

Northern Tapi Flora and Fauna Survey

8-10 March 2024

Organised by
Gujarat Forest Department
In Coordination with
Nature Club Surat
And
Bird Conservation Society, Gujarat

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Vyara and Surat Forests Division, Gujarat
8-9-10 March 2024

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Report compiled by: Anuj Raina (BCSG) and Tejal Surti (NCS)

OVERVIEW

Program - Northern Tapi flora and fauna survey was organized on 8-10 March under the supervision of Vyara and Surat Forests Division. The forest area for survey is about 65000 hectares. The Northern Tapi or Ukai region is rich biodiversity region encompassing different habitat types. The three-day citizen science survey was conducted to study and report the underlying biodiversity. For conducting citizen science surveys, we had invited experts from different fields of Zoology including college students, Field naturalist, Faculties and forest staff. From more than 300 entries, 45 volunteers were selected for the survey.

Day1: 8th March 2024, all volunteers and staff were informed to report at Kevdi Forest Guest House by 11:00am. Event started with volunteer registration, signing of Indemnity bond and introduction. The program witnessed healthy participation from forest officials, volunteers from BCSG and Nature Club Surat. The session started with the inauguration followed by program overview session by Ms. Ruchi Dave, RFO Padamdungri. A brief motivational speech was given by PCCF Shri Shrivastav Sir, CCF Shri Shashi Kumar, and Shri Retd CCF Shri Uday Vora Sir.

Organization introduction for BCSG and Nature Club Surat was presented by Shri Bakul Trivedi and Shri Snehal Patel respectively. Both emphasized on the role of wildlife volunteering, citizen science and support to Forest department for better conservation.

Mr. Anuj Raina (BCSG) gave presentation on various field Apps for survey including eBird, Merlin, iNaturalist and GPS compass app. Participants were pre-informed to download and create accounts in apps for data collection. Presentation also included General instructions, and Rules & Regulations for participants to follow.

A total of 12 teams were finalized for survey which included field experts in Ornithologist, Botanist, Entomology and Herpetology. Within each team a forest official was assigned for ground management, route selection, and Safety. Food and stay for participants was arranged at their respective posts. Each team was allocated with points and route to conduct survey. The birders were asked to note checklist on eBird and share their checklist with "bcsgbirdcount" and also submit their eBird trip report after completion of survey. While all other submissions including insects, spider, reptile, amphibian and floral diversity were noted on paper and submitted on iNaturalist app.

eBird id: "bcsgbirdcount"

iNaturalist project: Northern-tapi-flora-fauna

LIST OF THE SURVEY ROUTES AND VOLUNTEERS

Range	Point	Responsible Officer	Team Member-1	Team Member-2	Team Member-3
Mandvi South	Guliumar Checkpost	Forester-Dharmeshbhai Singhav	Tejal Surati	Venus Joshi	Reshma
Mandvi South	Harshad Checkpost	Forester-Jignesh Chaudhry	Neha	Utpal	Satyam
Tapti	Toranpani	Forester-Sunilbhai Chaudhry	Anuj Raina	Dhairya Shah	Dharmesh R. Padhiyar
Tapti	Machhudra	Forester-Nagoribhai	Mahesh Bhilaskar	Jigar Kavta	Solanki Vishal Sadulbhai
Vajpur	Gaulang	Forester-Jitubhai	Nirupaben Vaghjibhai Dudhat	Priyanshi Patel	Subhash Parmar
Umarpada	Valdan Choki	Forester-Muljibhai	Hiren Patel	Dharmesh Kanthariya	Nitesh Beej
Umarpada	Himada Mahuda Choki	Forester-Jitendra	Abhijitsinh Nildipsinh Sarvaiya	Ashwin Mohan	
Mandvi North	Dhaj	Forester-Mehulbhai	Dr. Rajesh C. Senma	Divygar Chandangar Gusai	Minaxi Buchiya
Mandvi North	Sarsi	Forester-Mehulbhai	Dipesh Hemantbhai Mistry	Rohidas Dagale	
Kherwada	Ninadwada Nursery	Forester-Mitulbhai Chaudhry	Disha Bhattacharya	Nainesh Kapadia	Mayuri Patel

Kherwada	Hanuman Datra	Forester- Navinbhai Vasava	Uday Vora	Akshay Joshi	Jagdish Parmar
Vadpada	Devghat	Forester- Rameshbhai	Kartik Upadhyay	Bhavik Rathwa	

GENERAL INSTRUCTIONS FOR PARTICIPANTS

Please remember that this is an important flora and fauna survey, and certain protocols need to be followed. This will not be like any excursion/hiking/adventure/photography tour that you may have undertaken previously. Therefore, please read this document in detail, and we expect you to FOLLOW ALL INSTRUCTIONS given below. Please also remember that Strict discipline has to be followed, and non-adherence to instructions will result in your immediate dismissal from the field site.

- A team of 2-5 people will conduct each survey (Including forest guard/official).
- The collection of any wildlife article or specimen is considered a crime. If any participant is found not adhering to the Wildlife Act, they will be responsible for violations of wildlife crime and liable for legal action by the state forest department.
- While all training regarding field skills will be provided, please be aware that strict discipline needs to be maintained and that you need to respect wildlife and wild habitats. You are volunteering at your own risk, and you will be required to sign an 'Indemnity Form' before entering the forest.
- Wear appropriate field clothing preferably dull coloured clothes in grey, browns, green and black.
- This is not a wildlife photography tour; however, it is advisable to provide photographic evidence to support sightings of rare birds and to document species that could not be identified in the field. Camera gear will be allowed to document field events, interesting sightings, etc., and all photographs will have to be shared with your team at the end of every day's field work.
- Do not carry heavy suitcases. Consider carrying a large rucksack instead. A smaller backpack for daytime will be useful during fieldwork (to carry lunch box, water bottle, and field equipment).
- Laptops: Bring them at your own risk. Some of the places may be safe and others may not. We do not assume any responsibility if your equipment is damaged or stolen during the course of your stay.
- Mobile connectivity may not be good in most places. BSNL/ Jio will work in most places.

- Strict camp discipline will be maintained. You will not be allowed to consume alcohol and/or smoke in the camps. You need to adhere to time schedules.
- All your food, local travel, and living expenses will be covered, but your travel to and from the reporting site (Mandvi Forest guest house) will be borne by you. Simple vegetarian food will be provided.
- Certain locations are remote and may have very rudimentary facilities (toilets, bedding, etc.).
- Nearest railways station is Surat/Vyara. Participants are request to reach Mandvi Forest guest house by 11am on 8th March 2024. The program will end by 3pm on 10th March 2024.
- If, by any means, you are not able to attend the survey, we recommend withdrawing your participation right away. Please inform the Volunteer of your regret.
- We expect participants to be humble and treat the supervisor, volunteers, and other team members with respect. Disrespect or any nuisance behaviour will lead to termination from the survey.

