

## Original Research Article

# Field study on Herpetofauna in Arunachal Pradesh: The Eastern Himalayan Biodiversity Hot Spot, India.

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**Abstract:** The herpetofuna diversity of Papum Pare, Upper Subansiri, West Siang and East Siang districts of Arunachal Pradesh has been documented after carrying out a survey for one year. These districts are located at the center part of the state representing Pare, Subansiri and Siang river basin. The species were documented by means of visual encounter survey in and around the lotic and lentic habitats of the Dikrong, Pare, Subansiri and Siang rivers system with the help of local villagers. The present study on Papumpare, Upper Subansiri, West Siang and East Siang districts of Arunachal Pradesh, India resulted in recording of 8 amphibian species belonging to 5 families viz., Bufonidae, Megophryidae, Dicroglossidae, Ranidae and Rhacophoridae under order Anura. 12 reptilian species documented belonging to order squamata and sub order serpents which comes under 3 families such as Typhlopidae, Colubridae and Viperidae; under suborder sauria 3 families viz., Scincidae, Agamidae and Gekkonidae were reported. One reptilian species belongs to order Lacetilia belonging to the family Varanidae and reptilian species comes order Testudines belonging to the family Gekkonidae were also reported. In total 40% of frogs, 35% of snakes, 20% of lizards and 5% of turtles are recorded. According to the IUCN concern all the species are comes under LC-Least Concern category except Peacock Soft shell Turtle (*Nilssonina hurum*) which comes under VU- Vulnerable. Arunachal Pradesh located at the eastern Himalayan region is one of the biodiversity hotspot zones of the world. It implies presence of a number of endemic species in this particular zone. Documentation of the herpatofauna and their distribution on this hill state of eastern Himalayan zone shall help in conservation strategy of the species.

**Key words:** Arunachal Pradesh, Biodiversity Hot Spot, Eastern Himalaya, Herpatofuna, Vulnerable species

## Introduction

The north-eastern India including eastern Himalayan region is a unique transitional zone of Indian, Indo-Malayan and Indo-Chinese biogeographical zones. It is the meeting point of the Himalayan region with the Peninsular India (Captain & Bhatt, 2000). This region is constituted by seven north-eastern states and is popularly known as 'seven sisters' of north east India. The total forest cover of this region is 164,043 sq km, which is 25% of the total forest cover of India. The ecosystems of Arunachal Pradesh are rich repositories of natural

resources and biological wealth. The entire state is located on the eastern Himalayan zone, recognized as the biodiversity hot spot (Mayers *et al.*, 2000). The state is characterized by hills, mountains, plateau, lakes, streams, waterfalls and mighty rivers flowing through narrow valleys. An Altitudinal variation in the state creates various climatic zones: temperate to snow covered alpine region. The rich biodiversity of Amphibians has remained under explored and unexplored in certain parts of Arunachal Pradesh due to inaccessibility in difficult hilly

terrain, lack of communication network and other reasons. In recent years, amphibian and reptilian diversity of Arunachal Pradesh has been studied in at certain accessible parts of the state with new records and descriptions of some species (Sabitry Bordoloi *et al.*, 2007). The boundary zones of Assam-Arunachal Pradesh share similar pattern of vegetation and ecological conditions where certain herpatofaunal studies have been done in recent time (Sengupta *et al.*, 2008, 2010). The pioneering works of Boulenger (1890), and Annandale (1912) recorded aquatic biodiversity of Arunachal Pradesh.

on spot, photographs were taken for record. The various morph metric measurements were taken with Matutoyo dial vernier caliper with an accuracy of 0.01 mm. Morphological characters were described following Sondhi & Ohler (2011). Identification was done with the help of standard publications such as Boulenger (1920), Chanda (1994), Dutta (1997), Dubois & Ohler (2000) Daniels (2005) and Ao *et al.*, (2003, 2006) and current species and family names are described as per IUCN (2013).

