



BITS Pilani
Hyderabad Campus



BIOSCAPES

Campus Wildlife



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Mission

This booklet marks the inaugural initiative of the Nature Club at BITS Pilani, Hyderabad Campus, inviting the campus community to discover, document, and celebrate the remarkable biodiversity that quietly thrives around us. Through collective exploration, scientific documentation, and meaningful community participation, the club seeks to foster ecological curiosity and cultivate a deeper connection with the living landscape of our campus. By bringing together field observations, research-driven projects, and conservation initiatives, the Nature Club envisions the campus as a living laboratory where biodiversity is not only studied, but appreciated, protected, and shared.

Vision

A vibrant community of observers, researchers, and nature enthusiasts working together to uncover, quantify, and safeguard the diverse life forms that make our campus a dynamic ecological space.

Team



Prof. Akanksha Rathore
Club Convenor, Booklet Curation



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Club Convenor



Prof. Murari R. R. Varma
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Booklet Curation



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Riddhi Chatterjee
Booklet Curation

Bees and Wasps



SCOLIID WASP
Scolia affinis
Prabhav S Uppoor



HONEY BEE
Apis cerana indica
Prabhav S Uppoor

Beetles



DUNG BEETLE
Heliocopris sp.
Ambika M S



NET-WINGED BEETLE
Lycostomus
Anbumani P

Beetles



SCARAB BEETLE (GREEN)
Heterorhina elegans
Paaras Gandhi



WHITE-SPOTTED FRUIT CHAFER
Mausoleopsis amabilis
Anbumani P



HOLOTRICHIA
Ambika M S

“ Scarab Beetles were so iconic in ancient Egypt that they became symbols of rebirth, regeneration, and the sun god Khepri. Imagine being such a legendary beetle that an entire civilization puts you on jewelry, art, and sacred amulets. Shah, N. A., & Shah, N. (2022)



SCARAB BEETLE
Ambika M S

Bugs



RED COTTON BUG
Dysdercus cingulatus
Akanksha Rathore



WATERSTRIDER
Gerridae
Akanksha Rathore



BOX ELDER BUG
Gonocerus acuteangulatus
Ambika M.S



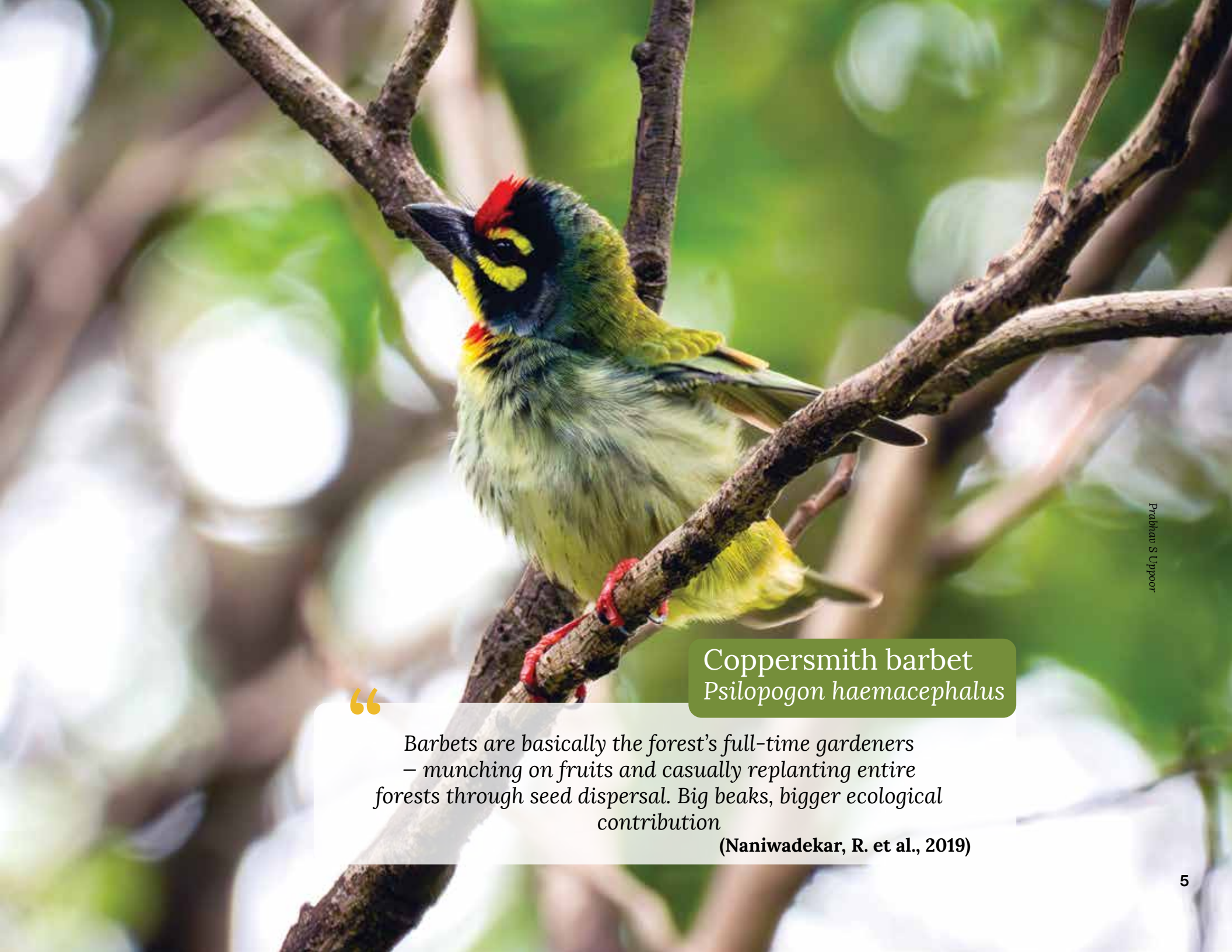
LOVEBUG
Plecia nearctica
Chitransh Gupta