Essentials to carry

- Please carry Photo ID card.
- Binocular/Field guide is important for Field Identification.
- Tiffin box/Water bottle.
- Participants have to bring their own sleeping bags. Participant can also bring their tent (not mandatory).
- Torch light/head lamps.
- Camera will be useful for record collection.
- As mobile will be used as a tool to report data, Power bank will be useful for power backup. OTG or Mobile cable will be useful for data transfer.
- Sturdy trekking shoes and extra pair of sleeper/sandal.
- Appropriate field clothing preferably dull coloured clothes in grey, browns and green. Full sleeve shirt/t-shirt prevents bites from insects and protection from sun.
- Cap/Hat to prevent sunrays.
- Anti-histamine tablets, Sunscreen lotion, mosquito repellent and personal medication and toiletries.
- A small field bag for you to carry the above mentioned field gear.

Nature Club Surat (NCS - Non Government Organization (NGO))is a group of people dedicated to conserving, protecting and preserving nature in its pristine form in today's times.

The club was founded by three nature enthusiasts in 1984, out of which Mr.Snehal Patel is still actively involved in the conduct of the club. There are about 1000+ members, out of which 400 are students from various schools and colleges. Today, Nature Club is a registered trust and society

The club conducts many educational sessions, eco-friendly campaigns. The club has also initiated countless projects and missions in the light of helping nature. Chief projects include The Deer Breeding Project, Vulture Conservation Project, Wetland Conservation Project and much more.

Many volunteers are experts in Animal rescue and their treatments. Surat city relies heavily on nature club for rescuing and treating snakes, birds and many other animals.

Adventuring and having good times is at heart of the nature Club Philosophy and therefore the club is engaged in many thrilling activities. Duly, Nature club organizes camps which take you to beautiful locations and give you a feel of "Incredible India." Club also owns many pieces of equipment and sites, for you to have fun in the city like the Mobile rock climbing wall.

Bird Conservation Society, Gujarat (BCSG) was founded in 2000 with the objective of conservation of birds of the state through field research, documentation, training, awareness activities, networking with like-minded NGOs; and lobbying for protection of birds and their habitats. It is the only statewide network of bird-watchers, ornithologists and conservationists of Gujarat striving to achieve the above goal. The society is an NGO registered as Trust with the charity commissioner.

BCSG is actively engaged in promoting conservation of birds and preservation of its habitats. The society has actively supported various Institutes and State forest department during bird conservation programs.

TOOLS (MOBILE APP) USED FOR DATA COLLECTION AND VERIFICATION

eBird is among the world's largest biodiversity-related science projects, a collaborative enterprise with hundreds of partner organizations, thousands of regional experts, and hundreds of thousands of users, eBird is managed by the Cornell Lab of Ornithology.

eBird data document bird distribution, abundance, habitat use, and trends through checklist data collected within a simple, scientific framework. Birders enter when, where, and how they went birding, and then fill out a checklist of all the birds seen and heard during the outing. eBird's free mobile app allows offline data collection anywhere in the world, and the website provides many ways to explore and summarize your data and other observations from the global eBird community. eBird is available worldwide, comprising a network of local, national, and international partners. eBird directly collaborates with hundreds of partner groups for regional data entry portals, outreach, engagement, and local impact. Data quality is of critical importance. When entering sightings, observers are presented with a list of likely birds for that date and region. These checklist filters are developed by some of the most knowledgeable bird distribution experts in the world.

iNaturalist is an American non-profit social network of naturalists, citizen scientists, and biologists built on the concept of mapping and sharing observations of biodiversity across the globe. iNaturalist may be accessed via its website or from its mobile applications. iNaturalist includes an automated species identification tool, and users further assist each other in identifying organisms from photographs. iNaturalist is a platform for science and conservation efforts, providing valuable open data to research projects, land managers, other organizations, and the public.

Merlin app is useful for Sound ID of birds on field. Currently the app supports sound id for 1,054 species of birds. Merlin Packs provide a way to download species accounts with reference text, photos, and audio for the suite of species in a region.

GPS Compass or Offline Google Map

Any GPS based App for accessing and storing GPS coordinates. The coordinates help navigation, saving important data points and locations. Google offline maps also help routing in area without mobile network access.

NORTHERN TAPI OR UKAI REGION

The Northern Tapi (or Ukai) region is located in south Gujarat, India, primarily around the Ukai Dam and Tapi River basin in the Tapi and Surat districts. It's an ecologically rich area with hydrological importance, tribal settlements, and significant biodiversity.

- **Ukai Dam:**
 - Built in 1972, it's the second-largest reservoir in Gujarat, after the Sardar Sarovar Dam in Gujarat. Also known as Vallabh Sagar.
 - Built across the Tapti (Tapi) River, Tapi district of Gujarat.
 - Serves multiple purposes: irrigation, power generation, and flood control.
 - Plays a vital role in the water management of the region.
 - The Ukai Hydro Power Station contributes significantly to Gujarat's electricity supply.
 - The dam's reservoir impacts the local ecosystem and agriculture.
- **Regional Context:**
 - The forest is Moist Deciduous forest.
 - The Tapti River basin is an important geographical feature of this part of Gujarat.
 - The Terrain is mix of riverine plains, low hills, and forest zones.
 - The region's economy is influenced by the dam's role in irrigation and power generation.

In essence, the Ukai region is defined by the presence and function of the Ukai Dam, which has a substantial impact on the environment and the lives of people in the area. The area has rich pristine forest range sustaining rich biodiversity. Due to its varied habitat, the region is home to various resident and migratory birds.

AVIAN DIVERSITY & CHECKLIST

Avian diversity is of paramount importance due to the multifaceted roles birds play in maintaining ecological balance and providing benefits to humans.

Birds act as crucial seed dispersers, pollinators, and insect controllers, directly influencing plant reproduction and ecosystem health. Their sensitivity to environmental changes also makes them valuable indicators of ecosystem health, signalling potential threats like pollution or habitat degradation. Furthermore, birds contribute significantly to human well-being through ecotourism, cultural significance, and the positive impacts of nature exposure on mental health. Therefore, the study of avian diversity is essential for understanding ecological processes, developing effective conservation strategies, and ensuring the continued provision of these vital ecosystem services. Comprehensive studies on bird populations, their habitats, and the threats they face are necessary to mitigate biodiversity loss and promote sustainable coexistence between humans and the avian world.

