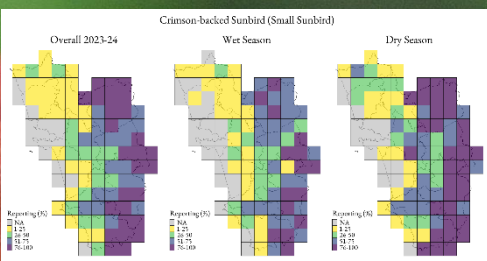
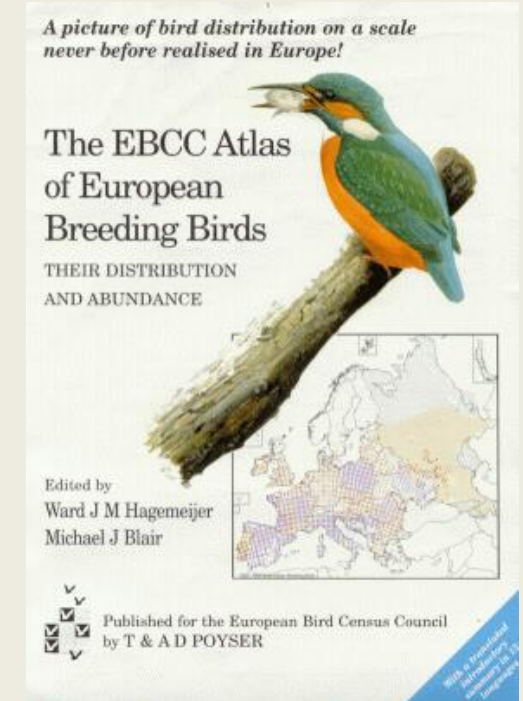
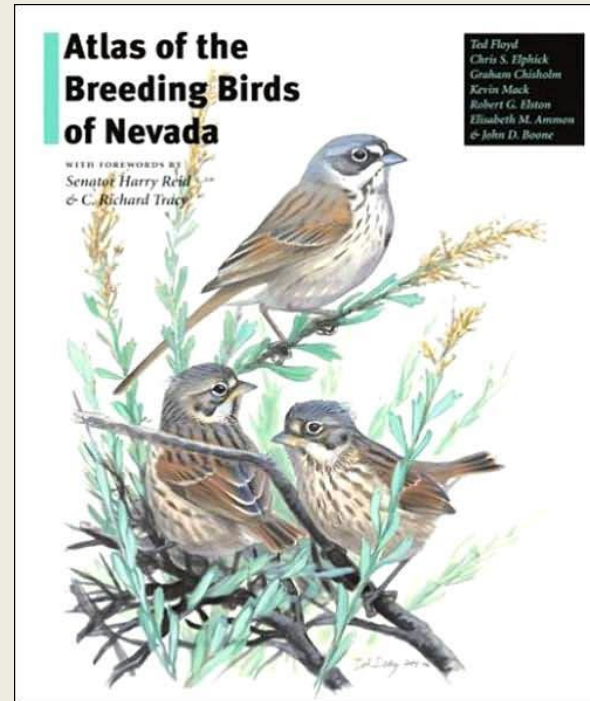
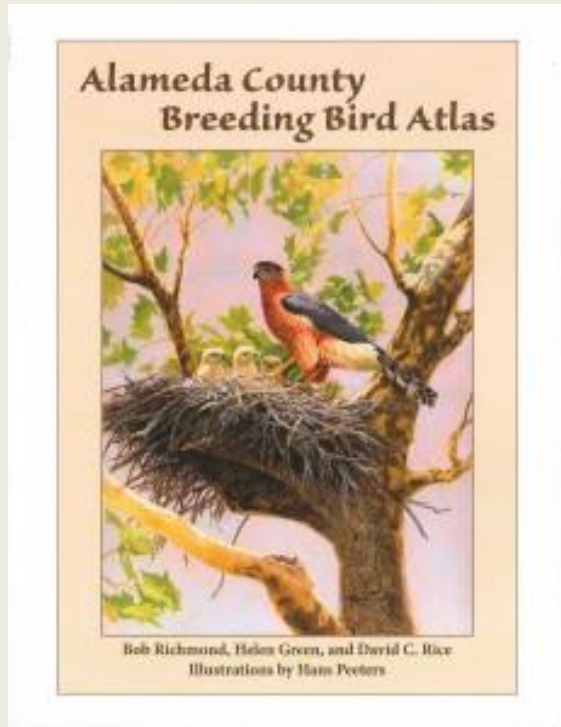


