

TEACHER'S ACTIVITY REPORT 2016 - 2021

FACULTY:

Science

DEPARTMENT/ COMMITTEE

Environmental Sciences

IQAC ACTIVITY No:

SVC 2019-20 EVS RS 2

NAME OF THE ACTIVITY:

DATE	FACULTY	DEPARTMENT/COMMITTEE	COORDINATOR NAME
June 2018 – August 2020	Science	Environmental Sciences	Dr. Robin Suyesh
TIME: Evening (35 Days)	VENUE	NUMBER OF PARTICIPANTS	NATURE: Outdoor/Indoor
	Aravali's	12	Outdoor
SUPPORT/ASSISTANCE:	Environmental Sciences, Sri Venkateswara College		

BRIEF INFORMATION ABOUT THE ACTIVITY (CRITERION NO. -)::

TOPIC/SUBJECT OF THE ACTIVITY	Unearthing the Amphibian Diversity of Aravali's in Delhi and NCR
OBJECTIVES	To understand the amphibian diversity of Delhi-NCR
METHODOLOGY	Extensive field surveys were carried out for two years during the monsoon
OUTCOMES	<p>Aravali Biodiversity Park is a thriving young city forest. In the summer of 2018 and 2019, we wanted to study the ecology of frogs of Delhi-NCR.</p> <p>Aravali Biodiversity Park provided an ideal choice for our field site, as revealed by 8 species of frogs found there during the field work. A perennial water body in Aravali Biodiversity Park sustains anuran species like the Indian skitter frog, Pierre's wart frog, Bull frog etc. throughout the year.</p> <p>This study revealed four new undocumented species from the region. National media covered the report.</p> <p>This work was also undertaken with the Sri Vipra Project (2019 – 2020) titled "Habitat Partitioning and Ecology of the sympatric amphibians of Delhi-NCR" (Attached Report)</p>

PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):

Notice & Letters	Student list of participation	Activity report	Photos	Feedback form
Feedback analysis	News clip with details	Certificate	Any other	

News Clip Link

<https://timesofindia.indiatimes.com/city/delhi/du-prof-finds-new-frog-species-in-aravalis/articleshow/70667148.cms>

THE TIMES OF INDIA

City: Delhi Mumbai Bengaluru Hyderabad Kolkata Chennai Agra Agartala Ahmedabad Ajmer Allahabad Amaravati Amritsar

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NEWS / CITY NEWS / DELHI NEWS / DU PROFESSOR FINDS NEW FROG SPECIES IN ARAVALLIS

THIS STORY IS FROM AUGUST 14, 2019

DU professor finds new frog species in Aravallis

Mohammad Ibrar / TNN / Updated: Aug 14, 2019, 09:08 IST

FACEBOOK TWITTER LINKEDIN EMAIL

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DU professor finds new frog species in Aravallis

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NEW DELHI: While amphibians in urban areas are currently facing a major crisis of habitat loss, split and fragmentation, a professor at Delhi University has found four new species in the Aravalli biodiversity area. Since frogs are an environmental indicator, their presence "indicates a relatively healthy ecosystem".

An amphibian survey conducted in Aravalli Biodiversity Park during the monsoon season of 2019 showed the presence of eight sympatric amphibians. The four species reported earlier are Bull frog (largest frog in India), Indian skipper frog, Narrow-mouthed frog (smallest land vertebrate from Delhi) and Pierre's wart frog. The four new species found this year are Nepal's Wart Frog, Indian Toad, Indus Valley Toad and Indian burrowing Frog.

Four new amphibian species sighted in Aravalli Biodiversity Park

Nepal's wart frog *Minervarya of nepalensis*
Indian burrowing frog *Sphaerotheca brevirostris*
Indian toad *Duttaphrynus melanostictus*
Indus Valley toad *Duttaphrynus stomasticus*

Amphibian-friendly habitat

- Relatively clean permanent and temporary waterbodies for egg laying and development of larvae (tadpoles)
- Vegetation providing shelter from excessive heat, dryness and predators
- Foraging areas and sufficiently good population of prey species – mostly insects
- Suitable hibernation sites

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"No other habitat in NCR currently shows such high diversity of amphibians," said Robin Suresh, amphibian biologist and assistant professor at Sri Venkateswara College, who found the amphibians.

