Forest Skink	Not Assessed	Not Listed
Varanidae	<i>Varanus bengalensis</i> (Daudin 1802)	Bengal Monitor	Least Concern	Schedule-I
Typhlopidae	<i>Indotyphlops braminus</i> (Daudin 1803)	Brahminy Blindsnake	Not Assessed	Not Listed
	<i>Argyrophis diardii</i> (Schlegel 1839)	Diard's Blindsnake	Not Assessed	Schedule-IV
Pythonidae	<i>Python bivittatus</i> Kuhl 1820	Burmese Python	Vulnerable	Schedule-I
Colubridae	<i>Lycodon aulicus</i> (Linnaeus 1758)	Common Wolf Snake	Not Assessed	Schedule-IV
	<i>Ptyas mucosa</i> (Linnaeus 1758)	Oriental Ratsnake	Not Assessed	Schedule-II
	<i>Coelognathus radiatus</i> (Boie 1827)	Copper-headed Trinket Snake	Not Assessed	Schedule-IV
Natricidae	<i>Xenochrophis piscator</i> (Schneider 1799)	Checkered Keelback	Not Assessed	Schedule-II
	<i>Rhabdophis subminiatus</i> (Schlegel 1837)	Red-necked Keelback	Vulnerable	Schedule-IV
	<i>Amphiesma stolatum</i> (Linnaeus 1758)	Buff-striped Keelback	Not Assessed	Schedule-IV
Ahaetuliidae	<i>Ahaetulla nasuta</i> (Bonnaterre 1790)	Green Vine Snake	Not Assessed	Schedule-IV
	<i>Chrysopelea ornata</i> (Shaw 1802)	Golden Flying Snake	Not Assessed	Schedule-IV
	<i>Dendrelaphis pictus</i> (Gmelin 1789)	Painted Bronzeback	Not Assessed	Schedule-IV
Elapidae	<i>Bungarus niger</i> Wall 1908	Greater Black Krait	Not Assessed	Schedule-IV
	<i>Bungarus fasciatus</i> (Schneider 1801)	Banded Krait	Not Assessed	Schedule-II
	<i>Naja kaouthia</i> Lesson 1831	Monocled Cobra	Least Concern	Schedule-II
	<i>Ophiophagus hannah</i> (Cantor 1836)	King Cobra	Vulnerable	Schedule-II
Viperidae	<i>Daboia russelii</i> (Shaw & Nodder 1797)	Russel's Viper	Not Assessed	Schedule-IV
Geomydidae	<i>Geoclemys hamiltonii</i> (Gray 1831)	Spotted Pond Turtle	Vulnerable	Schedule-I
	<i>Pangshura sylhetensis</i> Jerdon 1870	Assam Roofed Turtle	Endangered	Schedule-I
	<i>Pangshura tecta</i> (Gray 1831)	Indian Roofed Turtle	Not Assessed	Schedule-I
	<i>Pangshura tentoria</i> (Gray 1834)	Indian Tent Turtle	Not Assessed	Not Listed
Trionychidae	<i>Nilssoniana gangetica</i> (Cuvier 1825)	Ganges Softshell Turtle	Vulnerable	Schedule-I
	<i>Lissemys punctata</i> (Bonnaterre 1790)	Indian Flapshell Turtle	Least Concern	Schedule-I

164,043 km², which represents 25% of the total forest cover of India (FSI 1997). The region can be broadly differentiated into the Eastern Himalayan (Olson and Dinerstein 2002) to the north, the Northeastern Hills (Meghalaya and Mizoram-Manipur Kachin forest zones) to the south, and the Brahmaputra River Basin (BRB) separating the two (Mani 1974). Our study area (Fig. 1) consisted of the

Municipal Area of Dibrugarh District with an area of about 15.5 km² (27°27'0"N–27°31'20"N x 94°52'0"E–94°57'0"E) and the Municipal Area of Tinsukia District with an area of about 10.54 km² (95°19'20.00"E–95°24'00.00"E x 27°31'20.00"N–27°28'80.00"N).

From September 2012 to August 2017, we engaged in Visual Encounter Surveys (VES), supplemented with a thor-

ough review of the relevant literature and reliable photographic records, to record the reptilian species diversity. Active searches involving turning rocks and logs, peeling bark, and digging through leaf litter. Turtles were recorded on the basis of bycatches by fishermen and also by active searches along river banks and sacred temple ponds. For each observation, we recorded data on locality using a Garmin GPS 12, noted habitat, microhabitat, and the presence of sympatric species (if any), employed morphometric data and keys in Smith (1935, 1943), Das (2002), and Daniel (2002) to confirm the identities of species, and released animals at their respective capture sites. We also spoke with local residents to make them aware of the local reptilian fauna and to supplement field observations.

We recorded 34 species in 27 genera and 14 families during the survey period (Table 1). The most commonly encountered lizard species was *Hemidactylus frenatus*, whereas *Gekko gecko* and *Cristidorsa planidorsata* were extremely rare and had patchy distributions. *Lycodon aulicus* and *Ptyas mucosus* were the most frequently sighted snakes, whereas *Rhabdophis subminiatus* was sighted only three times during the entire study period. Among turtles, *Lissemys punctata* was frequently recorded in the Dibrugarh Municipal Drain and in ponds in the vicinity of the Brahmaputra River.

Acknowledgements

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