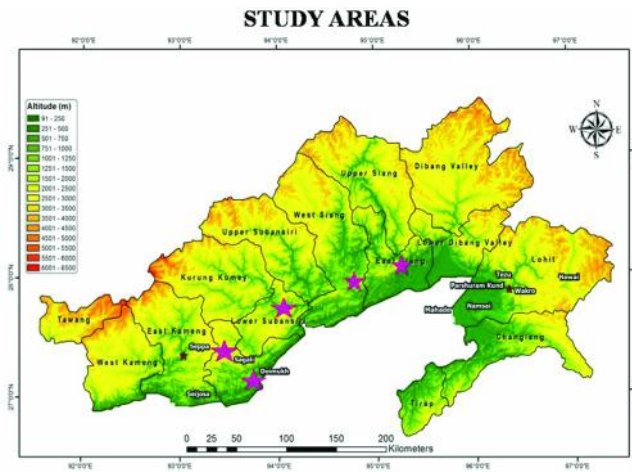


Fig. 1. Study area. 1- Rono Hills, Doimukh ( Papumpare district), 2- Saglee (Papumpare district, 3- Tale valley (Lower Subansiri district), 4- Barzeer village, (West Siang district) & 5- Passighat (East Siang district).

**Materials and methods**

Field visit had been conducted in Papum Pare, Lower Subansiri, East Siang and West Siang District (Fig. 1) as of Arunachal Pradesh and herpetofauna were recorded based on direct observation. Herpatofunal finding and record is seasonal and hence the ecosystems were surveyed and the species were collected from 2 seasons, pre-monsoon and monsoon of the year 2015. They show the highest activity during the monsoon season. Some species are early breeders; some are late breeders whereas some breed throughout the year. Their breeding is associated with monsoon and hence the surveys were undertaken mostly during the monsoon season. The lotic and lentic water bodies were explored along with the leaf litter, bushes etc. Data sheet for the amphibian recordings were filled up in the field. As few species could be identified

Table - 1. List of Amphibian species recorded

Sl. No.	Family	Species	IUCN status/distribution
1	Bufo	<i>Duttaphrynus melanostictus</i> (Schneider, 1799)	LC/ PP
2	Megophryidae	<i>Xenophrys parva</i> (Boulenger, 1893)	LC/ ES
3	Dicroglossidae	<i>Limnonectes limnochari</i> (Gravenhorst, 1829)	LC/ PP
4	Rhacophoridae	<i>Polypedates teraiensis</i> (Gravenhorst, 1829)	LC/ PP
5	Rhacophoridae	<i>Rhacophorus bipunctatus</i> (Ahl, 1927)	LC / LS
6	Dicroglossidae	<i>Limnonectes limnochari</i> (Gravenhorst, 1829)	LC/ PP
7	Rhacophoridae	<i>Rhacophorus maximus</i> (Günther, 1858)	LC-/ ES
8	Dicroglossidae	<i>Hoplobatrachus crassus</i> (Jerdon, 1854)	LC/ PP

Table - 2. List of Reptilian species recorded

Sl. No.	Family	Species	IUCN status/distribution
1	Gekkonidae	<i>Hemidactylus platyurus</i> (Schneider, 1792)	LC/ ES
2	Agamidae	<i>Calotes jerdoni</i> (Gunther, 1870)	LC/ PP
3	Agamidae	<i>Calotes versicolor</i> (Daudin, 1802)	LC/ PP
4	Scinidae	<i>Asymblepharus sikkimensis</i>	LC/ PP
5	Colubridae	<i>Dendrelaphis pictus</i> , (Gmelin, 1789)	LC/ PP
6	Viperidae	<i>Protobothrops jerdonii</i> (Günther, 1875)	LC/ LS
7	Colubridae	Cat Snake <i>Boiga gokool</i> , (Gray, 1835)	LC/ PP
8	Colubridae	<i>Ptyas nigromarginatus</i> (Blyth, 1854)	LC/ PP
9	Colubridae	<i>Lycodon jara</i> (Shaw, 1802)	LC/ WS
10	Typhlopidae	<i>Typhlops diardii</i> (Schlegel, 1839)	LC/ PP
11	Varanidae	<i>Varanus bengalensis</i> (Daudin, 1802)	LC/ PP
12	Trionychidae	<i>Nilssonina hurum</i> (Gray, 1830)	VU/ ES

