

"The Living Tapestry" of Sona Devi University

22° 37'05"N 86° 27'17"E

Ghatshila

(Best Private University in Jharkhand)

Under the Guidance of Archana Singh Madam (Asst. Registrar), Zoology Dept.



SONA DEVI UNIVERSITY

Sona Devi University 22° 37'05"N 86° 27'17"E





"The Living Tapestry" of Sona Devi University

Ghatshila

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"The Living Tapestry of Life"

is a metaphor for

- ❖ life's complex, interconnected nature, where every individual experience, relationship, and event form a unique thread that contributes to
- ❖ a larger,
- ❖ interwoven pattern with
- ❖ an Ecological Importance to maintain
- ❖ an Ecosystem for
- ❖ the survival of
- ❖ every single form
- ❖ of life, with the help
- ❖ of abiotic factors too.

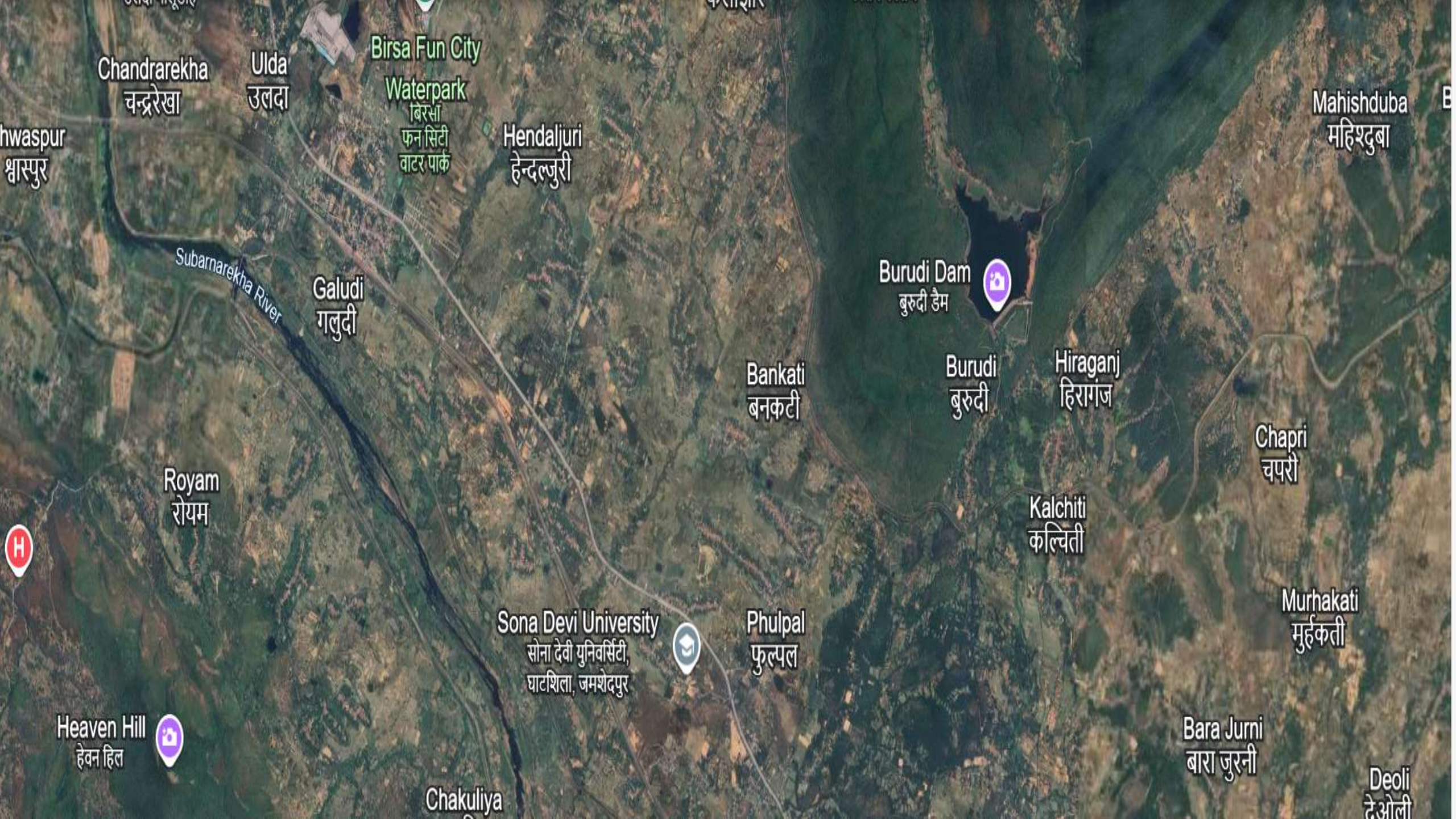
Just as a tapestry has different colours and textures, life includes both beautiful and challenging aspects, with each element adding depth, meaning, and beauty to the whole

Different types of habitats in & around Sona Devi University

- *Cashew Nut Jungle in East Side* Site: A
- *Human habitat in the Western Side* Site: B
- *Paddy field & Fresh Water Lentic Water bodies in the South West Side* Site: C
- *National Highway on the Northern Side* Site: D
- *Ecotone Areas of Jungle & Grassland in the Southern* Site: E