This table provides a checklist of avian species sighted in the Ukai region, with additional information on their scientific names, the count of each species observed, and the number of checklists in which they were recorded. The checklist includes a wide variety of bird species, covering waterfowl, raptors, pigeons, doves, owls, woodpeckers, and passerines. Here's a summary of the data:

- **176 bird species** were identified over two-day period.
- The **total count** column reveals the total number of individual birds from each species that were observed.
- The **no. of checklists** column indicates the frequency with which each species was recorded.

Species	Scientific Name	Gujarati Name	Status	Total count	No of Checklist
Lesser Whistling-Duck	<i>Dendrocygna javanica</i>	નાની સિસોટી બતક	R	8	1
Knob-billed Duck (Comb Duck)	<i>Sarkidiornis melanotos</i>	નકટો	R	31	4
Ruddy Shelduck (Brahminy Duck)	<i>Tadorna ferruginea</i>	ભગવી સુરખાબ	W	2	1
Garganey	<i>Spatula querquedula</i>	ચેતવા	W	8	1

Indian Spot-billed Duck	Anas poecilorhyncha	ટીલિયાળી બતક	R	40	3
Northern Pintail	Anas acuta	સિંગપર	W	5	1
Green-winged Teal (Common Teal)	Anas crecca	નાની મુરઘાબી	W	2	1
Indian Peafowl	Pavo cristatus	મોર / ઢેલ	R	30	7
Red Spurfowl	Galloperdix spadicea	ચોખારા	R	6	4
Grey Junglefowl	Gallus sonneratii	રાખોડી કૂકડો / રાખોડી વનકૂકડો	R	4	3
Grey Francolin	Ortygornis pondicerianus	તેતર	R	3	4
Painted Francolin	Francolinus pictus	તલિયો તેતર	R	1	1
Little Grebe	Tachybaptus ruficollis	નાની ડૂબકી	R	11	2
Rock Pigeon (Blue Rock Pigeon)	Columba livia	કબૂતર	R	41	6
Oriental Turtle-Dove	Streptopelia orientalis	શિયાળુ હોલો	W	1	1
Eurasian Collared-Dove	Streptopelia decaocto	હોલો	R	16	5
Spotted Dove	Spilopelia chinensis	તલિયો હોલો	R	92	48
Laughing Dove (Little Brown Dove)	Spilopelia senegalensis	હોલી	R	15	5
Asian Emerald Dove	Chalcophaps indica	નીલમ હોલી	R	3	3
Yellow-footed Green-Pigeon	Treron phoenicopterus	હરિયલ	R	46	15
Greater Coucal	Centropus sinensis	ધૂંકિયો/હુકો/ધોયરો	R	73	51
Asian Koel	Eudynamys scolopaceus	કોયલ	R	1	1
Fork-tailed Drongo-Cuckoo	Surniculus dicruroides	કોશી કોયલ	MB, R	2	1
Common Hawk-Cuckoo	Hierococcyx varius	બપૈયો	R	1	1
Jungle Nightjar (Indian Jungle Nightjar)	Caprimulgus indicus	વન દશરથિયું	R	25	9
Indian Nightjar	Caprimulgus asiaticus	નાનું દશરથિયું	R	1	1
Savanna Nightjar	Caprimulgus affinis	યાબુક દશરથિયું	R	13	6

Little Swift (Indian House Swift)	Apus affinis	અબાબીલ	R	16	3
Asian Palm Swift	Cypsiurus balasiensis	તાડી અબાબીલ	R	8	5
Crested Treeswift	Hemiprocne coronata	વન અબાબીલ	R	20	9
Grey-headed Swamphen (Purple Swamphen)	Porphyrio poliocephalus	નીલ જળમુરઘો	R	1	1
White-breasted Waterhen	Amaurornis phoenicurus	સફેદછાતી સંતાકૂકડી	R	2	1
Black-winged Stilt	Himantopus himantopus	ગજપાઉં	R	44	4
Little Ringed Plover	Charadrius dubius	કાંઠલાવાળી ઢોંગીલી	R	2	2
Red-wattled Lapwing	Vanellus indicus	ટિટોડી	R	26	7
Common Sandpiper	Actitis hypoleucos	તુતવારી	W	10	7
Green Sandpiper	Tringa ochropus	શ્વેતપૂંછ તુતવારી	W	4	4
Marsh Sandpiper	Tringa stagnatilis	નાનો લીલાપગ	W	2	1
Ruff	Calidris pugnax	ટીલિયો	W	50	1
Brown-headed Gull	Chroicocephalus brunnicephalus	લડાખી ધોમડો	W	1	1
Little Tern	Sternula albifrons	નાની વાબગલી	R	1	1
River Tern	Sterna aurantia	કેચીપૂંછ વાબગલી	R	17	2
Asian Openbill	Anastomus oscitans	ફાટીયાંચ ઢોક	R	6	2
Little Cormorant	Microcarbo niger	નાનો કાજિયો	R	74	9
Indian Cormorant (Indian Shag)	Phalacrocorax fuscicollis	વચેટ કાજિયો	R	6	2
Little Egret	Egretta garzetta	નાનો ધોળો બગલો	R	44	13
Indian Pond-Heron	Ardeola grayii	કાણી બગલી	R	43	15
Eastern Cattle Egret	Bubulcus coromandus	ઢોર બગલો	R	34	12
Great Egret	Ardea alba	મોટો ધોળો બગલો	R	2	2
Grey Heron	Ardea cinerea	કબૂત બગલો	R	2	1
Purple Heron	Ardea purpurea	નડી બગલો	R	1	1
Glossy Ibis	Plegadis falcinellus	નાની કાંકણસાર	R, W	9	3