Butterflies

“ Butterflies can be surprisingly dramatic – the Common Tiger butterfly survives by copying the look of the toxic Plain Tiger butterfly, while the Common Rose butterfly flies with such precision that it can hover over flowers like a tiny VIP helicopter. **Perveen, F. K., & Khan, A. (2024)** ”



COMMON ROSE
Pachliopta aristolochiae
Prabhav S Uppoor



Coppersmith barbet
Psilopogon haemacephalus

“ Barbets are basically the forest’s full-time gardeners – munching on fruits and casually replanting entire forests through seed dispersal. Big beaks, bigger ecological contribution **(Naniwadekar, R. et al., 2019)** ”

Caterpillars



**INDIAN LILY
MOTH CATERPILLAR**
Polytela gloriosae
Dipin Das



**LEOPARD MOTH
CATERPILLAR**
Prabhav S Uppoor



**GEOMETER MOTH
CATERPILLAR**
Prabhav S Uppoor



**TIGER MOTH
CATERPILLAR**
Ambika M S

Katydid

“ Leaf Katydid are so committed to camouflage that evolution literally turned them into leaves – complete with fake veins and ragged edges. Predators are basically out there getting fooled by salad.
(Mugleston, J., et al., 2016)



**LEAF-MIMIC
KATYDID**
Barsha Mitra



KATYDID
Mihir Joshi

Flies



SHEEP BOT FLY
Oestrus ovis
Anbumani P



GREEN BOTTLE FLY
Lucilia sericata
Ambika M S

Other Invertebrates



BOMBAY LOCUST
Patanga succincta
Chitransh Gupta



HOODED GRASSHOPPER
Teratodes brachypterus
Sudev Krishnan K

Butterflies



PLAIN TIGER
Danaus chrysippus

Akanksha Rathore



COMMON LIME BUTTERFLY
Papilio demoleus

Anubhav Saha Roy



COMMON PIERROT
Castalius rosimon

Harshita Kurella



TAWNY COSTER
Acraea terpsicore

Prabhav S Uppoor



COMMON GRASS YELLOW
Eurema hecabe

Sree Nithish Reddy Gunupati



COMMON EVENING BROWN
Melanitis leda

Ambika M S



CRIMSON TIP
Colotis danae

R Sujith



COMMON BARON
Euthalia aconthea

Mihir Joshi



LEMON PANSY
Junonia lemonias

Harshita Kurella



COMMON CERULEAN
Jamides celeno

Ayush Kumar Singh



COMMON JEZEBEL
Delias eucharis

Prabhav S Uppoor



COMMON LEOPARD
Phalanta phalantha

R Sujith



Amogh A

Jungle babbler
Turdoides striata

“Jungle Babblers basically run on gossip – their huge variety of calls helps the whole “Seven Sisters” gang stay coordinated, dramatic, and united, (yes, scientists actually studied their gossip network).”