Sona Devi University
सोना देवी युनिवर्सिटी,
घाटशिला, जमशेदपुर





Chandrarekha
चन्द्ररेखा

Ulda
उल्दा

Birsa Fun City
Waterpark
बिरसा
फन सिटी
वाटर पार्क

Hendaljuri
हेन्दलजुरी

Mahishduba
महिशदुबा

hwaspur
श्वामपुर

Subarnarekha River

Galudi
गलुदी

Burudi Dam
बुरुदी डैम

Bankati
बनकटी

Burudi
बुरुदी

Hiraganj
हिरागंज

Chapri
चपरी

Royam
रोयम

Kalchiti
कल्चिती

Murhakati
मुर्हकती

Sona Devi University
सोना देवी युनिवर्सिटी,
घाटशिला, जमशेदपुर

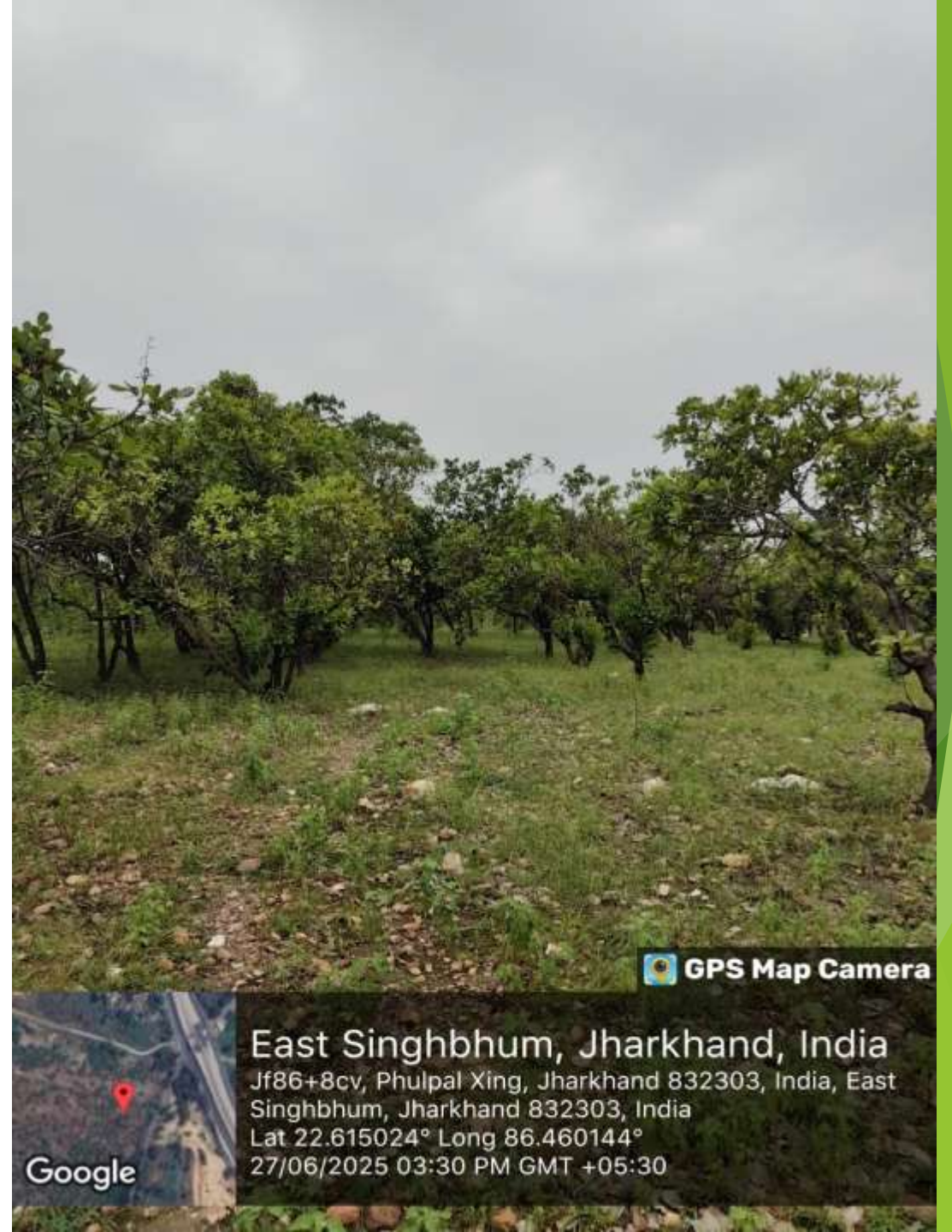
Phulpal
फुल्पाल


Heaven Hill
हेवन हिल

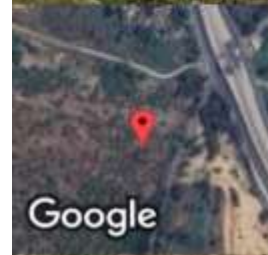
Chakuliya

Bara Jurni
बारा जुरनी

Deoli
देओली



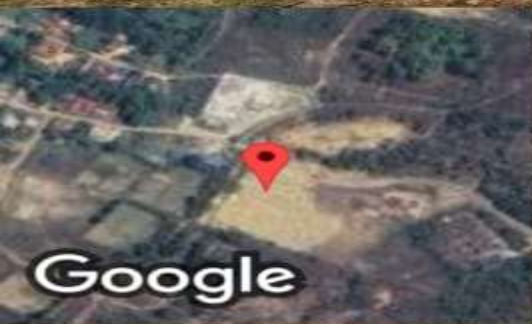
 **GPS Map Camera**



East Singhbhum, Jharkhand, India
Jf86+8cv, Phulpal Xing, Jharkhand 832303, India, East
Singhbhum, Jharkhand 832303, India
Lat 22.615024° Long 86.460144°
27/06/2025 03:30 PM GMT +05:30



Grassland Habitat



East Singhbhum, Jharkhand, India

Jf84+9r3, Jharkhand 832303, India, East Singhbhum,
Jharkhand 832303, India


Lat 22.61665° Long 86.455738°

26/07/2025 03:21 PM GMT +05:30





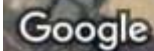


 **GPS Map Camera**


Ghatshila, Jharkhand, India

Jf93+5rr, Kitadih, Ghatshila, Jharkhand
832303, India

Lat 22.616941° Long 86.455742°
26/07/2025 02:04 PM GMT +05:30

 Google



 GPS Map Camera



East Singhbhum, Jharkhand, India

Jf86+8cv, Phulpal Xing, Jharkhand 832303, India, East
Singhbhum, Jharkhand 832303, India

Lat 22.615652° Long 86.460144°

27/06/2025 03:45 PM GMT +05:30

Objective :-

- I. The significance of biodiversity**
- II. Threats to biodiversity**
- III. Observation of different Species**
- IV. Spreading Awareness for
Environment Consciousness
& Biodiversity.**

Place:

**Sona Devi University ,
Ghatshila ,
(*Best Private University in Jharkhand*)**

**It's a Social
Responsibility**



“Study of Species richness & Biodiversity “ in & around of Sona Devi University, Ghatshila

- Sona Devi University, Ghatshila, is situated within the heart of nature's paradise, in between the **Swarna Rekha River & the River of Development of an Civilization**, named as **National Highway 18**.
- **The renowned University has been** managed and run by the Sona Devi Memorial Educational Foundation Trust, and is one of the Best Private University in Jharkhand, established **17th Feb 2023**.
- It situated in between Jamshedpur- Kolkata National Highway No-18 (NH33) at Ghatsila, East Singhbhum. **in the Jharkhand state of India,**
- Various Industrial Giants like Tata Steel Ltd, Jamshedpur, Tata Motors Ltd, Tata Power Ltd, Uranium Corporation of India, Jaduguda, Hindustan Copper Ltd, Mushabani, & others, highlighted these places in the World Map with the Quality Raw Material & Finished Quality products.
- So SDU will help Students to become more efficient in taking part in the Global Challenges shortly. Our University **premises are enriched with flora and fauna**, which is an **indicator of healthy biodiversity**.