LC : Least Concern, VU : Vulnerable, PP : Papumpare, LS : Lower Subansiri, WS : West Siang, ES: east Siang

**Results**

During the study, the total twenty species of amphibians and reptiles have been recorded (Table 1&2) in four districts (Papumpare, Lower Subansiri, West Siang and East Siang) of Arunachal Pradesh. In total 40% frogs, 35% snakes, 20% lizards and 5% turtles are recorded in (Fig 7). According to



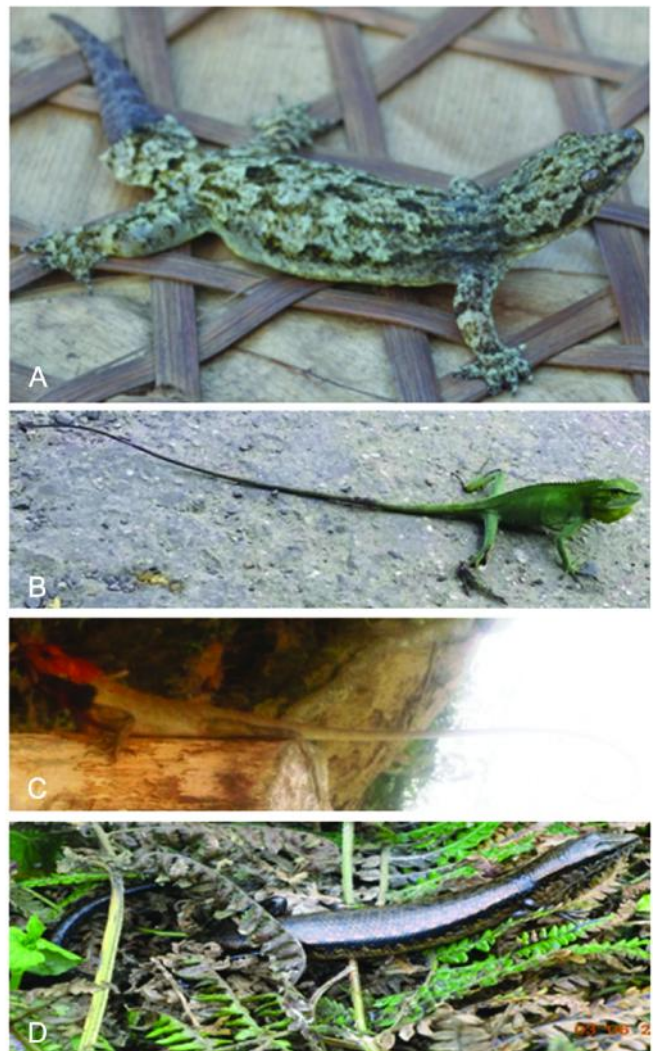
**Fig. 2** (a) Common Asian Toad, (b) Mountain Horned Frog, (c) A pair of Large Tree Frog (mating), (d) Twin-spotted Tree Frog,

the IUCN concern, all the species are come under the Least Concern(LC)-category except the Peacock Soft shell Turtle (*Nilssonia hurum*), which comes under the Vulnerable (VU)-category. In amphibia, the LC-category species such as, Common Asian Toad, Indian Skipping Frog, Paddy Field Frog, Cricket Frog, Common Tree Frog and Jerdon’s Bull Frog were all found from the Papumpare District. As like, the other amphibian species, Mountain Horned Frog and Large Tree Frog (LC-category) were found at East Siang District. Also, from the Tale Valley, Lower Subansiri District, the other amphibian species called, Twin-spotted Tree Frog (LC-



**Fig. 3** (a) Jerdon’s Bull Frog, (b) Indian Skipping Frog, (c) Paddy field Frog, (d) Common Tree Frog

Category) was sighted. From the class of reptilian, the species such as, Flat-tailed Gecko, Green Rat Snake (LC-category) and Peacock Soft Shell Turtle (VU-category) were recorded at the East Siang District. Also, the other reptilian species such as, Jerdon’s Forest Lizard, Indian Garden Lizard, *Sikkim Rock Skink*, Eastern Cat Snake, Diard’s Blind-snake, Painted Bronzeback snake and Bengal Monitor, which come under the LC-category were found at Papum Pare District. The Jerdon’s Pit Viper of the same class was found from the Tale Valley of Lower Subansiri District, which also comes under the LC-category. The other LC-category species called Yellow-Speckled Wolf Snake of reptilian class was found from the Barzeer village in west Siang district. According to this study,