Black-headed Ibis	Threskiornis melanocephalus	ધોળી કાંકણસાર	R	21	2
Red-naped Ibis (Indian Black Ibis)	Pseudibis papillosa	કાળી કાંકણસાર	R	12	8
Eurasian Spoonbill	Platalea leucorodia	ચમચો	R	25	1
Black-winged Kite (Black-shouldered Kite)	Elanus caeruleus	કપાસી	R	3	3
Oriental Honey-buzzard (Crested Honey Buzzard)	Pernis ptilorhynchus	મધિયો બાજ	R	41	18
Crested Serpent-Eagle	Spilornis cheela	ચોટલિયો સાપમાર	R	30	21
Changeable Hawk-Eagle	Nisaetus cirrhatus	મોરબાજ	R	2	2
White-eyed Buzzard	Butastur teesa	સફેદનેણ ટીસો	R	55	26
Shikra	Accipiter badius	શકરો	R	32	26
Black Kite	Milvus migrans	સમડી	R	1	1
Barn Owl	Tyto alba	રેવીદેવી	R	1	1
Indian Scops-Owl (Collared Scops-Owl)	Otus bakkamoena	કંઠીલો ચુગડ	R	3	3
Rock Eagle-Owl (Indian Eagle-Owl)	Bubo bengalensis	મોટો ધુવડ	R	5	4
Brown Fish-Owl	Ketupa zeylonensis	મત્સ્ય ધુવડ	R	3	2
Jungle Owlet	Glaucidium radiatum	વન ચીબરી	R	86	53
Mottled Wood-Owl	Strix ocellata	વન ધુવડ	R	31	15
Brown Hawk-Owl	Ninox scutulata	બાજ ધુવડ	R	7	2
Eurasian Hoopoe	Upupa epops	ઘંટીટાંકણો	R, W	3	3
Indian Grey Hornbill	Ocyrceros birostris	રાખોડી ચિલોત્રો	R	99	44
Common Kingfisher (Small Blue Kingfisher)	Alcedo atthis	નાનો કલકલિયો	R	5	5
White-throated Kingfisher	Halcyon smyrnensis	કલકલિયો	R	37	30
Asian Green Bee-eater	Merops orientalis	નાનો પતરંગો	R	48	22
Indian Roller	Coracias benghalensis	ચાષ	R	32	19

Coppersmith Barbet	Psilopogon haemacephalus	નાનો કંસારો / ટુકટુક	R	80	52
Brown-headed Barbet	Psilopogon zeylanicus	બદામીશિર કંસારો	R	132	68
Brown-capped Pygmy Woodpecker	Yungipicus nanus	ઝીણકો લક્કડખોદ	R	15	9
Yellow-crowned Woodpecker	Leopicus mahrattensis	પીતશિર કાબરો લક્કડખોદ	R	1	1
Greater Flameback	Chrysocolaptes guttacristatus	લાલપીઠ સોનેરી લક્કડખોદ	R	6	2
Malabar Flameback	Chrysocolaptes socialis		R	8	3
White-naped Woodpecker	Chrysocolaptes festivus	કાળીપીઠ લક્કડખોદ	R	16	10
Rufous Woodpecker	Micropternus brachyurus	કીડીઘર લક્કડખોદ / બદામી લક્કડખોદ	R	2	2
Black-rumped Flameback	Dinopium benghalense	સોનેરી લક્કડખોદ	R	34	24
Lesser Yellownape	Picus chlorolophus	લીલો લક્કડખોદ	R	1	1
Alexandrine Parakeet	Psittacula eupatria	મોટો વન પોપટ / એલેક્ઝાન્ડ્રીન પોપટ	R	68	20
Rose-ringed Parakeet	Psittacula krameri	પોપટ	R	104	44
Plum-headed Parakeet	Psittacula cyanocephala	તૂંધ	R	42	22
Small Minivet	Pericrocotus cinnamomeus	નાનો રાજાલાલ	R	23	17
Large Cuckooshrike	Coracina macei	મોટો કશ્યો / મોટો કોયલ - કશ્યો	R	18	11
Black-headed Cuckooshrike	Lalage melanoptera	શ્યામશિર કશ્યો / શ્યામશિર કોયલ - કશ્યો	R	1	1
Indian Golden Oriole	Oriolus kundoo	પીળક	R	9	6
Black-naped Oriole	Oriolus chinensis	કાળીડોક પીળક	V	2	2
Black-hooded Oriole	Oriolus xanthornus	શ્યામશિર પીળક	R	84	51

Common Woodshrike	Tephrodornis pondicerianus	વન - કશ્યો	R	76	42
Bar-winged Flycatcher-shrike	Hemipus picatus	કાબરો કશ્યો / કાબરો માખીમાર - કશ્યો	R	2	1
Common Iora	Aegithina tiphia	શોબિગી	R	72	38
Spot-breasted Fantail	Rhipidura albogularis	ટપકીલી નાયણ	R	14	10
White-browed Fantail	Rhipidura aureola	નાયણ	R	4	2
Black Drongo	Dicrurus macrocercus	કાળિયો કોશી	R	59	23
Ashy Drongo	Dicrurus leucophaeus	રાખોડી કોશી	W	21	9
White-bellied Drongo	Dicrurus caerulescens	સફેદપેટો કોશી	R, W	25	15
Greater Racket-tailed Drongo	Dicrurus paradiseus	ભીમરાજ	R	69	34
Black-naped Monarch	Hypothymis azurea	નીલપંખો	R	87	45
Indian Paradise-Flycatcher	Terpsiphone paradisi	દૂધરાજ	R	70	39
Long-tailed Shrike	Lanius schach	મટિયો વટોરો	R	7	5
Rufous Treepie	Dendrocitta vagabunda	ખેરખટ્ટો	R	31	17
House Crow	Corvus splendens	કાગડો	R	20	7
Large-billed Crow	Corvus macrorhynchos	જંગલી કાગડો	R	126	41
Grey-headed Canary-Flycatcher	Culicicapa ceylonensis	રાખોડીશિર માખીમાર/ તરવરિયો માખીમાર	W	2	2
Cinereous Tit (Great Tit)	Parus cinereus	રાખોડી રામચકલી	R	6	5
Rufous-tailed Lark	Ammomanes phoenicura	ખેતરિયો	R	4	2
Common Tailorbird	Orthotomus sutorius	દરજોડો	R	64	47
Grey-breasted Prinia	Prinia hodgsonii	નાની ફડકકૂત્કી / રાખોડીછાતી ફડકકૂત્કી	R	29	18
Jungle Prinia	Prinia sylvatica	જંગલ ફડકકૂત્કી	R	1	1
Ashy Prinia	Prinia socialis	રાખોડી ફડકકૂત્કી	R	6	5
Plain Prinia	Prinia inornata	ફડકકૂત્કી / સાદી ફડકકૂત્કી	R	1	1
Zitting Cisticola	Cisticola juncidis	પંખાપૂંછ ટીકટીકી	R	1	1