Bird Atlases in India

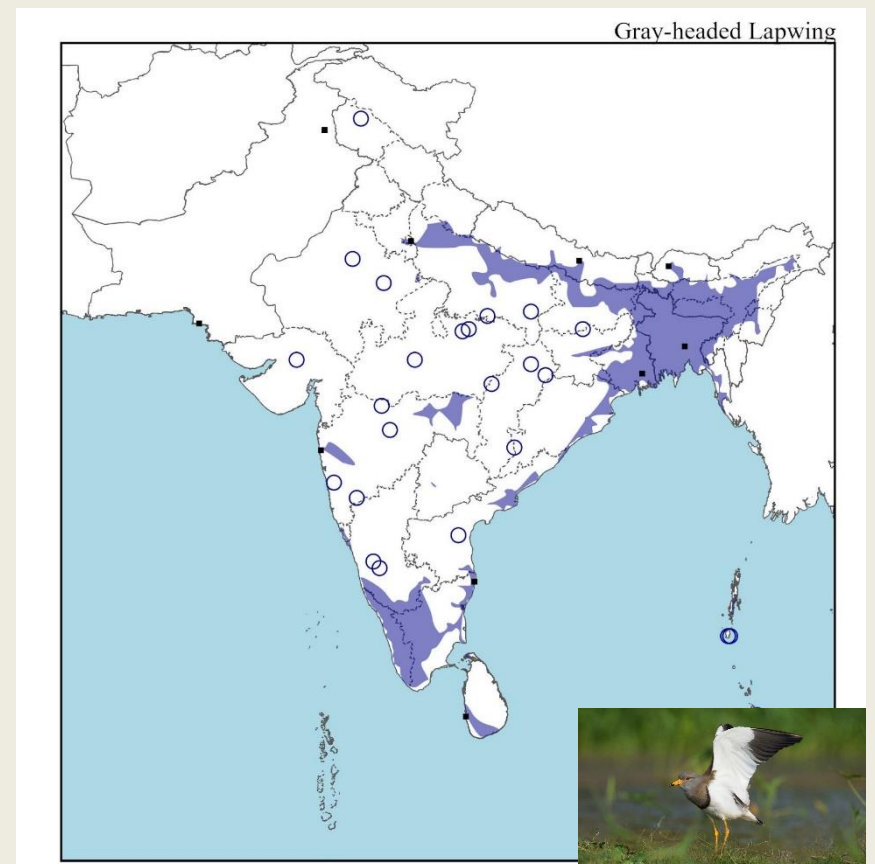
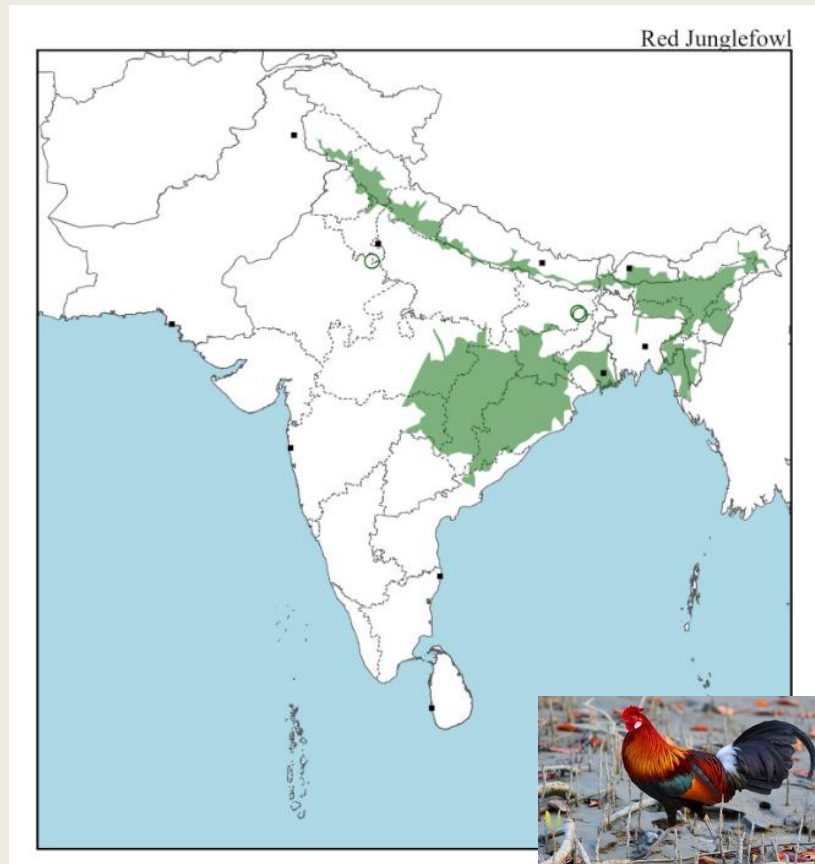


What is a bird atlas?