He informed that National Capital Region has very limited habitat that can support amphibians and Aravalli Biodiversity Park is among the best.

"The park has a suitable combination of required aquatic and terrestrial habitat to support the amphibians. They lay eggs in water and the larvae (tadpoles) develop there. Outside the breeding season, adults and sub-adults spend much of their time on land where, generally, they need moist conditions to prevent loss of water, although some species can tolerate more water loss than others," said Suresh.

He added that the basic requirements to sustain amphibian life are already present in the park.

SASTRA
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IQAC Document No: Departmental file no	Criterion No: IQAC file No;	Metric No:
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NAME OF	NAME OF HEAD/ COMMITTEE	IQAC COORDINATOR (SEAL & SIGNATURE)
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TEACHER & SIGNATURE	INCHARGE & SIGNATURE	

For Reference

Criterion I	Curricular Aspects (planning & Implementation)	Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation	Criterion VI	Governance
Criterion III	Research, Innovations & Extension	Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure		

Team Member

Mentor: Dr. Robin Suyesh

Student Volunteers: (2019- 2020)

Apoorv Saini, Botany (H) 3rd year

Dipanshu Chaturvedi, Botany (H) 2nd year

Bhawna Yadav, Zoology (H) 3rd year

Mansi Dhingra, Zoology (H) 2nd year

Anand Bedgujar, Life Sciences 3rd year

Aditya, Maths (H) 2nd year

Ex Student Volunteers:

Abdus Samad, Batch 2014-17

Abhishek Singh, Batch 2014-17

Staff of Aravali Biodiversity Park

**“Habitat Partitioning and Ecology of the sympatric amphibians of
Delhi-NCR”**

Progress Report

Sri-Vipra



Department of Environmental Studies

Sri Venkateswara College



FACULTY

Dr. Robin Suyesh (Assistant Professor, Environmental Studies, Sri Venkateswara College)

Students involved (Total)

Project Students

1. Anand Bedgujar, Life Science
2. Bhawna Yadav, Zoology

Student Volunteers

3. Mansi Dhingra, Zoology
4. Deepanshu Chaturvedi, Botany
5. Aastha Saini, Zoology
6. Aaditya, Maths
7. Apoorv Saini, Botany

Ex-Student Volunteers

8. Abdus Samad, Biological Sciences
9. Abhishek Singh, Biological Sciences

Habitat Partitioning and Ecology of the sympatric amphibians of Delhi-NCR

The current project is a small step towards a bigger objective as it will not only create awareness in students about the importance of amphibians but also train them in conducting ecological and behavioral study using amphibians as model organism.

The study was conducted with the following objectives:

1. To train students to conduct ecological studies/habitat partitioning using amphibian as model organism.
2. To train students to record and analyze acoustic data from the amphibians.
3. To train students to identify and monitor amphibian population and delimit a species distribution in Delhi-NCR through acoustic spot sampling.
4. Restoration of a water body near Aravali Biodiversity Park – A primary amphibian habitat

Current Progress

30 days field visit to one of our proposed study site, Aravali Biodiversity Park was conducted for behavioral and ecological studies on anuran amphibians.

The fieldwork was done during the evening hours 16:00 Hours to 20:30 Hours. The fieldwork included identification of local amphibians, collection of their acoustic data and understanding their microhabitat.



Study Site



Students at Study Site

Results

Identified Eight Species of Sympatric Amphibians at the study site – making new records for amphibians from Delhi-NCR.