22° 37'05"N 86° 27'17"E

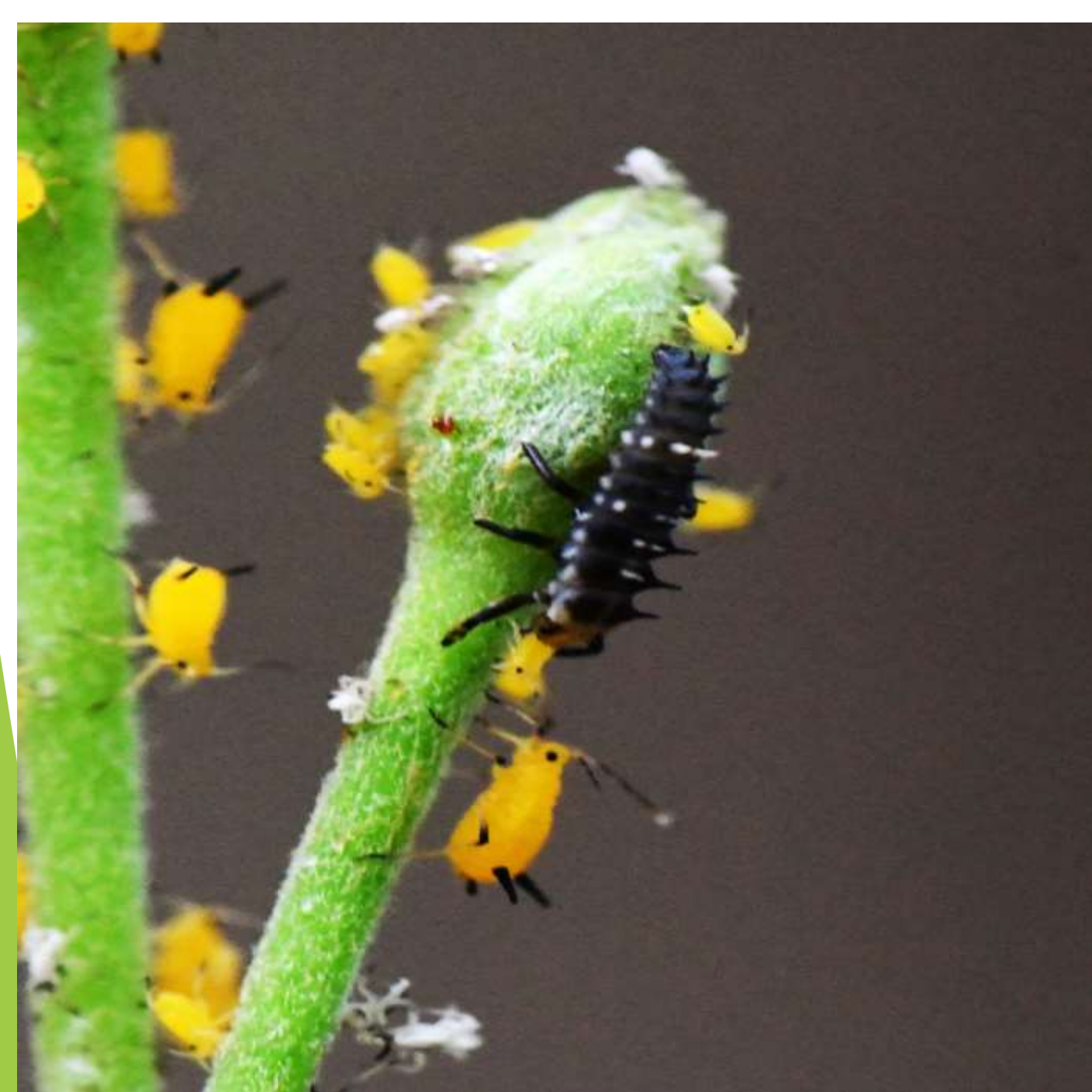
- As, Biodiversity refers to the variety of living organisms found on Earth, such as Plant , Animal , Bacterial, Algae Fungai including the diversity of species, ecosystems, and genetic variation within species.
- Biodiversity is essential for ecosystem services such as pollination, geochemical cycle, nutrient cycling, water purification, water reservoir and protect Soil erosion. It's very important for all Living Species. It may be Plant or Animal.
- It also contributes to human well-being by providing food, medicines, and other resources.
- However, biodiversity is under threat from human activities such as habitat destruction, climate change, and pollution, has led to the loss of habitat and species. Conserving biodiversity is crucial for sustainable development with a multidisciplinary approach.
- The habitat is well protected under the guidance of our administrative team, and will continue to conserve the biodiversity in future, **Under the leadership of PRABHAKAR SINGH Founder & Chancellor**
- **green audit, ISO certification**
-
- This involves conservation biologists, policymakers, and local communities working together to develop and implement strategies to protect and restore biodiversity of our University , and setting a excellent example to other institutions.
- As we know that it starts from Autotrophs to various strata of consumers and ultimately ends with the decomposers. Various fauna of different **phylum** is present in our Sona Devi Universities premises.