Blyth's Reed Warbler	Acrocephalus dumetorum	नानो पान करकरियो	W	3	3
Clamorous Reed Warbler	Acrocephalus stentoreus	मोटो पान करकरियो	R	2	2
Dusky Crag-Martin	Ptyonoprogne concolor	अभावी	R	2	1
Barn Swallow	Hirundo rustica	शियाणु तारोडियुं	W	10	5
Wire-tailed Swallow	Hirundo smithii	तारपूछ तारोडियुं	R	9	4
Red-rumped Swallow	Cecropis daurica	केंयीपूछ तारोडियुं	R	19	5
Red-whiskered Bulbul	Pycnonotus jocosus	सिपाडी बुवबुव	R	41	14
Red-vented Bulbul	Pycnonotus cafer	बुवबुव	R	96	46
Yellow-browed Warbler	Phylloscopus inornatus	पीतनेष कुत्की	V	2	2
Hume's Warbler	Phylloscopus humei	ह्युस पर्षा - कुत्की	W	10	8
Sulphur-bellied Warbler	Phylloscopus griseolus	पीणी वडापी कुत्की	W	10	8
Green Warbler	Phylloscopus nitidus	वीवी कुत्की	W	7	5
Greenish Warbler	Phylloscopus trochiloides	आंपी वीवी पर्षा - कुत्की	W	18	14
Western Crowned Warbler	Phylloscopus occipitalis	उत्तराभंडी कुत्की	W, PM	3	2
Yellow-eyed Babbler	Chrysomma sinense	पीणीआंभ वेवुं	R	12	2
Indian White-eye (Oriental White-eye)	Zosterops palpebrosus	श्वेतनयना	R	85	27
Tawny-bellied Babbler	Dumetia hyperythra	कुत्की ववेडी	R	7	3
Puff-throated Babbler	Pellorneum ruficeps	टपकीवी ववेडी	R	3	2
Brown-cheeked Fulvetta	Alcippe poioicephala	सीटीमार ववेडी	R	4	2
Jungle Babbler	Argya striata	वन वेवुं	R	29	6
Common Babbler	Argya caudata	थोरियुं वेवुं	R	1	1
Brahminy Starling	Sturnia pagodarum	ब्राह्मणी काबर	R	2	1
Common Myna	Acridotheres tristis	काबर	R	4	2
Orange-headed Thrush	Geokichla citrina	नारंगी कस्तूरी	R	2	2

Tickell's Thrush	Turdus unicolor	ટીકેલ્સ કસ્તૂરો	W	1	1
Asian Brown Flycatcher	Muscicapa dauurica	બદામી માખીમાર	R, W	2	2
Indian Robin	Copsychus fulicatus	દેવચકલી	R	12	9
Oriental Magpie-Robin	Copsychus saularis	દેચડ	R	12	9
Verditer Flycatcher	Eumyias thalassinus	હરિતનીલ માખીમાર	W	10	7
Tickell's Blue Flycatcher	Cyornis tickelliae	અધરંગ	R	55	34
Malabar Whistling-Thrush	Myophonus horsfieldii	ઈંદ્રરાજ	R	2	2
Ultramarine Flycatcher	Ficedula superciliaris	નીલવર્ણી માખીમાર	W	2	1
Taiga Flycatcher (Red-throated Flycatcher)	Ficedula albicilla	લાલકંઠ માખીમાર	W	10	6
Red-breasted Flycatcher	Ficedula parva	લાલછાતી માખીમાર / ચટકી માખીમાર	W	74	43
Black Redstart	Phoenicurus ochruros	કાળો થરથરો	W	4	2
Pied Bushchat	Saxicola caprata	કાબરો પિદ્ધો	R	1	1
Thick-billed Flowerpecker	Dicaeum agile	જાડીયાંચ ફૂલસૂંઘણી	R	22	10
Pale-billed Flowerpecker	Dicaeum erythrorhynchos	પીળીયાંચ ફૂલસૂંઘણી	R	93	39
Purple-rumped Sunbird	Leptocoma zeylonica	પચરંગી શક્કરખોરો	R	29	11
Purple Sunbird	Cinnyris asiaticus	શક્કરખોરો	R	130	59
Loten's Sunbird (Long-billed Sunbird)	Cinnyris lotenius	લોટન્સ શક્કરખોરો	R	2	2
Vigors's Sunbird	Aethopyga vigorsii	ફૂલરાજ	R	81	29
Jerdon's Leafbird (Jerdon's Chloropsis)	Chloropsis jerdoni	હરિતભાવ હરેવો	R	24	13
Golden-fronted Leafbird (Golden-fronted Chloropsis)	Chloropsis aurifrons	સોનેરીભાવ હરેવો	R	16	8
Indian Silverbill (White-throated Munia)	Euodice malabarica	ટપૂસિયું	R	1	1
Scaly-breasted Munia (Spotted Munia)	Lonchura punctulata	તલિયું ટપૂસિયું	R	2	2
House Sparrow	Passer domesticus	ચકલી	R	31	8

- The Asian Openbill, Black-headed Ibis, and Eurasian Spoonbill are key wetland indicators.

Raptors and Predatory Birds

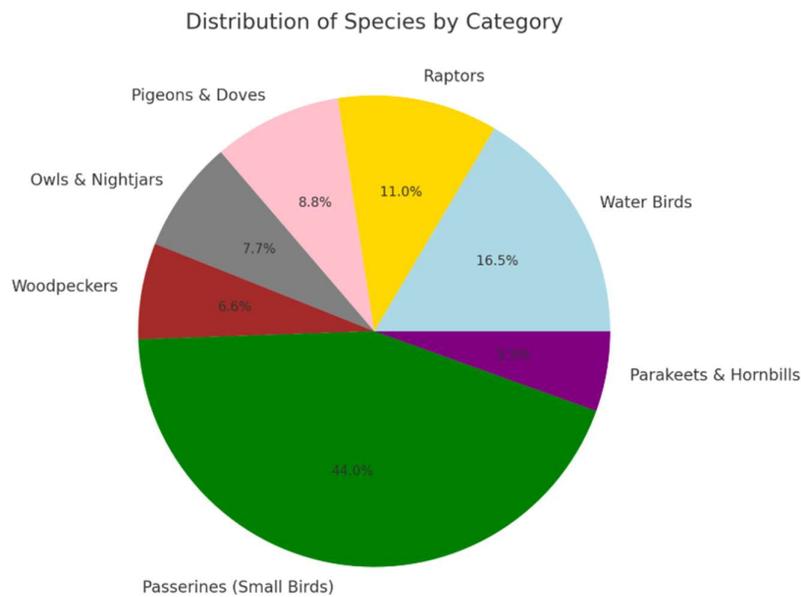
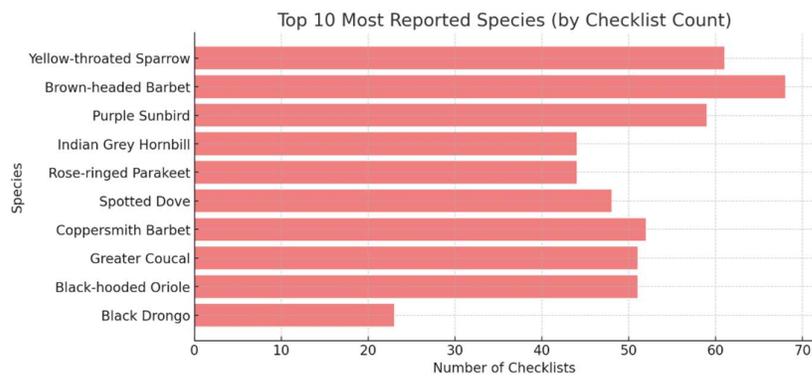
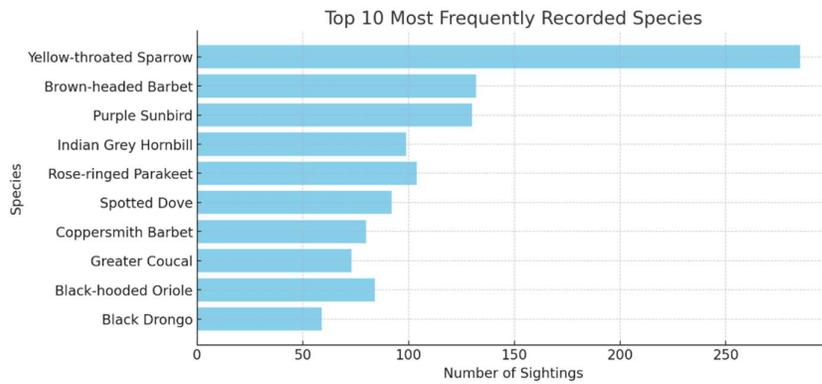
- The region supports a good number of raptors, including:
 - Crested Serpent-Eagle (30 sightings, 21 checklists)
 - Shikra (32 sightings, 26 checklists)
 - White-eyed Buzzard (55 sightings, 26 checklists)
- This suggests a healthy prey base and diverse habitats.