Yambem, S. D., Chorol, S., & Jain, M. (2021).

Other Invertebrates



INDIAN FLOWER MANTIS(NYMPH)
Creobroter pictipennis

Quasid Qamar



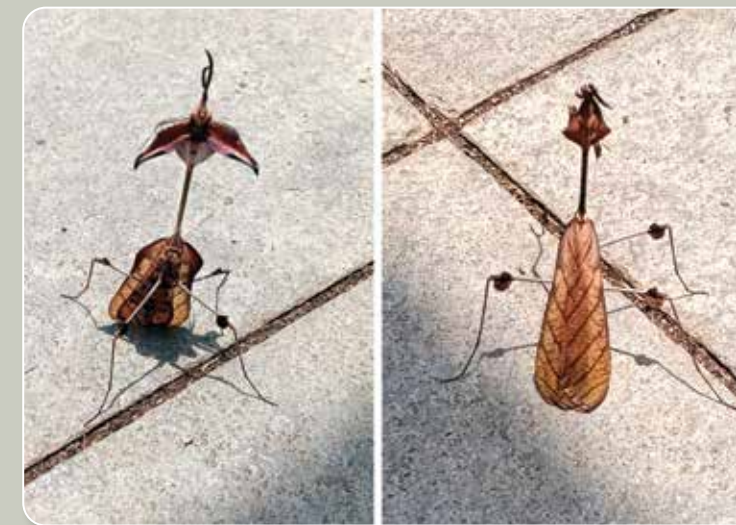
SHORTHORNED GRASSHOPPER

Harshita Kurella



CARPENTER ANT
Camponotus sp.

Ayush Kumar Singh



WANDERING VIOLIN MANTIS
Gongylus gongylodes

Ashwini Muthyalu

Moths



GREEN MOTH
Agathia laetata

Ishan Sood



COFFEE BEE HAWKMOTH
Cephonodes hylas

Manasvita Penujuri

“Coffee Bee Hawk-Moth survives by looking so much like a bumblebee that predators usually decide, “not worth getting stung over,” and leave it alone. Fake it till you make it, moth edition.

Waldbauer, G. P. (1988)



INDIAN OWLET MOTH
Erebus macrops

Ishan Sood



JASMINE MOTH / WHITE PEARL
Palpita vitrealis

Chitransh Gupta



OLEANDER HAWK MOTH
Daphnis nerii

Prashant Kadam

Moths



PLAIN GREY HAWK MOTH
Psilogramma increta

Chitransh Gupta



SCOPULA

Akanksha Rathore



GONODONTIS PALLIDA

Ishan Sood



TRIANGLES / SEMI-LOOPER
Trigonodes hyppasia

Ambika M S



TASAR SILK MOTH
Antheraea paphia

Anbumani P



THALASSODES

Chitransh Gupta



COMMON FRUIT PIERCING MOTH
Eudocima phalonia

Manasvita Penujuri



WASP MOTH

Chitransh Gupta



Prabhav S Uppoor

“

Tickell's blue flycatcher
Cyornis tickelliae

Tickell's Blue Flycatcher spends its day expertly catching flying insects in forests, but its name actually comes from the wife of British ornithologist Samuel Tickell. Imagine being such a charming bird that someone says, “yes, this deserves my family name.”

(Burger, C et al., 2012)

Odonata



DAMSELFLY Akanksha Rathore



GREEN MARSH HAWK Akanksha Rathore



BLUE FLASH DRAGONFLY Ishan Sood



DRAGONFLY



Prabhav S Uppoor

“

Dragonfly and Damselfly have survived for over 300 million years, so at this point they have probably seen several mass extinctions and still decided to stick around judging our pond quality.

(Pereira-Moura, L., et al, 2023)

Spiders



GIANT WOOD SPIDER
Nephila pilipes



GIANT WOOD SPIDER
Nephila pilipes



GARDEN TENT WEB SPIDER
Cyrtophora cicatrosa



MARBLED ORB WEAVER
Araneus marmoreus



SPOTTED ORB WEAVER
Neoscona crucifera

“Orb-weaver Spider builds stunning wheel-shaped webs by carefully creating frames, spokes, and sticky spirals like tiny eight-legged engineers. Then, after all that hard work, many of them eat the entire web in the morning just to recycle the silk and build it all over again at night. Peak “reduce, reuse, recycle.”