1. *Duttaphrynus stomasticus*



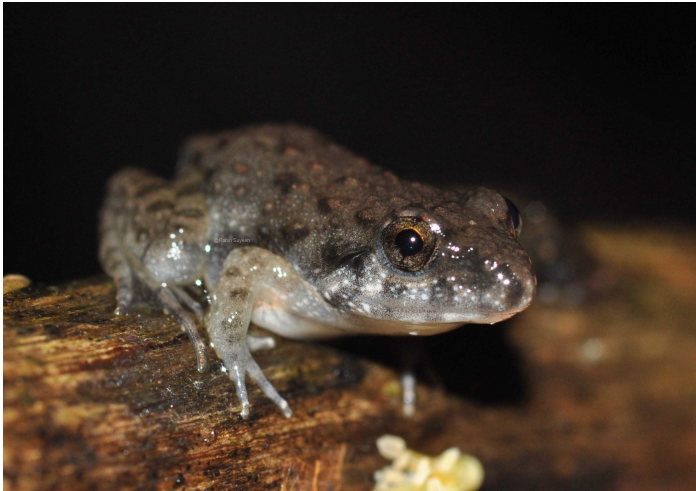
2. *Duttaphrynus melanosticus*



3. *Minervarya nepalensis*



4. *Minervarya pierrei*



5. *Euphlyctis cyanophlytis*



6. *Hoplobatrachus tigerinus*



7. *Sphaerotheca breviceps*



8. *Minervarya nilphameriensis*



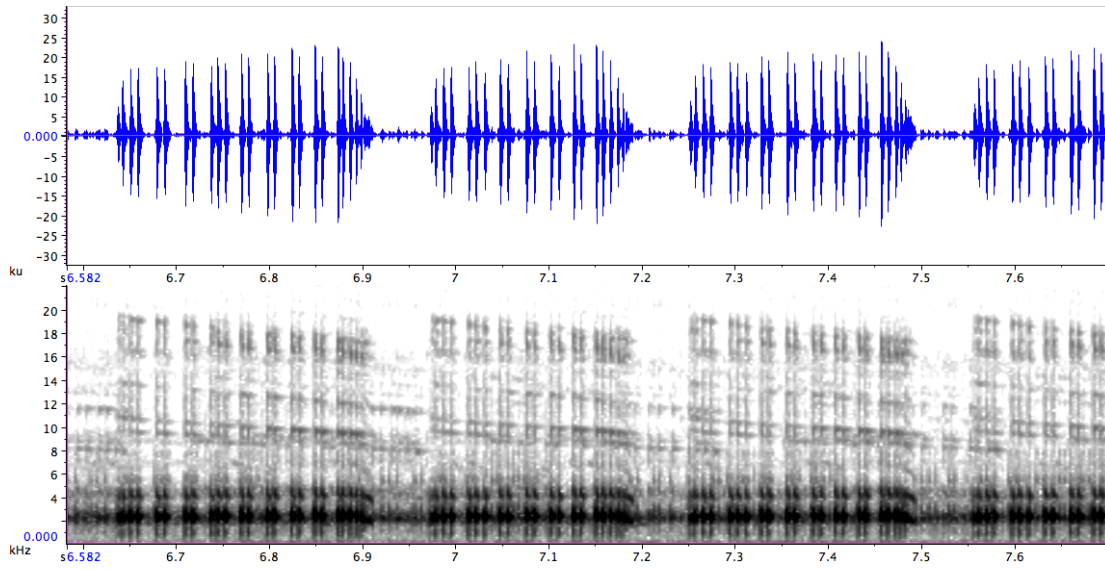
2. Sound Recording

The sound was recorded using digital solid-state recorder Zoom H6n mounted with a directional microphone (Sennheizer Me-67).