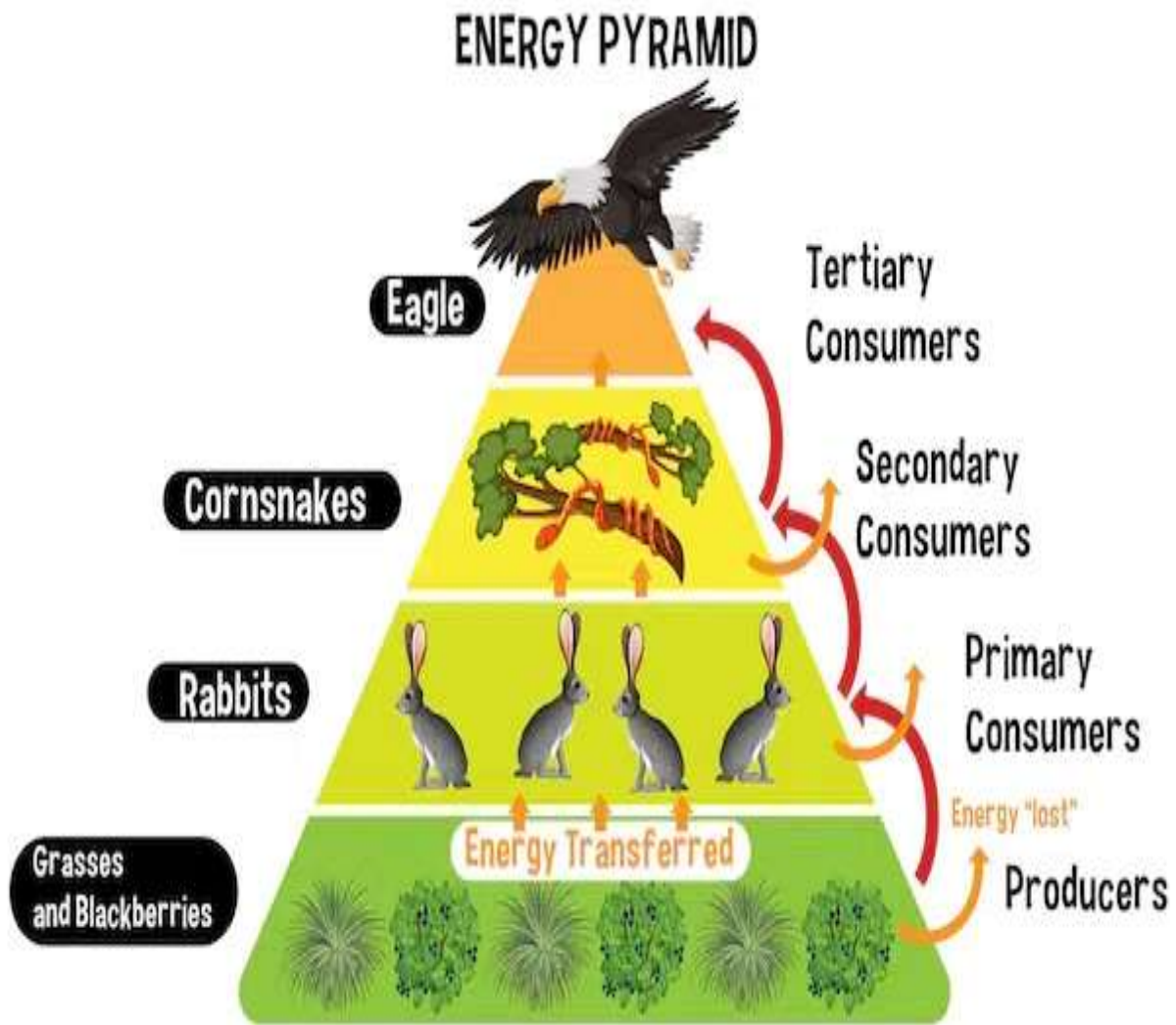
Transformation of Energy in the Food Chain

Initiation
of
Life
from
Autotrophs



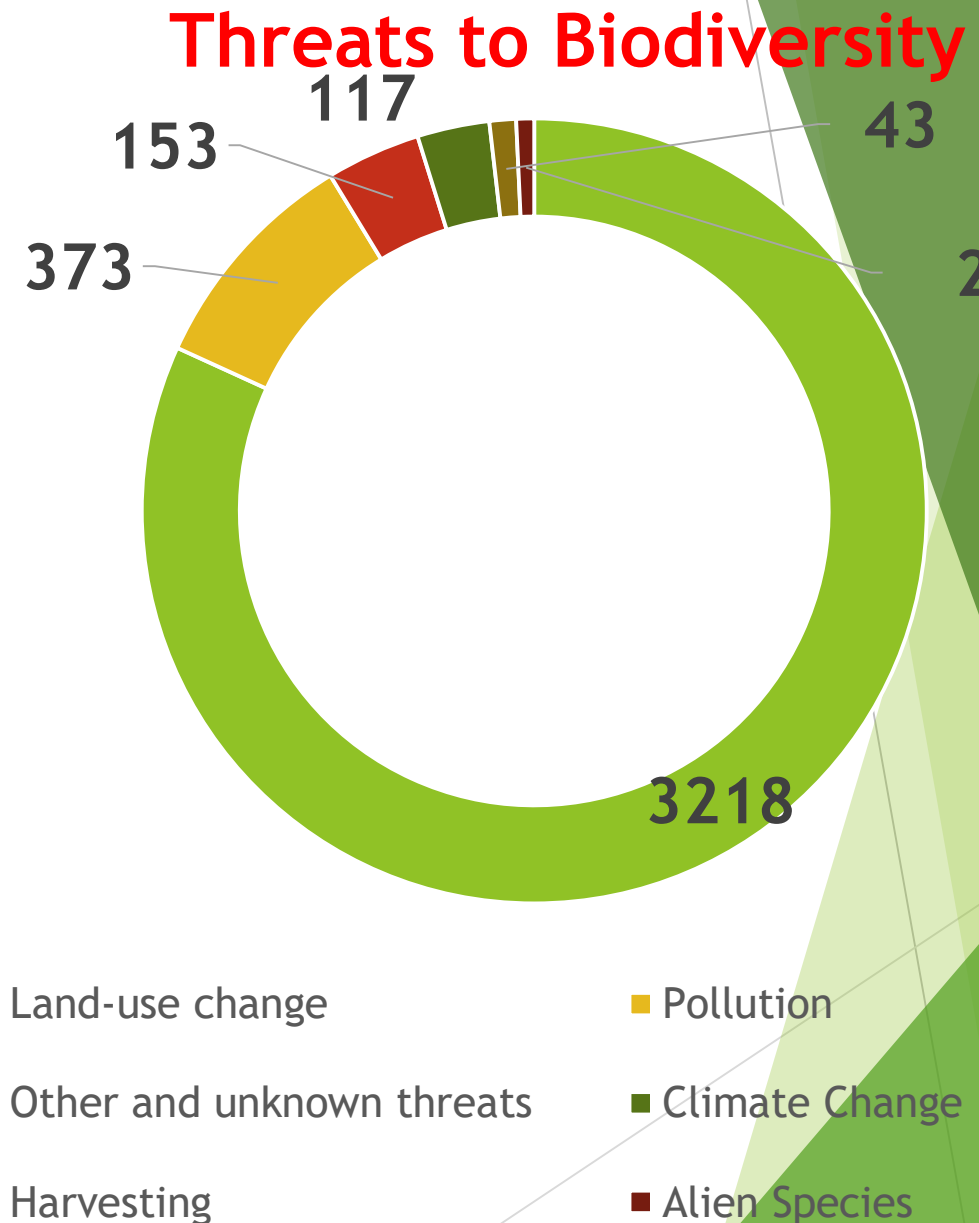
**DIVERSITY OF Order- Hymenoptera (Class- Insecta) Phylum:Arthropoda at JAMSHEDPUR CO OPERATIVE COLLEGE,
JAMSHEDPUR**





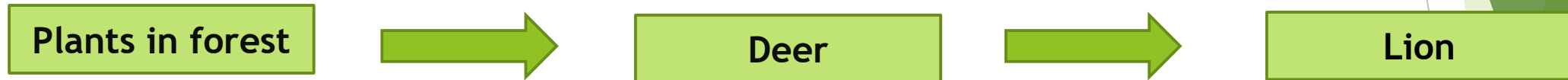
Threats to Biodiversity:

Human activities such as deforestation, pollution, and climate change are causing significant losses in biodiversity. Deforestation leads to habitat loss, which is the primary cause of species extinction. Pollution from industrial and agricultural activities contaminates water and soil, leading to the loss of biodiversity. Climate change is also a significant threat to biodiversity, as it alters temperature and rainfall patterns, affecting the distribution and abundance of species.