Lesser, E. (2022)

Tick & Mite



RED VELVET MITE
Trombididae



BROWN DOG TICK
Rhipicephalus sanguineus

Scorpion



ASIAN FOREST SCORPION
Heterometrus

“Red Velvet Mites show up every monsoon dressed like miniature luxury carpets with legs. Even the rain seems to know when it’s time for a fashion entrance.

Tevis & Newell (1962)

Diplopoda



MILLIPEDE
Phyllogonostreptus nigrolabiatus

Ambika M.S



COMMON ASIAN MILLIPEDES
Trigoniulus corallinus

Manaswita Penujuri

Crustacea



FRESHWATER CRAB
Gecarcinucidae

R Sujith

“

Millipedes are nature’s tiny recyclers! They feed on dead leaves and organic matter, helping enrich the soil, improve water retention, and support healthy plant growth. Even more fascinating, their defensive secretions may contain bio active compounds that could inspire future medicines, natural pesticides, and antimicrobial agents – making these humble creatures valuable not only for ecosystems but also for biotechnology.

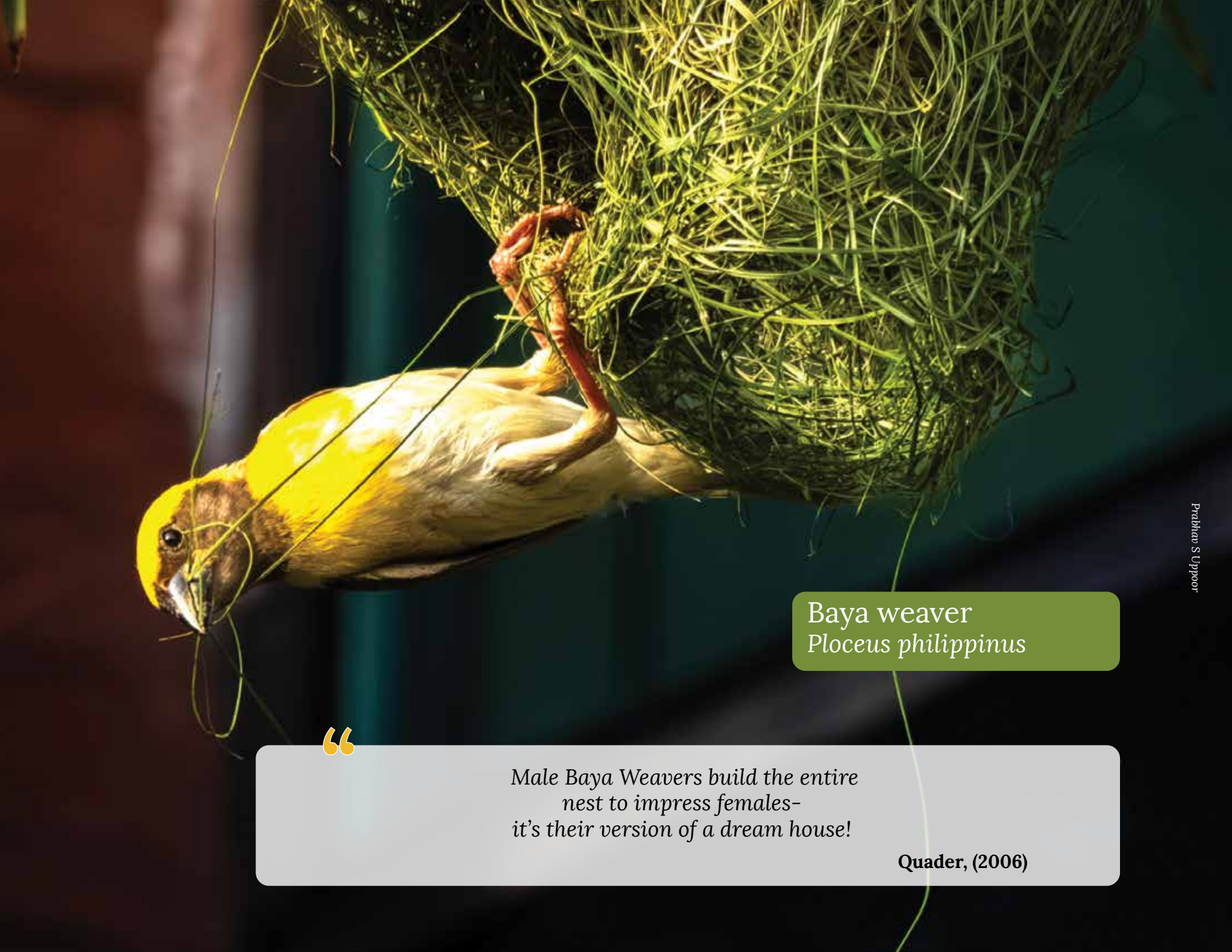
Yashwant et al., (2024)

“

Male Baya Weavers build the entire nest to impress females- it’s their version of a dream house!