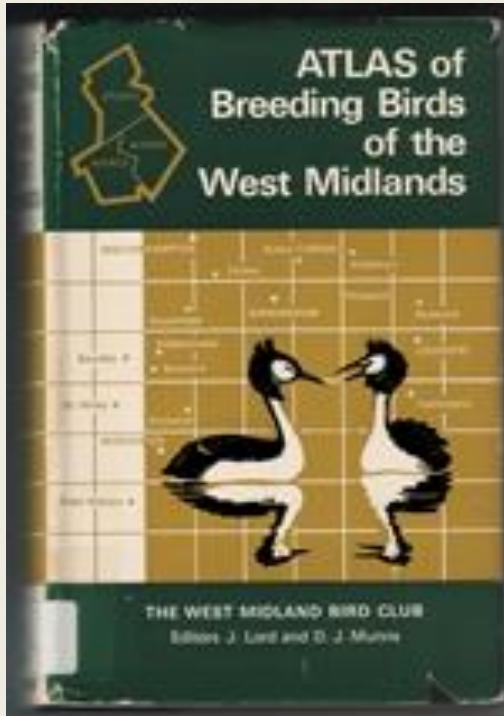


- ▶ Atlas- a map showing cities, states, countries etc.
- ▶ Bird atlas- map of bird distribution in a city, district, state, country etc.
- ▶ Map of seasonal patterns of birds

The Field Guide: A book of maps



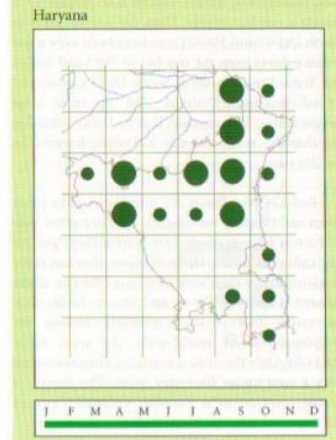
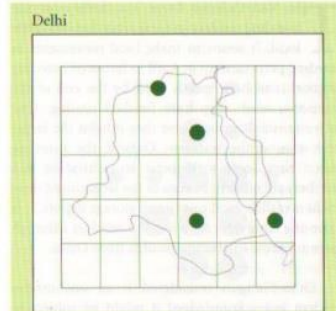
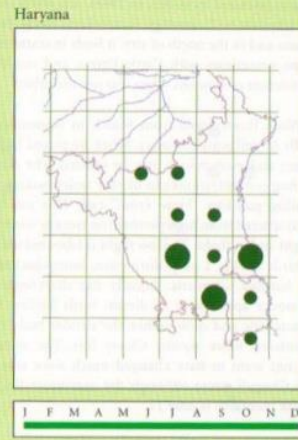
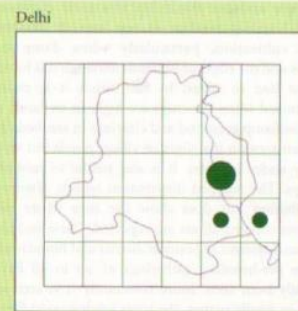
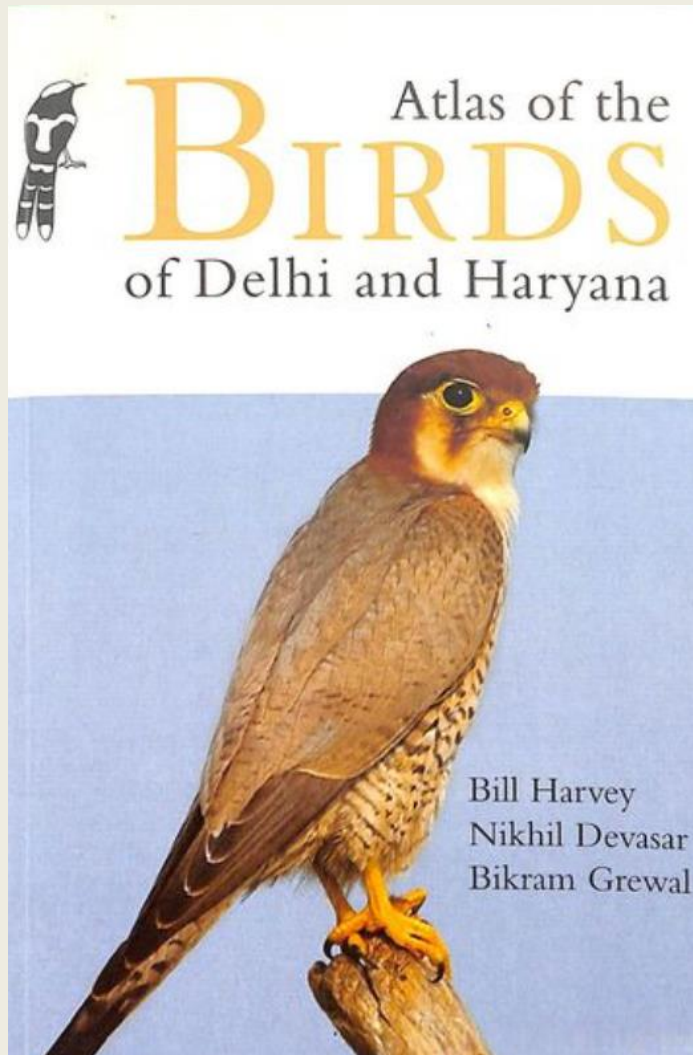
History of Atlases