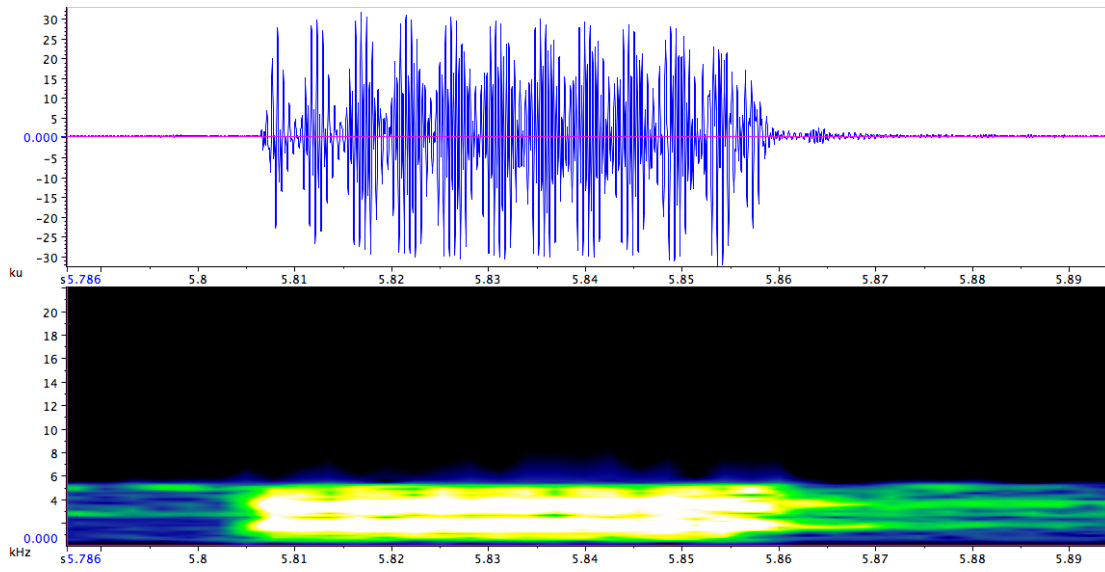
The sound analysis will be done using the Raven Pro 1.4. Acoustic properties (20 call Properties) will be analyzed for the study

Sound Analysis (in Progress)