Woodpeckers and Tree-dwelling Birds

- Multiple woodpecker species like Black-rumped Flameback, Greater Flameback, and White-naped Woodpecker indicate dense wooded areas.

Passerines and Small Birds

- The checklist contains numerous small songbirds, including:
 - Red-vented Bulbul (96 sightings, 46 checklists)
 - Common Iora (72 sightings, 38 checklists)
 - Indian White-eye (85 sightings, 27 checklists)
- This suggests that shrubland, gardens, and forest edges provide suitable habitats.



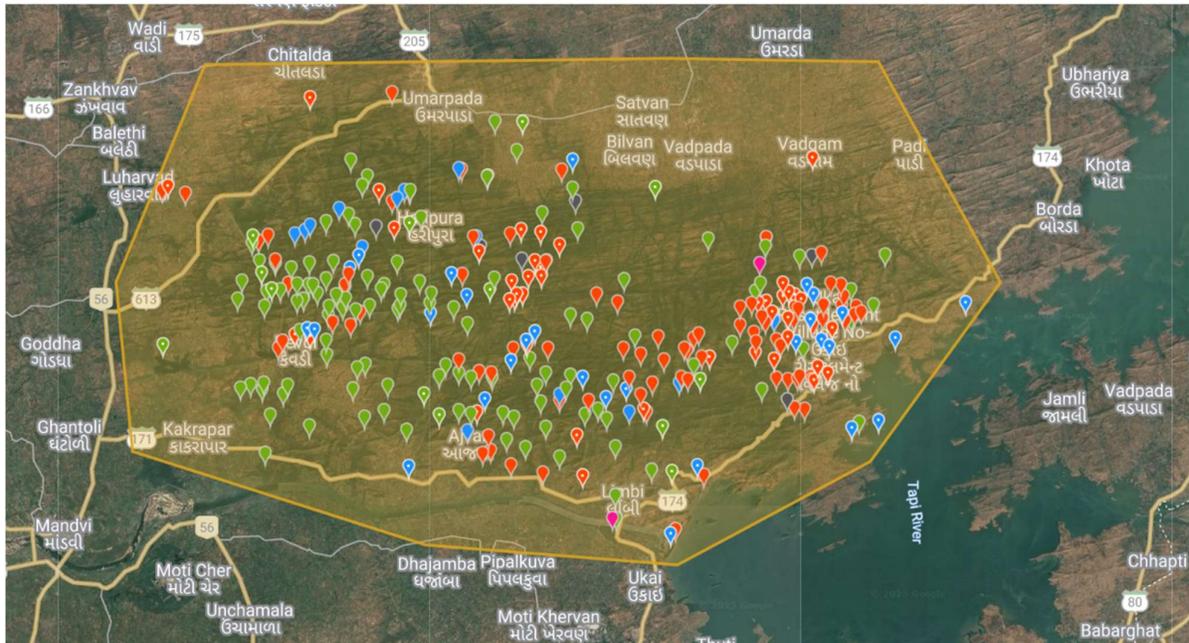
Interesting Species record

1. Yellow-browed Warbler *Phylloscopus inornatus* *
2. Forest Wagtail *Dendronanthus indicus*
3. Bar-winged Flycatcher *Hemipus picatus*

* Very Rare record for Gujarat. Photographic evidence is required.

INATURALIST (FOR NON-AVIAN SPECIES)

<https://www.inaturalist.org/projects/northern-tapi-flora-fauna>



Arachnids (Spiders)

Scientific Name	Common Name
Agelenidae	Funnel Weavers
Anelosimus vittatus	Banded Comb-Footed Spider
Araneidae	Orbweavers
Araneinae	Typical Orbweavers
Araneoidea	Orbweavers and Allies
Araneomorphae	Typical Spiders
Argiope	Garden Orbweavers
Argiope aemula	Oval Saint Andrew's Cross Spider
Argiope anasuja	Signature spiders
Argiope pulchella	Garden cross spider
Ariamnes	Whip spiders
Bijoaraneus mitificus	Kidney Garden Spider
Cheiracanthium	Longlegged Sac Spiders

Chilobrachys fimbriatus	Indian Violet Tarantula
Corinnidae	Ground and Ant-mimic Sac Spiders
Cyclosa	Trashline Orbweavers
Cyclosa insulana	Common Garbage-Line Web Spider
Cyrtophora citricola	Tropical Tent-web Spider
Entelegynae	Entelegyne Spiders
Epeus	
Epeus gloriatus	
Eriovixia	Tailed Araneid Spiders
Eriovixia laglaizei	Laglaise's Garden Spider
Gnathopalystes	
Guizygiella	
Hersilia	
Hersilia caudata	
Hersiliinae	Typical Two-tailed Spiders
Hottentotta tamulus	Indian Red Scorpion
Hyllus semicupreus	Heavy-bodied Jumper
Larinia	Grass Orb-web Spiders
Leucauge	Orchard Spiders and Allies
Leucauge decorata	Decorative Vleispider
Lycosa	
Lycosidae	Wolf Spiders
Lycosinae	
Menemerus	Wall Jumping Spiders
Menemerus nigli	
Meotipa	
Myrmaplata plataloides	Red Weaver Ant-mimicking Spider
Neoscona	Spotted Orbweavers
Neoscona punctigera	Pointillist Neoscona