**Fig. 4.** (a) Flat-tailed Gecko, (b) Jerdon’s Forest Lizard, (c) Indian Garden Lizard, (d) Sikkim Rock Skink.



the maximum numbers of amphibian species were found in RGU campus, Papum Pare district. Due to the best avail of light source at RGU campus, we were able to find the more amphibian species around the light source, when they come for its prey (insects). And, this light trapping is one of the techniques to collect amphibians for herpetological studies. Amphibians are considered to be the best indicators of environmental health. A decline in amphibian populations indicates ecosystem deterioration that might affect a wider spectrum of the earth's biological diversity (Daniels, 2005).

**Species accounts**

**Amphibians**

**Common Asian Toad**

Family: Bufonidae

Scientific name: *Duttaphrynus melanostictus* (Schneider, 1799) (Fig. 2 a).

The Common Indian Toad is identified by its medium to large size, skin is rough and numerous black- tipped, horny lump spread all over the body. Strong black ridges over eyes. Two large parotid gland behind eyes, tympanum large and distinct. Nocturnal. Inhabit forest, in and around human habitation like dark and corner of house and actively forage at night near light sources. Breed throughout the year in stagnant water. Hibernate only during very cold winter.



Fig. 5 a. Painted Bronze back (Head portion in inset), (b) Eastern Cat Snake, (c) Jerdon's Pit Viper



Fig. 6 a Green rat snake, (b) Yellow - speckled Wolf Snake, (c) Diard's Blind-snake, (d) Bengal Monitor, (e) Peacock Soft shell Turtle

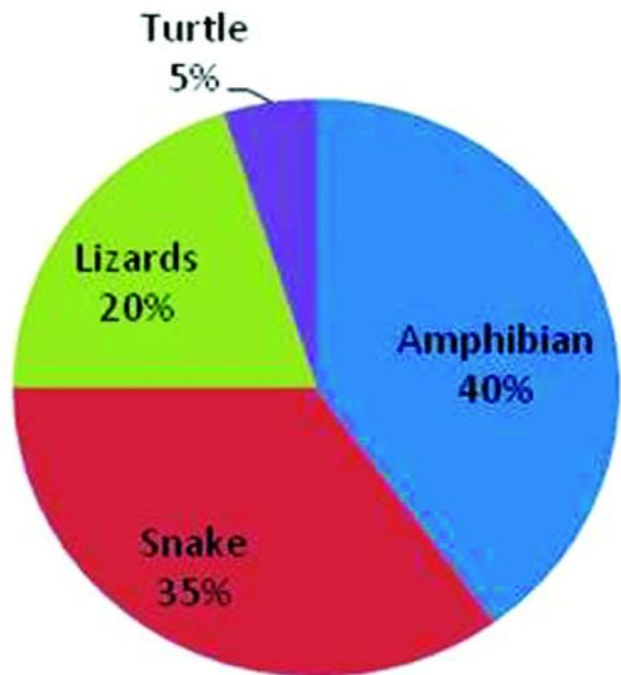


Fig. 7 Distribution pattern of studied herpatofauna

Exude poisonous fluid from its parotid glands when harmed. Calling males inflate a single large balloon-like external vocal sac. We record the frog at evening 7:30 pm during the month of May in RGU campus, Papum Pare district, Arunachal Pradesh, India.

### Mountain Horned Frog

Family: Megophryidae

Scientific name: *Xenophrys parva* (Boulenger, 1893) (Fig. 2b).