Quader, (2006)

Baya weaver
Ploceus philippinus



Prabhat S Upoor

Reptilia



INDIAN CHAMELEON
Chamaeleo zeylanicus
C P Kiran



BENGAL MONITOR
Varanus bengalensis
R Sujith



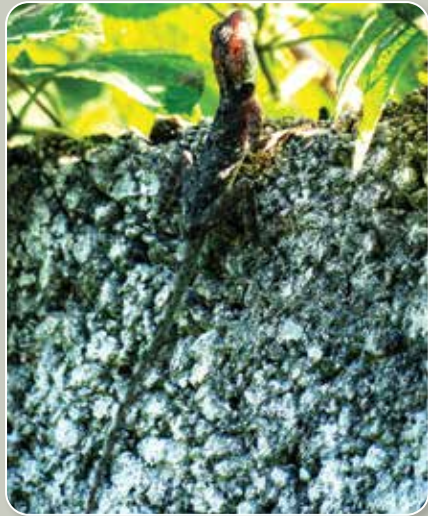
ORIENTAL GARDEN LIZARD
Calotes versicolor
Sree Nithish Reddy Gunupati

“Peninsular Rock Agama females do not waste their energy impressing everyone; studies show they only show off their bright colors and “dance moves” for top-tier males. If the male is unimpressive, they simply act invisible. Brutal, but efficient.”

Sridharan, A., et al., (2023)



HOUSE GECKO
Hemidactylus sp.
Manasvita Penujuri



COMMON ROCK AGAMA
Psammophilus dorsalis
Prabhav



INDIAN STAR TORTOISE
Geochelone elegans
Sree Nithish Reddy Gunupati

Amphibia



ASIAN COMMON TOAD
Duttaphrynus melanostictus
Dipin Das



ASIAN COMMON TOAD
Duttaphrynus melanostictus
Mihir Joshi

“Asian Common Toad tadpoles can actually recognize their siblings and apparently grow up faster when surrounded by family. Even tadpoles do better with a supportive home environment!”

Li, X. L et al., (2024)



INDIAN TREE FROG
Polypedates maculatus
Chandraday Prodhan



R Sujith

Indian peacock
Pavo cristatus

“A peacock’s famous fan may be more of an advertisement than the final selling point! The real inspection happens much closer to the ground.”
Yorzinski et al., (2013)

Mammalia



MONKEY
Rhesus macaque

Amogh A

“Cats don’t naturally prefer men, women, or children; they respond to how people behave toward them.”
Fahemeeda et al., (2023)



SQUIRREL
Funambulus palmarum

R Sujith



DOG
Canis familiaris

Anubhav Saha Roy



CAT
Felis catus

Prabhav S Uppoor



Anubhav Saha Roy

Red-wattled lapwing
Vanellus indicus

“

Red-wattled Lapwings may secretly be better weather forecasters than humans – tribal farmers in Rajasthan have long used their nesting choices to predict monsoons. If the birds build nests on higher ground, people prepare for heavy rains. Turns out, the lapwings usually know what they’re talking about.

(Bhardwaj, R. L et al., 2024)