Neoscona theisi	Common Web-spider
Neoscona vigilans	
Nephila pilipes	Giant Golden Orbweaver
Olios	Golden Huntsman Spiders
Orientattus	
Oxyopes	Grass lynx spiders
Oxyopes macilentus	Lean Lynx Spider
Oxyopidae	Lynx Spiders
Oxytate	Green Grass Crab Spiders
Paranelima	
Pardosa lugubris	Common Forest Wolf Spider Complex
Pardosa pseudoannulata	Pond Wolf Spider
Pardosa sumatrana	
Perenethis	
Peucetia	Green Lynx Spiders
Philodamia	
Pisauridae	Nursery Web Spiders
Plexippus paykulli	Pantropical Jumping Spider
Pseudopoda	
Salticidae	Jumping Spiders
Salticinae	Typical Jumping Spiders
Sparassidae	Huntsman Spiders
Steatoda	False Widow Spiders
Stenaelurillus	
Telamonia	
Telamonia dimidiata	Two-striped Telamonia
Tetragnatha	
Tetragnathidae	Long-jawed Orbweavers
Tylorida ventralis	Big-bellied Tylorida

Uloboridae	Hackled Orbweavers
Uloborus	Feather-legged Spiders

REPTILES & AMPHIBIANS

Amphibians

Scientific Name	Common Name
Dicroglossinae	
Duttaphrynus melanostictus	Asian Common Toad
Euphlyctis cyanophlyctis	Common skittering frog
Hoplobatrachus	Crowned Bullfrogs and Tiger Frogs
Hoplobatrachus tigerinus	Indian Bullfrog
Minervarya	
Minervarya agricola	Common Indian Cricket Frog
Polypedates	Whipping frogs
Polypedates maculatus	Chunam Tree Frog

Reptiles

Scientific name	Common name
<i>Amphiesma stolatum</i>	Buff Striped Keelback
<i>Calotes versicolor</i>	Oriental Garden Lizard
<i>Chamaeleo zeylanicus</i>	Indian Chameleon
<i>Eutropis</i>	Asian Mabuyas
<i>Eutropis allapallensis</i>	Allapalli Grass Skink
<i>Eutropis macularia</i>	Bronze Mabuya
<i>Fowlea piscator</i>	Chequered Keelback
<i>Gekkonidae</i>	Typical Geckos
<i>Hemidactylus</i>	House Geckos
<i>Hemidactylus brookii</i>	Brook's House Gecko
<i>Hemidactylus leschenaultii</i>	Bark Gecko
<i>Hemidactylus parvimaculatus</i>	Spotted House Gecko

<i>Lycodon striatus</i>	Barred Wolf Snake
<i>Naja naja</i>	Indian Cobra
<i>Daboia russelii</i>	Russell's Viper
<i>Echis carinatus</i>	Indian Saw-scaled Viper
<i>Python molurus</i>	Indian Python
<i>Ptyas mucosa</i>	Oriental Rat Snake
<i>Dendrelaphis tristis</i>	Common Indian Bronze-back
<i>Coelognathus helena</i>	Trinket Snake
<i>Eryx johnii</i>	Red Sand boa
<i>Boiga trigonata</i>	Common Cat Snake
<i>Natricinae</i>	Natricine Snakes
<i>Psammophilus</i>	Rock Agamas
<i>Psammophilus dorsalis</i>	Rock Dragon
<i>Sitana</i>	Fan-throated Lizards
<i>Sitana spinaecephalus</i>	Spiny-headed fan-throated lizard

LEPIDOPTERA (MOTHS AND BUTTERFLY)

Butterfly

Scientific name	Common name
<i>Acraea terpsicore</i>	Tawny Coster
<i>Caprona ransonnettii</i>	Golden Angle
<i>Castalius rosimon</i>	Common Pierrot
<i>Catochrysops strabo</i>	Forget-me-not
<i>Catopsilia pomona</i>	Lemon Emigrant
<i>Catopsilia pyranthe</i>	Mottled Emigrant
<i>Celaenorrhinus ambareesa</i>	Malabar Spotted Flat
<i>Cepora nerissa</i>	Common Gull
<i>Charaxes psaphon</i>	Plain Tawny Rajah
<i>Charaxes solon</i>	Black Rajah
<i>Coladenia indrani</i>	Tricolour Pied Flat
<i>Colotis aurora</i>	Plain Orange-tip

<i>Delias eucharis</i>	Common Jezebel
<i>Euploea core</i>	Common Crow Butterfly
<i>Eurema hecabe</i>	Common Grass Yellow
<i>Eurema laeta</i>	Spotless Grass Yellow
<i>Euthalia aconthea</i>	Common Baron
<i>Euthalia nais</i>	Baronet
<i>Everes lacturnus</i>	Indian Cupid
<i>Freyeria putli</i>	Jewelled Grass-blue
<i>Graphium agamemnon</i>	Tailed Jay
<i>Graphium nomius</i>	Spot Swordtail
<i>Hypolimnas bolina</i>	Great Eggfly
<i>Jamides celeno</i>	Common Cerulean
<i>Junonia almana</i>	Peacock Pansy
<i>Junonia hierta</i>	Yellow Pansy
<i>Junonia iphita</i>	Chocolate Pansy
<i>Junonia lemonias</i>	Lemon Pansy
<i>Lampides boeticus</i>	Pea Blue
<i>Leptotes plinius</i>	Zebra Blue
<i>Melanitis leda</i>	Common Evening Brown
<i>Neptis hylas</i>	Common Sailer
<i>Papilio</i>	Common Swallowtails
<i>Papilio demoleus</i>	Lime Swallowtail
<i>Papilio polytes</i>	Common Mormon Swallowtail
<i>Papilionoidea</i>	Butterflies
<i>Pareronia hippia</i>	Indian Wanderer
<i>Phalanta phalantha</i>	Common Leopard
<i>Polyura bhārata</i>	Indian Nawab
<i>Sarangesa purendra</i>	Spotted Small Flat
<i>Ypthima huebneri</i>	Common Four-ring
<i>Zizina otis</i>	Lesser Grass Blue
<i>Zizula hylax</i>	Tiny Grass Blue