Body is elongated slender. Limbs are long, slender few 'V' and 'W' shaped glandular fold present on the dorsal side of the frog. Digits are long, slender, no webbing. Dorsal side of the frog is light brown with darker lines, prominent triangular mark between eyes. Ventral side of the frog is pink in colour. Nocturnal. Inhabit tropical and sub tropical broadleaf forest from 100-2800 m. We record the frog at evening 7:30 pm during the month of May in East Siang district, Arunachal Pradesh, India.

### Large Tree Frog

Family: Rhacophoridae

Scientific name: *Rhacophorus maximus* (Günther, 1858) (Fig. 2c).

Head of Tree Frog is Large in size and rounded snout and slightly pointed. Digits with large discs. Fingers two-third webbed, toes fully webbed. No dermal appendages. Dorsum green. Flank and webbing with brown reticulation. Lower jaw white. Nocturnal and arboreal. Inhabit tropical and subtropical broadleaf forests (80-200m). We record that Male mating with female at midnight 11:30 pm during the month of March in East Siang district Arunachal Pradesh, India.

### Twin-spotted Tree Frog

Family: Rhacophoridae

Scientific name: *Rhacophorus bipunctatus* (Ahl, 1927) (Fig. 2d).

Dorsal side of the Twin-spotted Tree Frog is light to grass green in colour, sprayed with tiny black dots. Two or more purple spots on the edge. Head is large in size; pointed snout more pointed in males. Forelimbs strong and stout, finger two-third webbed. Webbing is orange or reddish in colour. Hind limbs long and slender, toes fully webbed. Calcar and a dermal flap over vent present. Nocturnal and arboreal. We

recorded in the tropical forest 1400m at evening 8:30 pm during the month of May in Tale Valley, Lower Subansiri district, Arunachal Pradesh, India

### Jerdon's Bull Frog

Family: Dicroglossidae

Scientific name: *Hoplobatrachus crassus* (Jerdon, 1854) (Fig. 3a).

Head is large and triangular in shape and the tympanum is large and round in shape. Dorsum with irregular glandular folds. Dorsum brown with dark spots including flank. Elongated spots on hind limb. Limbs stout and strong, digits long and slightly pointed. Finger free, toes completely webbed. Nocturnal. Inhabit floodplains with grassland, forests, marshes and paddy. Breed in rainwater pools and paddy during June to July. Call can be heard from a distance. Hibernate in soft moist soil and inside holes. We record the frog at evening 9:45 pm during the month of August in RGU campus, Papum Pare district, Arunachal Pradesh, India.

### Indian Skipping Frog

Family: Dicroglossidae

Scientific name: *Euphlyctis cyanophlyctis* (Schneider, 1799) (Fig. 3b).

Indian Skipping frog is also called as pond frog. Head is flat and triangular in shape. The skipper frog is a medium sized aquatic frog. It is easily identified by its habit of floating in open water. Unlike any other species of Indian frog, the skipper frog floats even in deep water effortlessly and with all limbs on level with the body. The back is dark olive-brown (sometimes blackish or even with patches of green), normally bearing black blotches. We record the frog at evening 7:30 pm during the month of May in Sagalee, Papum Pare district, Arunachal Pradesh, India.

### Paddy Field Frog, Cricket Frog

Family: Dicroglossidae

Scientific name: *Limnonectes limnochari* (Gravenhorst, 1829) (Fig. 3c)

The Paddy field frog is a small to medium sized frog of the Indian wetlands, meadows and other damp ground. It is olive-

brown in colour with black spots and bands all over the upper surface. Most of the frogs that belong to this species have a white vertebral stripe and underside is white. In breeding males, the throat is blackish. We record frog at after noon 1:30 pm during the month of May in Sagalee, Papum Pare district, Arunachal Pradesh, India.

### Common Tree Frog

Family: Rhacophoridae

Scientific name: *Polypedates teraiensis* (Gravenhorst, 1829) (Fig. 3d).

The common tree frog is a medium to large in size, habit of inhabiting human dwellings. Distinct chocolate brown-black band along the sides of the head and eyes. The body bears a series of small spots and stripes on the back. The legs are cross-barred and the rear sides of the things are yellow with dark brown spots. The eardrum is distinct and almost as big as the eye. The nostrils are closer to the tip of the snout than to the eyes. The toes are about ½ webbed and there are traces of webbing on the fingers. Both the fingers and toes have large discs. The first and second fingers are almost equal in length. We record the frog at evening 8 pm during the month of June in Rono Hills, Papum Pare district, Arunachal Pradesh, India.