Biodiversity and Balance of Nature

- ❑ **Tropic level:** Elimination of species from the tropic level can cause destruction of the ecosystem as well as biodiversity.



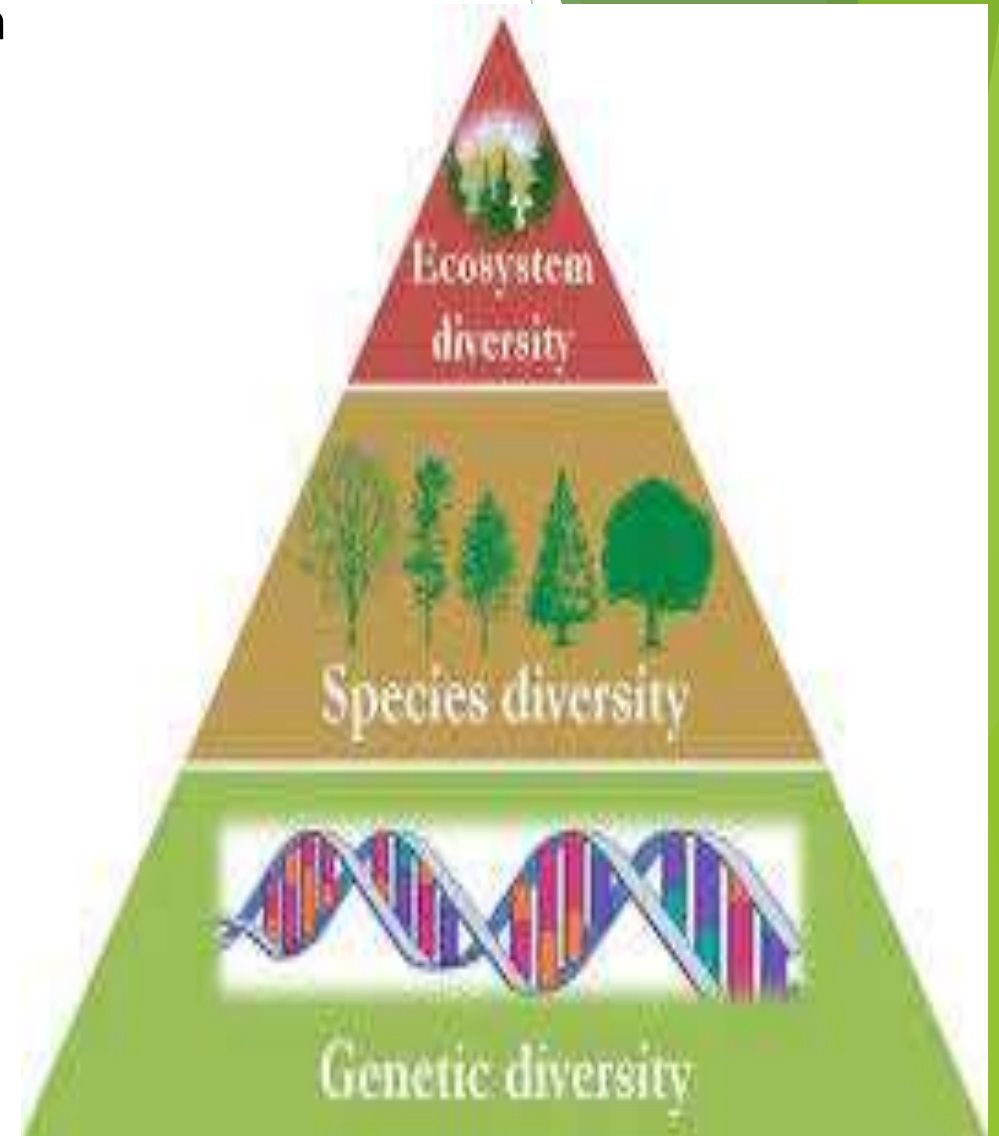
- ❑ **Complex Ecosystem:** In a complicated ecosystem having several trophic levels, the loss of one or more species does not cause any serious problem because the alternatives are available.
- ❑ **Keystone Species:** Loss or addition of species causes detectable changes in ecosystem rates, i.e. species make a unique contribution to ecosystem functioning.
- ❑ **Niche Complementary:** Differences among species in their requirements for different resources will cause complementary interaction so that a species could obtain more resources.

- ❑ **Facilitation and Mutualism:** Plants may also benefit from their neighbours through amelioration of the physical and biotic environment.
- ❑ **Portfolio Effect:** Species richness increases the temporal stability of the entire community while the biomass is stabilized.
- ❑ **Insurance Hypothesis:** Biodiversity buffers ecosystem against environmental changes such as global warming.