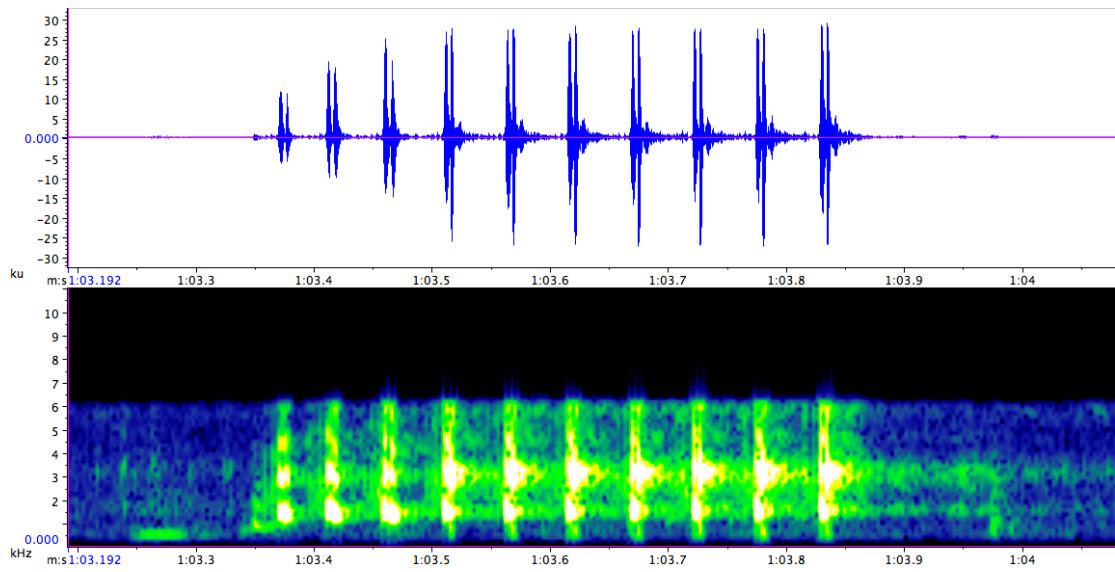
1. *Duttaphrynus stomasticus*



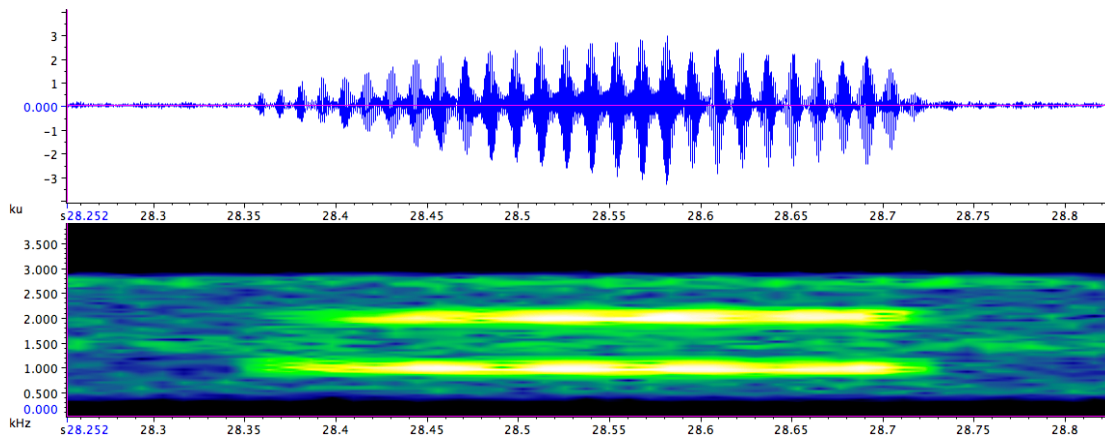
2. *Minervarya pierrei*



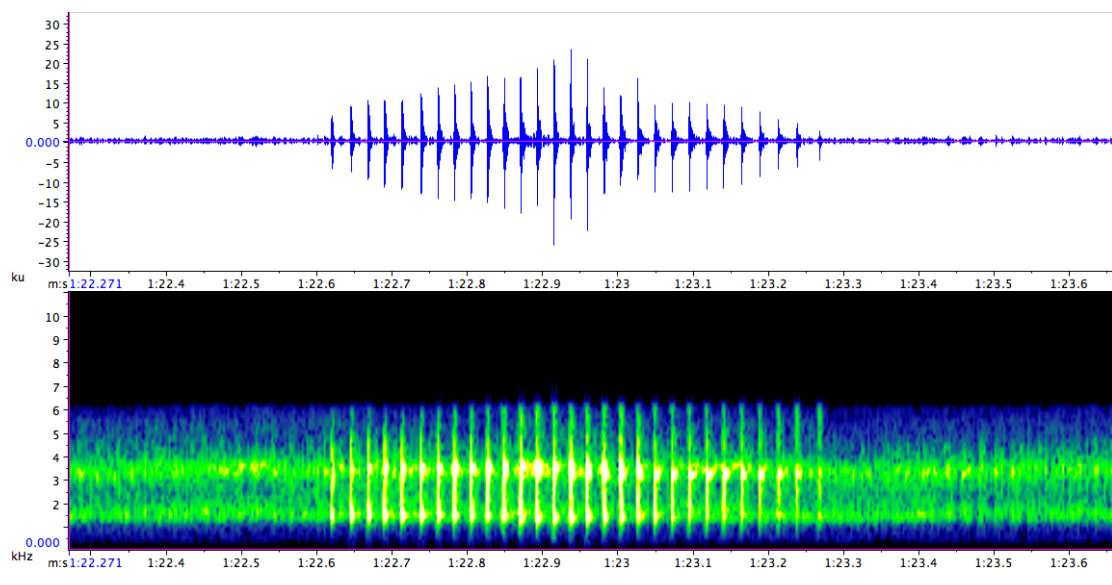
3. *Euphlyctis cyanophlytis*



4. *Sphaerotheca breviceps*



5. *Minervarya nilphameriensis*





SRI VENKATESWARA COLLEGE
(University of Delhi)

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A.O(I/C)

This is to certify that the Activity report (Teacher/Department /Society/Association) has been submitted for documentation to IQAC, Sri Venkateswara College, University of Delhi.

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