### Flat-tailed Gecko

Family: Gekkonidae

Scientific name: *Hemidactylus platyurus* (Schneider, 1792) (Fig. 4 a).

Dorsal coloration variable from light to dark grey and with variable dark brown patterns; belly is yellowish in colour. A flap of skin on the side of the body and back of the hind limbs distinguishes it from other geckos. Tail is flat in shape. Nocturnal. Inhabits a variety of habitats like forests, plantation and human habitations (50-2500m) and also found in the rocky river bank. Retreat in crevices during day time. Back just outside its crevices and retreat quickly in disturbed. Often seen on large trees a large rock on banks of the river. We record that Male mating with female at midnight 7:30 am during the month of July in East Siang district, Arunachal Pradesh, India.

### Jerdon's Forest Lizard

Family: Agamidae

Scientific name: *Calotes jerdoni* (Gunther, 1870) (Fig. 4 b).

Green or brown in colour. Buff dorso lateral stripe maybe present on dorsum from the neck to the base of the tail. Dorsal scales larger than ventral. Scales on throat larger than those on belly. A black skin fold present on neck above the shoulder. Two parallel rows of compressed scales above tympanum. Diurnal in nature. Inhabit tropical and subtropical moist ever green forests (500-2500m). Prefer low bushes, shrubs and trees, but also seen in fields and degraded forests. Lay up to 12 eggs. Non-venomous. There is no Poisonous lizard found in India and Asia. We record the lizard at 9:45 am during the month of August in RGU campus, Papum Pare district, Arunachal Pradesh, India.

### Indian Garden Lizard

Family: Agamidae

Scientific name: *Calotes versicolor* (Daudin, 1802) (Fig. 4 c).

Dorsally light brown, usually with dark brown spots or bars. Radiating black lines from eye and two separated spines present above tympanum. Breeding males display red fore body with a prominent red gular pouch. Usually two cream stripes on sides of body in juveniles. Diurnal. Live in variety of habitats-dry and moist forest, forest edges, human habitation, and road side vegetation and plantations. Distributed up to 2700m, but commonly seen below 500m. Lay upto 23 eggs that hatch after 42-67 days. We record the lizards at afternoon 1 pm during the month of August in RGU campus, Papum Pare district, Arunachal Pradesh, India.

### Sikkim Rock Skink

Family: Scinidae

Scientific name: *Asymblepharus sikkimensis* (Blyth, 1854) (Fig. 4 d).

Lower eyelids with a transparent window, 26-29 scales round mid body, dorsal scales half the size of laterals, 56-62 gular ventrals nuchal 2-4 pairs 5<sup>th</sup> supralabial touching the eye, 7-8 ciliars (not thickened). We recorded in the tropical forest 600m at evening 11:45am during the month of May in Sagalee, Papum Pare district, Arunachal Pradesh, India.

**Painted Bronzeback**

Family: Colubridae

Scientific name: *Dendrelaphis pictus* (Gmelin, 1789) (Fig. 5a).

Painted Bronze Back is also called as Common Bronze Back, Indonesian Bronze Back. During the birth it is 200-300 mm (8-12 inches), in Adult it is 900-1200 mm (35-47 inches) and maximum upto 1430 (56 inches). In the Painted Bronze back the maxillary teeth number from 23 to 26. The eye is as long as the distance between the nostril and eye. The rostral scale is more broad than deep and is visible from above. Inter nasal scales as long as or slightly shorter than the prae frontal scales. Body is slim and slender large eye present on the head distinct from neck. Black stripe behind eye to neck tongue is pink in colour. Body is bronze with sky-blue inter scale skin and under skin is white in colour. Diurnal and arboreal in nature. Inhabits backyard gardens, plantation and forest edges. Lizards, frogs and small birds are the some of the prey for this snake. Non Venomous. Observed in the RGU campus, Papum Pare district in the month of May at morning 10 am.