Moths

Species/Genus	Common name
<i>Actias selene</i>	Indian Moon Moth
<i>Amyna</i>	
<i>Anoba lunifera</i>	
Anobinae	
<i>Arna</i>	
<i>Artaxa</i>	
<i>Asota caricae</i>	Tropical Tiger Moth
<i>Biston suppressaria</i>	tea looper
<i>Boarmiini</i>	
<i>Boarmiini</i>	
<i>Brunia</i>	
<i>Calliteara horsfieldii</i>	Horsfield's Tussock Moth
<i>Carea angulata</i>	
Cerurinae	
<i>Cerynea</i>	
<i>Chadisra bipars</i>	
<i>Chalciope mygdon</i>	Triangular-striped moth
<i>Chiasmia</i>	
<i>Chlorissa viridata</i>	Small Grass Emerald
<i>Cretonotos gangis-interrupta</i> agg	
<i>Culladia</i>	
<i>Diduga</i>	
<i>Diduga flavicostata</i>	
<i>Ectropis bhurmitra</i>	Burmese Engrailed Moth
Ennominae	
<i>Eoophyla</i>	
<i>Episteme adulatrix</i>	Blue-spotted Forester Moth

Erebidae	Underwing, Tiger, Tussock, and Allied Moths
Erebus macrops	Asian Large Owl Moth
Eupithecia	Pug Moths
Eupitheciini	Pug Moths & Allies
Gastropacha pardale	
Geometridae	Geometer Moths
Gesonia	
Gesonia obeditalis	
Gonodonta pyrgo	
Gracillariidae	Leaf Blotch Miner Moths
Hemitheini	
Hipoepa	
Hyblaea	
Hyblaea puera	Teak Defoliator
Hyposidra talaca	Black Looper
Lecithoceridae	Long-horned Moths
Limacodidae	Slug Caterpillar Moths
Lymantria	
Lymantria grandis	
Lymantriinae	Tussock Moths
Macariini	Angle Moths and Allies
Macrobrochis gigas	
Manoba	
Miltochrista	
Naarda	
Naarda	
Narosoideus	
Narosoideus flavidorsalis	
Noctuidae	Cutworm Moths and Allies
Noctuoidea	Owlet Moths and Allies

Nodaria externalis	
Nola	
Nolidae	Tufted Moths
Nolini	
Notodontidae	Prominent Moths
Nyctria	
Nygmia icilia	
Nygmiiini	
Olepa ricini	
Orvasca subnotata	
Parasa lepida	Blue-striped Nettle Grub
Parotis	
Perina nuda	Banyan tussock moth
Phalera grotei	Grote's Buff-tip
Psychidae	Bagworm Moths
Pterophorinae	
Pyralidae	Pyralid Snout Moths
Rajendra perrottetii	
Roeseliidina	
Scopelodes	
Scopula marginepunctata	Mullein Wave
Scopula pulchellata agg	
Scopulini	
Sphingidae	Sphinx Moths
Spilomelinae	Pearl Moths
Spirama retorta	
Spodoptera	Armyworm Moths
Stauropus alternus	Lobster Caterpillar Moth
Sterrhinae	Waves and Mochas
Thespea virescens	
Tonica	

Tortricidae	Tortricid Leafroller Moths
Trabala	
Trabala pallida	
Trilocha varians	Greenish Silk-Moth
Westermannia	
Xanthodes transversa	Transverse moth

Mammals

Scientific name	Common name
<i>Anathana ellioti</i>	Madras Treeshrew
<i>Canis aureus</i>	Golden Jackal
<i>Funambulus palmarum</i>	Three-striped Palm Squirrel
<i>Funambulus pennantii</i>	Northern Palm Squirrel
<i>Gazella bennettii</i>	Indian Gazelle
<i>Macaca mulatta</i>	Rhesus Macaque
<i>Muroidea</i>	Muroids
<i>Hyaena hyaena</i>	Striped Hyena
<i>Felis chaus</i>	Jungle Cat
<i>Pteropus giganteus</i>	Indian flying fox
<i>Boselaphus tragocamelus</i>	Blue Bull
<i>Urva edwardsii</i>	Indian grey mongoose
<i>Semnopithecus entellus</i>	Northern plains gray langur
<i>Urva smithii</i>	Ruddy Mongoose
<i>Sus scrofa cristatus</i>	Indian boar

Importance of Flora Fauna Data collection

Collecting data on flora and fauna is crucial for numerous reasons, ranging from scientific research and conservation to ecosystem management and policymaking. Here are some key points highlighting the importance of flora and fauna data collection:

1. **Biodiversity Conservation:** Flora and fauna data collection provides essential information for assessing and monitoring biodiversity. By documenting the presence, abundance, and distribution of plant and animal species, researchers can identify areas of high biodiversity, prioritize conservation efforts, and track changes over time.

2. **Ecosystem Health and Functioning:** Flora and fauna play vital roles in ecosystem functioning, including nutrient cycling, pollination, seed dispersal, and habitat provision. Collecting data on the composition and structure of plant and animal communities helps scientists understand ecosystem dynamics and assess the health and resilience of ecosystems to environmental disturbances and human impacts.

3. **Species Management and Recovery:** Data on rare, threatened, and endangered species are essential for developing conservation strategies and management plans to protect and recover these species. Monitoring populations, tracking trends, and identifying threats are critical components of species management efforts aimed at preventing extinction and promoting recovery.

4. **Invasive Species Detection and Control:** Flora and fauna data collection helps identify invasive species and assess their impacts on native ecosystems. Early detection of invasive species is crucial for implementing effective control measures to prevent their spread and minimize ecological and economic damage.

5. **Climate Change Research:** Studying the responses of flora and fauna to climate change provides valuable insights into the impacts of changing environmental conditions on biodiversity. Data collection allows researchers to track shifts in species distributions, phenology (timing of life cycle events), and behaviour, helping to inform climate change adaptation and mitigation strategies.

6. Natural Resource Management: Flora and fauna data are essential for managing natural resources sustainably, including forests, wetlands, grasslands, and fisheries. Understanding the interactions between species and their habitats enables policymakers and resource managers to make informed decisions about land use planning, habitat restoration, and wildlife conservation.

7. Human Health and Well-being: Many plant and animal species have direct or indirect effects on human health and well-being, such as providing food, medicine, clean water, and recreational opportunities. Monitoring changes in biodiversity helps protect these ecosystem services and supports human health and quality of life.

8. Education and Outreach: Flora and fauna data collection engages the public in scientific research and environmental stewardship, fostering a deeper appreciation for nature and biodiversity conservation. Citizen science initiatives and educational programs provide opportunities for people of all ages to participate in data collection efforts and contribute to scientific knowledge.

Overall, flora and fauna data collection is essential for understanding and conserving the natural world, addressing global challenges such as biodiversity loss, climate change, and ecosystem degradation, and promoting sustainable development for future generations.