Aves



ASIAN GREEN BEE-EATER
Merops orientalis

Amogh A



HOUSE SPARROW
Passer domesticus

Amogh A



ORIENTAL HONEY BUZZARD
Pernis ptilorhynchus

Amogh A



ROSE-RINGED PARAKEET
Psittacula krameri

Amogh A



RUFIOUS TREEPIE
Dendrocitta vagabunda

Amogh A



COMMON MYNA
Acridotheres tristis

Anubhav Saha Roy

Aves



INDIAN SILVERBILL
Euodice malabarica

Anubhav Saha Roy



EURASIAN HOOPOE
Upupa epops

R Sujith



SCALY-BREASTED MUNIA
Lonchura punctulata

Anubhav Saha Roy



WHITE-BROWED WAGTAIL
Motacilla maderaspatensis

Anubhav Saha Roy



ASIAN KOEL
Eudynamys scolopaceus

Murari R. R. Varma



BLACK KITE
Milvus migrans

Murari R. R. Varma



SPOTTED DOVE
Spilopelia chinensis

Prabhav S Uppoor

Aves



EASTERN RED-RUMPED SWALLOW
Cecropis daurica

Murari R. R. Varma



ASHY PRINIA
Prinia socialis

Prabhav S Uppoor



INDIAN WHITE-EYE
Zosterops palpebrosus

Prabhav S Uppoor



ASIAN OPENBILL
Anastomus oscitans

Prabhav S Uppoor



COMMON IORA
Aegithina tiphia

Prabhav S Uppoor

Aves



GREY FRANCOLIN
Ortygornis pondicerianus

Prabhav S Uppoor



GREY-BREASTED PRINIA
Prinia hodgsonii

Prabhav S Uppoor



INDIAN POND HERON
Ardeola grayii

Prabhav S Uppoor



PIED BUSHCHAT
Saxicola caprata

Prabhav S Uppoor



PIED CUCKOO
Clamator jacobinus

Prabhav S Uppoor



PURPLE SUNBIRD
Cinmyris asiaticus

Prabhav S Uppoor



WHITE-THROATED KINGFISHER
Halcyon smyrnensis

Prabhav S Uppoor



ROBIN
Copsychus fulicatus

Prabhav S Uppoor

Aves



RED-VENTED BULBUL
Pycnonotus cafer
Prabhav S Uppoor



SPOTTED OWLET
Athene brama
Murari R. R. Varma



SMALL MINIVET (MALE)
Pericrocotus cinnamomeus
Prabhav S Uppoor



INDIAN GOLDEN ORIOLE
Oriolus kundoo
Murari R. R. Varma



WHITE-BROWED BULBUL
Pycnonotus luteolus
R Sujith



INDIAN NIGHTJAR
Caprimulgus asiaticus
Dipin Das



WHITE-BREASTED WATERHEN
Amaurornis phoenicurus
Prabhav S Uppoor

Aves



WHITE-SPOTTED FANTAIL
Rhipidura albogularis

Prabhav S Uppoor



YELLOW-CROWNED WOODPECKER
Leiopicus mahrattensis

Prabhav S Uppoor



BAY-BACKED SHRIKE
Lanius vittatus

R Sujith



BRAHMINY STARLING
Sturnia pagodarum

R Sujith



FERAL ROCK PIGEON
Columba livia

R Sujith



GREATER COUCAL
Centropus sinensis

R Sujith

Aves



COMMON HAWK CUCKOO
Hierococcyx varius

R Sujith



LAUGHING DOVE
Spilopelia senegalensis

R Sujith



PARADISE FLYCATCHER
Terpsiphone paradisi

R Sujith



PLUM-HEADED PARAKEET
Psittacula cyanocephala

R Sujith



YELLOW-EYED BABBLER
Chrysomma sinense

R Sujith



SPOT BILLED DUCK
Anas poecilorhyncha

Prabhav S Uppoor

Sources & References

- Bhardwaj, R. L., Verma, M. P., Vyas, L., Sharma, A., Jakhar, D. S., Choudhary, K., & Meena, J. (2024). Red-wattled lapwing (*vanellus indicus*): A traditional rain forecaster for tribal farmers of Southwestern Rajasthan. *Weather, Climate, and Society*, 16(3), 541–554. <https://doi.org/10.1175/wcas-d-23-0149.1>
- Burger, C., Belskii, E., Eeva, T., Laaksonen, T., Mägi, M., Mänd, R., Qvarnström, A., Slagsvold, T., Veen, T., Visser, M. E., Wiebe, K. L., Wiley, C., Wright, J., & Both, C. (2012). Climate change, breeding date and nestling diet: How temperature differentially affects seasonal changes in pied flycatcher diet depending on habitat variation. *Journal of Animal Ecology*, 81(4), 926–936. <https://doi.org/10.1111/j.1365-2656.2012.01968.x>
- Fahemeeda, S., Parveen, Z., & Ansari, M. (2023). Owner’s perceptions and experiences with cat behavior and care: A survey. *Ijfmr*23044642, 5(4). <https://www.ijfmr.com/papers/2023/4/4642.pdf>