**Eastern Cat Snake**

Family: Colubridae

Scientific name: *Boiga gokool*, (Gray, 1835) (Fig. 5 b).

Eastern Cat Snake is also called as Gamma Cat Snake and Arrow back Tree Snake. The body length of the adult snake from 800-870 mm (31-34 inches) maximum length is 1200 mm (47 inches). Body is triangular in shaped. Head distinct from neck with a dark brown arrow mark on top. Yellowish brown above with black 'Y' or 'T' shaped markings on either side of the body. Ventral scales whitish with series of black spots on side of each scale. The can grow to a maximum of about 1.15 metres. Usally arboreal and nocturnal. Semi-evergreen and degraded forests, tall grasslands and tea gardens at low elevations (100-1000 m). Birds, small mammals and lizards are the foods for this snake. Mildly Venomous. We recorded in RGU campus Papum Pare district in the month of June at 6 pm evening.

**Jerdon's Pit Viper**

Family: Viperidae

Scientific name: *Protobothrops jerdonii* (Gunther, 1875) (Fig. 5 c).

Head is broad, flat and triangular, very distinct from neck. Heat sensitive pit between nostril and eye. Tail short and prehensile. Top of the head black with arrow head shaped mark. Dorsally varies from greenish yellow to olive with irregular reddish brown or dark brown blotches throughout. Jaw and undersurface yellowish in colour. Nocturnal Inhabit subtropical forests (1300-2800 m). Retreat under rocks and woodpiles. Venomous. Envenomation should be treated with proper medication. We record the snake 10 am during the month of March in Tale Valley, Subansiri district, Arunachal Pradesh, India.

**Green Rat Snake**

Family: Colubridae

Scientific name: *Ptyas nigromarginatus* (Blyth, 1854) (Fig. 6a).

Large in length elongate, cylindrical bodied snake with a long tail can grow to a length of about 2.60 metres. Head is elongated and distinct from neck. Eyes are all in size with round pupils. Dorsal scale with apical pits, smooth laterally with median 4 to 6 rows keeled. Ventrals are rounded.

**Yellow – Speckled Wolf Snake**

Family: Colubridae

Scientific name: *Lycodon jara* (Shaw, 1802) (Fig. 6 b).

Snout much depressed eye rather small rostral much broader than long, just visible from above, inter nasals much shorter than the profrontal's frontals as long as or a little shorter than its distance from the end of the snout, a little shorter than the parietals loreal elongate, not entering the eye, one pre-ocular, two post-ocular, temporal small, 1+2, 9 or 10 upper labials, third, fourth and fifth entering the eye, 4 or 5

lower labials in contact with the anterior chin-shields, which are longer than the posterior. Dorsal scales smooth in 17 rows. Ventrals 167, not angulate laterally anal divided; subcaudals 56-63, in two rows. We found in the Barzeer village in West Siang district on the month of June at 6 pm evening.

#### **Diard's Blind-snake**

Family: Typhlopidae

Scientific name: *Typhlops diardii* (Schlegel, 1839) (Fig. 6 c).

Head is not very distinct from the tail. Tail ends into a short spine. Blind, rudimentary eyes visible underneath scales. The body is smooth and shiny; black or dark brown above and paler below. Nocturnal and burrowing in nature. It inhabit in forest as well as around human habitation. Often uncovered from the leaf litter and rotten logs. Rain sand floods sometimes bring them over ground. Quick to disappear in the forest floor. Lay 4-14 eggs during March to June. We found on the road of Rajiv Gandhi University, Papum Pare district in the month of June at 6am morning.

#### **Bengal Monitor**

Family: Varanidae

Scientific name: *Varanus bengalensis* (Daudin, 1802) (Fig. 6 d).

One of the largest lizards found in India. Head is large, flat and triangular in shape. Snout is elongated and the nostril and ear opening oblique. Dorsum brown with small dark brown spots. Juveniles dark olive with yellowish spots arranged on transverse rows. Ventral yellow. Diurnal and solitary. Inhabit variety of habitats ranging from grassland to primary forests, plantation and tea gardens. Lay 6-30 eggs per clutch during monsoon. We record the lizards at evening 5 pm during the month of November in RGU campus, Papum Pare district, Arunachal Pradesh, India.