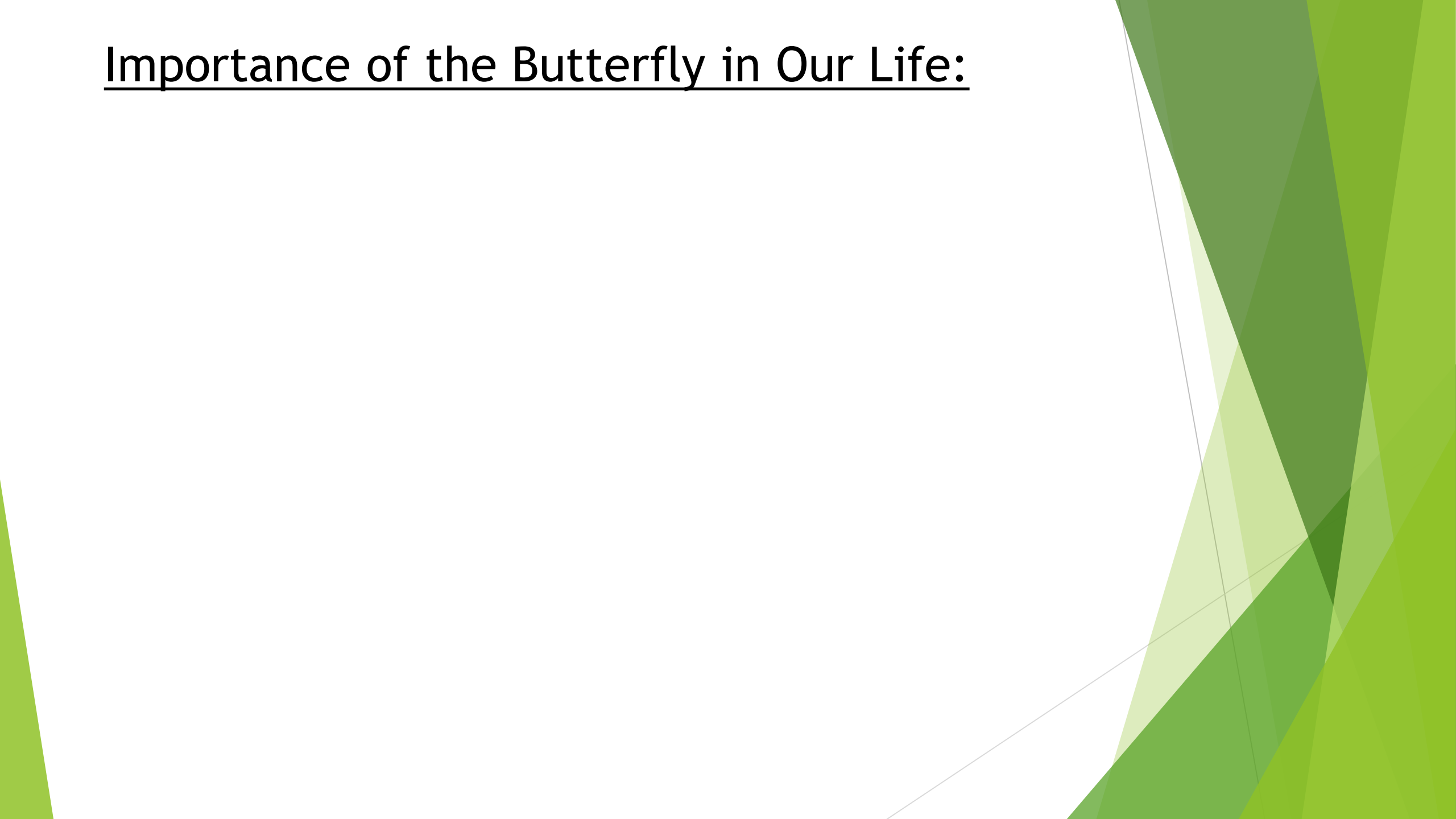


Types of Biodiversity

- ❑ Ecological Diversity: The range of ecosystems found in a biosphere is also referred to as ecological diversity. An ecosystem is made up of a population of living species as well as physical elements like water, soil, and climate. The number of ecosystems found in a given area is the earliest definition of ecosystem biodiversity.
- ❑ Species diversity: Species diversity is defined as the number of different species present in an ecosystem and relative abundance of each of those species.” Diversity is greatest when all the species present are equally abundant in the area.
- ❑ Genetic Diversity: Genetic Diversity refers to the range of different inherited traits within a species. In a species with high genetic diversity, there would be many individuals with a wide variety of different traits.



Importance of the Butterfly in Our Life:



Some Images of Insects-diversity







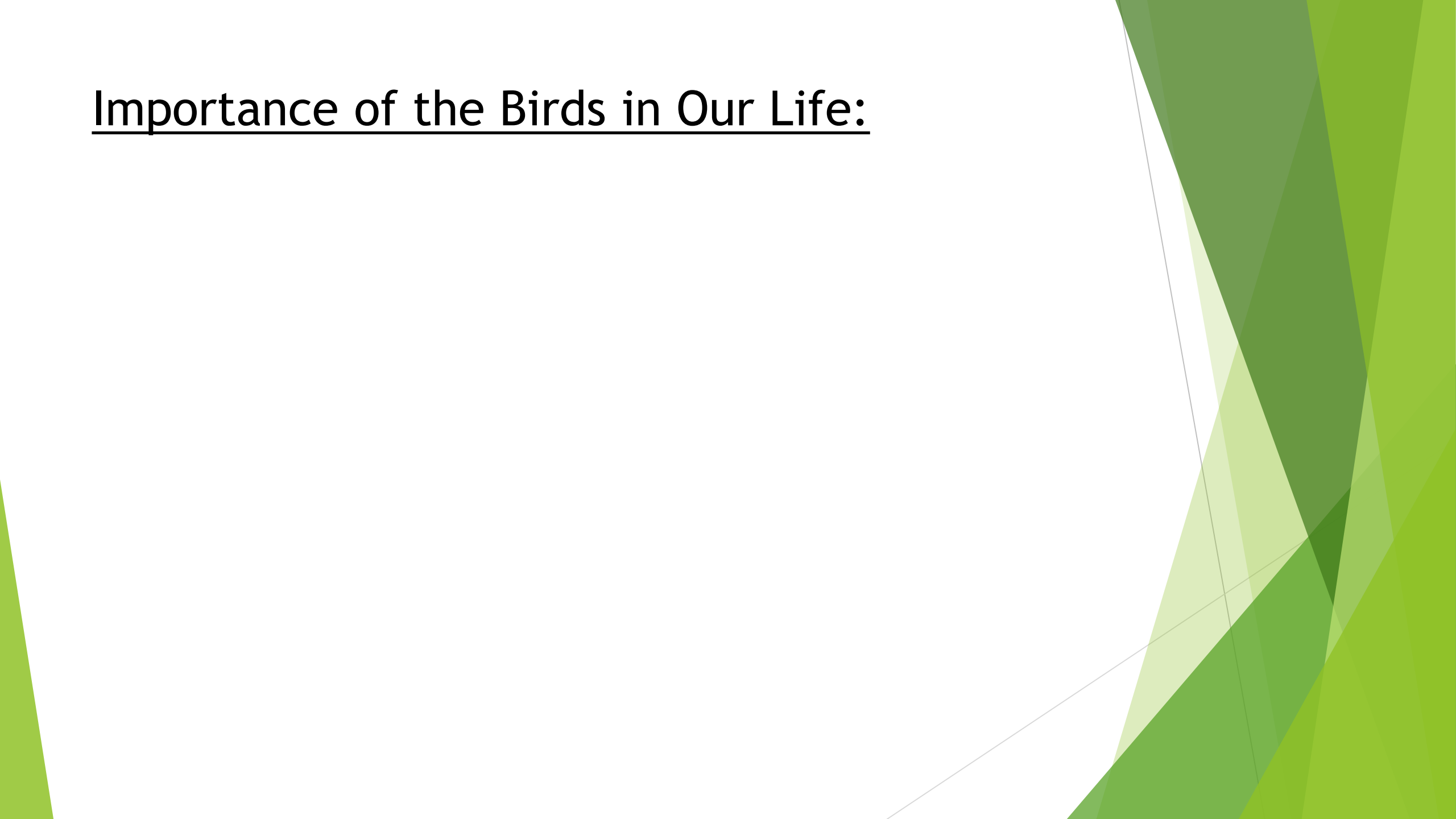








Importance of the Birds in Our Life:



Details of Avian Diversity in & around Sona Devi University, Ghatshila, East Singhbhum, Jharkhand

Sr. No.	Name of Species	Scientific Name	Conser-vational Status as per IUCN	Residential Status
1	Black-winged Kite	<i>Elanus hypoleucus</i>	LC	Resident
2	Shikra	<i>Accipiter badius</i>	LC	Resident
3	Lesser Whistling teal	<i>Dendrocygna javanica</i>	LC	Resident
4	Common Hoopoe	<i>Upupa epops</i>	LC	Resident
5	Indian Nightjar	<i>Caprimulgus asiaticus</i>	LC	Resident
6	Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>	LC	Resident
7	Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>	LC	Resident
8	Asian-Openbill Stork	<i>Anastomus oscitans</i>	LC	Resident
9	Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	LC	Resident
10	Spotted Dove	<i>Spilopelia chinensis</i>	LC	Resident
11	Yellow-footed Green- Pigeon,	<i>Treron phoenicopterus</i>	LC	Resident
12	Laughing Dove	<i>Streptopelia senegalensis</i>	LC	Resident
13	Common Kingfisher	<i>Alcedo atthis</i>	LC	Resident
14	White Breasted Kingfisher	<i>Halcyon smyrnensis</i>	LC	Resident
15	Indian Roller	<i>Coracias benghalensis</i>	LC	Resident
16	Green Bee-eater	<i>Merops orientalis</i>	LC	Resident
17	Common Cuckoo	<i>Cuculus canorus</i>	LC	Migratory (S)
18	Koel Asian	<i>Eudynamys scolopaceus</i>	LC	Resident
19	Grey Francolin	<i>Francolinus pondicerianus</i>	LC	Resident
20	Common Moorhen,	<i>Gallinula chloropus</i>	LC	Resident
21	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	LC	Resident
22	Ashy-crowned Sparrow lark	<i>Eremopterix griseus</i>	LC	Resident
23	Crested Lark	<i>Galerida cristata</i>	LC	Resident

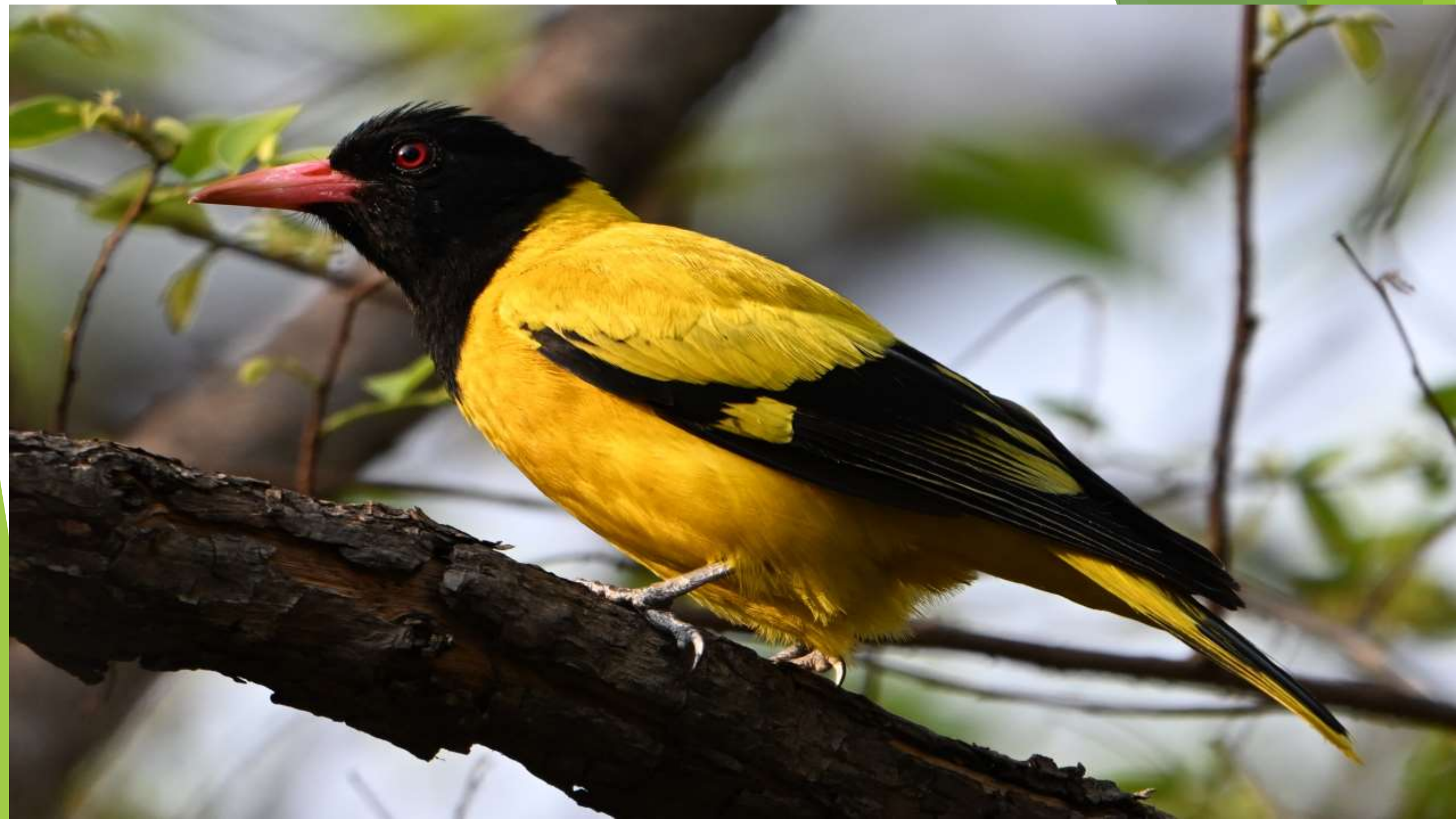
Details of Avian Diversity in & around Sona Devi University, Ghatshila, East Singhbhum, Jharkhand