- Lesser, E. (2022). The Orb-Weaver’s step-by-step guide to homebuilding. *Journal of Experimental Biology*, 225(1). <https://doi.org/10.1242/jeb.243437>
- Li, X. L., Wang, H. B., Shi, W. H., & Yu, T. L. (2024). Kinship influences the metamorphic traits of Asiatic toad (*Bufo gargarizans*) larvae, in Central China. *Ethology Ecology & Evolution*, 36(3), 343–353. <https://doi.org/10.1080/03949370.2023.2298481>
- Lichter-Marck, I. H., Wylde, M., Aaron, E., Oliver, J. C., & Singer, M. S. (2014). The struggle for safety: Effectiveness of Caterpillar defenses against bird predation. *Oikos*, 124(4), 525–533. <https://doi.org/10.1111/oik.01515>
- Mugleston, J., Naegle, M., Song, H., Bybee, S. M., Ingley, S., Suvorov, A., & Whiting, M. F. (2016). Reinventing the leaf: Multiple origins of leaf-like wings in katydids (orthoptera : Tettigoniidae). *Invertebrate Systematics*, 30(4), 335. <https://doi.org/10.1071/is15055>
- Naniwadekar, R., Chaplod, S., Datta, A., Rathore, A., & Sridhar, H. (2019). Large frugivores matter: Insights from network and seed dispersal effectiveness approaches. *Journal of Animal Ecology*, 88(8), 1250–1262. <https://doi.org/10.1111/1365-2656.13005>
- Patne Yashwant, Rajesh, A., Pankaj Baisthakur, & Ravi, B. (2024). Millipedes as ecosystem engineers: Their role in nutrient cycling, soil health and biotechnological... *International Journal of Entomology Research*, 9(11), 168–176. https://www.researchgate.net/publication/388082439_Millipedes_as_ecosystem_engineers_Their_role_in_nutrient_cycling_soil_health_and_biotechnological_significance
- Pereira-Moura, L., Veras, D. S., de Carvalho, F. G., Juen, L., & Couceiro, S. R. M. (2023). Habitat specificity and morphology-main filters for the distribution of Odonata in the Cerrado Maranhense, Brazil. *Aquatic Ecology*, 57(2), 443–458. <https://doi.org/10.1007/s10452-023-10021-1>
- Quader, S. (2006). What makes a good nest? Benefits of nest choice to female Baya Weavers (*ploceus philippinus*). *The Auk*, 123(2), 475–486. <https://doi.org/10.1093/auk/123.2.475>
- Shah, N. A., & Shah, N. (2022). Ecological benefits of scarab beetles (coleoptera: Scarabaeidae) on nutrient cycles: A review article. *Advances in Biochemistry and Biotechnology*. <https://www.gavinpublishers.com/article/view/ecological-benefits-of-scarab-beetles-coleoptera-scarabaeidae-on-nutrient-cycles-a-review-article>
- Sridharan, A., Lawrence, S., & Isvaran, K. (2023). Dance or disappear: Strategic sexual signalling in female Peninsular rock agama. <https://doi.org/10.1101/2023.08.30.555377>
- Tevis, L., & Newell, I. M. (1962). Studies on the biology and seasonal cycle of the Giant Red Velvet Mite, *dinothrombium pandorae* (Acari, trombidiidae). *Ecology*, 43(3), 497–505. <https://doi.org/10.2307/1933377>
- Waldbauer, G. P. (1988). Aposematism and Batesian Mimicry. *Evolutionary Biology*, 227–259. https://doi.org/10.1007/978-1-4613-0931-4_5
- Yambem, S. D., Chorol, S., & Jain, M. (2021). More than just babble: Functional and structural complexity of vocalizations of jungle babbler. *Behavioral Ecology and Sociobiology*, 75(8). <https://doi.org/10.1007/s00265-021-03018-z>
- Yorzinski, J. L., Patricelli, G. L., Babcock, J. S., Pearson, J. M., & Platt, M. L. (2013). Through their eyes: Selective attention in peahens during courtship. *Journal of Experimental Biology*, 216(16), 3035–3046. <https://doi.org/10.1242/jeb.087338>



ASIAN GREEN BEE-EATER
Merops orientalis

Prabhav S Uppoor



SMALL MINIVET (FEMALE)
Pericrocotus cinnamomeus

R Sujith

R Sujith



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