#### **Peacock Soft shell Turtle**

Family: Trionychidae

Scientific name: *Nilssonia hurum* (Gray, 1830) (Fig. 6 e).

Maximum length of the turtle is 60 cm. Low and oval carapace, olive in colour with a yellow rim. Head is large with black

reticulation. Large yellow or orange patch behind eye and one cross snout. Juvenile with four-six dark eye marks on dorsum. Plastron white or light gray with five large callosities. Nocturnal and strictly aquatic. Inhabit river channels, marshes and wetlands. Remain buried in mud or sand at the bottom keeping just eyes and nostrils out, wait for prey to pass by and grab at amazing speed. Lay 20-38 eggs per clutch. We record the turtle at 7:30 am during the month of July in East Siang district, Arunachal Pradesh, India.

#### **Discussion**

The present survey was conducted for documenting the herpatofunal species of Papumpare, Upper Subansiri, West Siang and East Siang districts. Major rivers of the state are Kameng, Subansiri, Siang, Lohit and Tirap while, many minor rivers such as Dikrong and Pare, etc. Climate of the state varies from temperate in northern part to warm and humid in the southern part with average annual rainfall ranging from 2,000 mm to 8,000 mm. The species were documented by means of visual encounter survey in and around the lotic and lentic habitats of the Dikrong, Pare, Subansiri and Siang rivers system, and with the help of local villagers. The present study on Papumpare Upper Subansiri, West Siang and East Siang districts, Arunachal Pradesh, India resulted in recording of 8 amphibian species belonging 5 families such as Bufonidae, Megophryidae, Dicroglossidae, Ranidae and Rhacophoridae under order Anura. 12 reptilian species also documented belonging to order squamata and sub order serpents which comes under 3 families such as Typhlopidae, Colubridae and Viperidae suborder sauria 3 families such as Scincidae, Agamidae and Gekkonidae were reported. One reptilian species comes order Lacetilia belonging to the family Varanidae and another species comes order Testudines belonging to the family Gekkonidae were also reported. Among all the species 40% of frogs, 35% of snakes, 20% of lizards and 5% of turtles are recorded. According to the IUCN concern all the species are comes under LC-Least Concern category expect Peacock Soft shell Turtle (*Nilssonia hurum*) is comes under VU-Vulnerable. The various morph metric measurements were taken with Matutoyo dial vernier caliper with an accuracy of 0.01 mm. Morphological characters were described



following Agarwal *et al*(2010), Ahmed *et al*(2009), Athreya (2005), Chettri *et al* (2010), Sondhi & Ohler (2011). Identification was done with the help of standard publications such as Boulenger (1920), Chanda (1994), Borah and Bordoloi (2002, 2004), Dutta (1997), Dubois & Ohler (2000) and Ao *et al.* (2003, 2006) and Current species and family names are as per IUCN (2013). The rich biodiversity of Amphibians has remained under explored and unexplored in certain parts of Arunachal Pradesh due to inaccessibility in difficult hilly terrain, lack of communication network and other reasons. In recent years, amphibian diversity of Arunachal Pradesh has been studied by many workers. There have been studies on the amphibian and reptilian diversity of Arunachal Pradesh. But those were done on the more accessible parts of the state with new records and also descriptions of some species. We owe a lot to the pioneers like Boulenger (1890), and Annandale (1912) for recording aquatic biodiversity of Arunachal Pradesh. The ecosystems of Arunachal Pradesh are rich in natural resources and biological wealth. The wealthy biodiversity of Amphibians has remained under familiar and unfamiliar in certain parts of Arunachal Pradesh due to reserve in difficult hilly terrain, lack of communication network and other reasons Sabitry Bordoloi *et al.* (2007). In recent years, amphibian diversity of Arunachal Pradesh has been studied by many workers. There have been studies on the amphibian and reptilian diversity of Arunachal Pradesh. But those were done on the more accessible parts of the state with new records and also descriptions of some species.

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