Sr. No.	Name of Species	Scientific Name	Conser-vational Status as per IUCN	Residential Status
24	Ashy Woodswallow	<i>Artamus fuscus</i>	LC	Resident
25	Ashy Prinia	<i>Prinia socialis</i>	LC	Resident
26	Common Tailorbird	<i>Orthotomus sutorius</i>	LC	Resident
27	Zitting Cisticola	<i>Cisticola juncidis</i>	LC	Resident
28	Rufous treepie	<i>Dendrocitta vagabunda</i>	LC	Resident
29	House Crow	<i>Corvus splendens</i>	LC	Resident
30	Black Drongo	<i>Dicrurus macrocercus</i>	LC	Resident
31	Tricoloured Munia	<i>Lonchura malacca</i>	LC	Resident
32	Scaly-breasted Munia	<i>Lonchura punctulata</i>	LC	Resident
33	Indian Silverbill	<i>Euodice malabarica</i>	LC	Resident
34	Indian Robin	<i>Saxicoloides intermedius</i>	LC	Resident
35	Oriental Magpie-Robin	<i>Copsychus saularis</i>	LC	Resident
36	Purple Sunbird	<i>Cinnyris asiaticus</i>	LC	Resident
37	Black-hooded Oriole	<i>Oriolus xanthornus</i>	LC	Resident
38	Yellow-eyed Babbler	<i>Chrysomma sinense</i>	LC	Resident
39	Sparrow House	<i>Passer domesticus</i>	LC	Resident
40	Red-vented Bulbul	<i>Pycnonotus cafer</i>	LC	Resident
41	Red Whiskered Bulbul	<i>Pycnonotus jocosus</i>	LC	Resident
42	Brahminy Starling (Brahminy Myna)	<i>Sturnia pagodarum</i>	LC	Resident
43	Common Myna	<i>Acridotheres tristis</i>	LC	Resident
44	Chestnut Starling	<i>Sturnia malabarica</i>	LC	Resident
45	Cattle Egret	<i>Bubulcus coromandus or ibis</i>	LC	Resident
46	Little Egret	<i>Egretta garzetta</i>	LC	Resident
47	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	LC	Resident

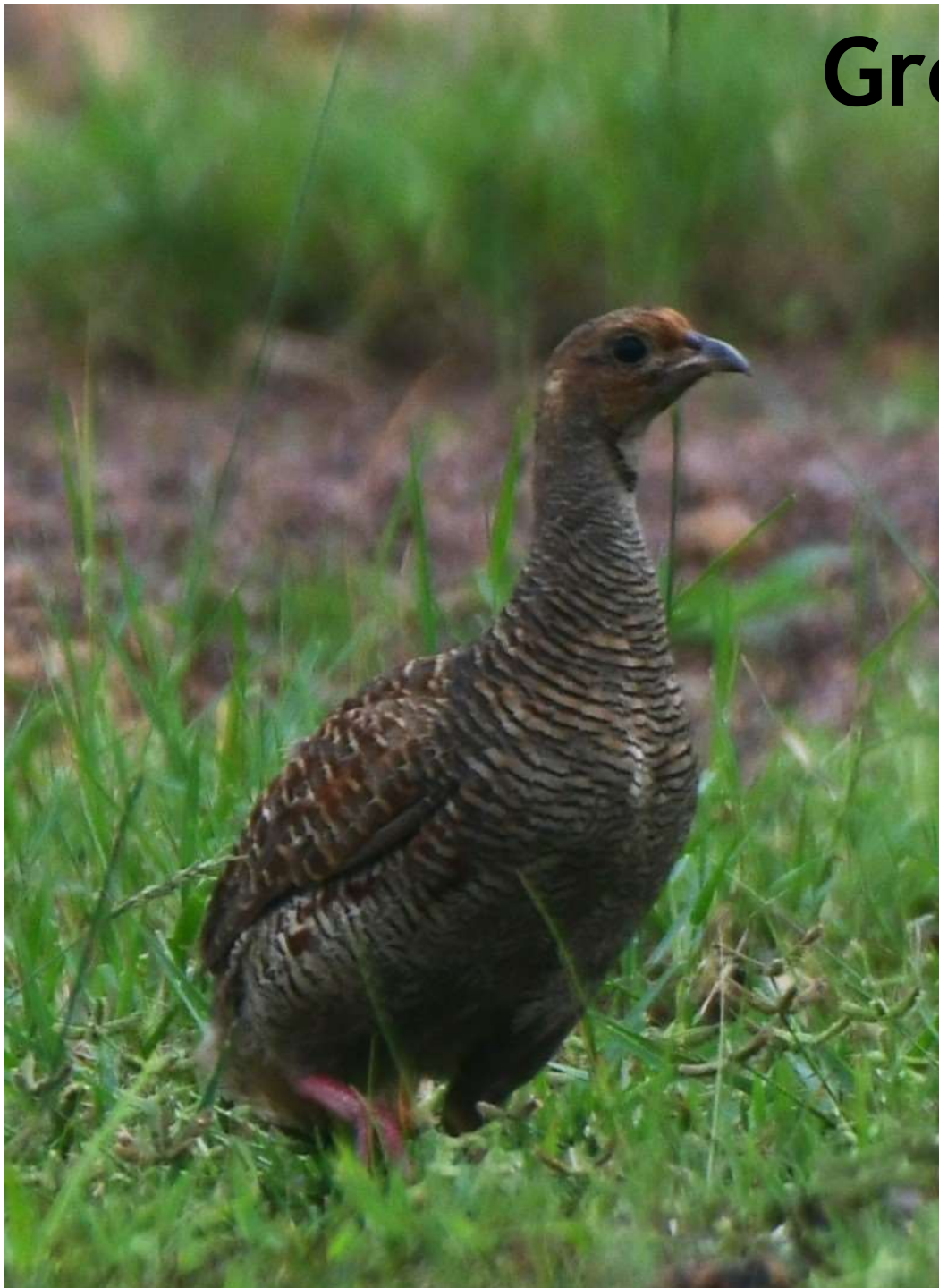
Details of Avian Diversity in & around Sona Devi University, Ghatshila, East Singhbhum, Jharkhand

Sr. No.	Name of Species	Scientific Name	Conser-vational Status as per IUCN	Residential Status
48	Indian Pond Heron	<i>Ardeola grayii</i>	LC	Resident
49	Black headed Ibis	<i>Threskiornis melanocephalus</i>	LC	Resident
50	Red-naped Ibis	<i>Pseudibis papillosa</i>	LC	Resident
51	Coppersmith Barbet	<i>Megalaima haemacephala</i>	LC	Resident
52	Little Grebe	<i>Podiceps cristatus</i>	LC	Resident
53	Alexandrine Parakeet	<i>Psittacula eupatria</i>	NT	Resident
54	Spotted Owlet	<i>Athene brama</i>	LC	Resident
55	Barn Owl	<i>Tyto alba</i>	LC	Resident
56	Little Cormorant	<i>Microcarbo niger</i>	LC	Resident





Grey Francolin





Ashy Wood Swallow



Common Hawk-Cuckoo (*Hierococcyx varius*)















Ashy wood Swallow



House Sparrow (Passer domesticus)



Chestnut-tailed Starling (*Sturnia malabarica*)





Black Drongo



Scally breasted Munia



Indian Robin





Black Drongo





House Sparrow (Passer domesticus)