- 1962: Atlas of British Flora- first biodiversity atlas
- 1970: Atlas of Breeding Birds of the West Midlands- first bird atlas
- By 2008, multiple atlases from numerous countries

✓ 27.9 million records of birds by 1,08,000 birders!

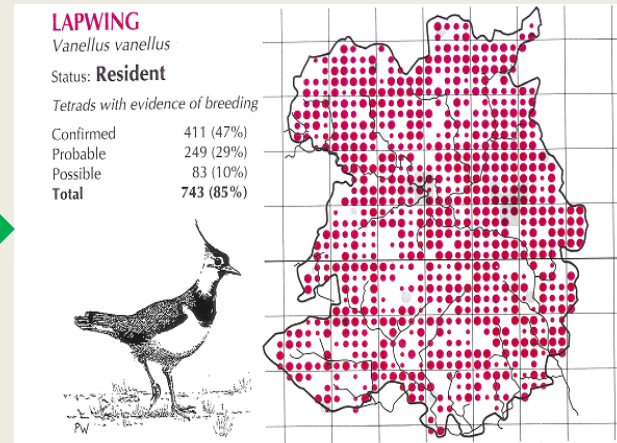
Bird atlases - early attempts



J F M A M J J A S O N D

J F M A M J J A S O N D

Why make a bird atlas?



- because birds are already being monitored!
- to understand fine-scale distribution; more accurate information than field guides
- for better understanding of our species

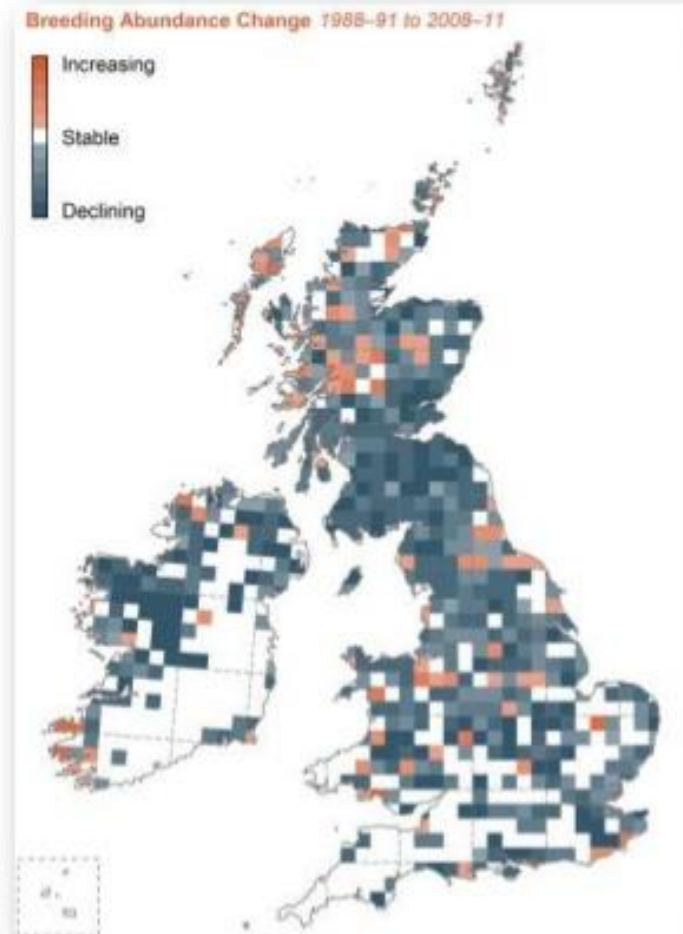
Why make a bird atlas?

Conservation planning

- Assessing changes in distribution and abundance
- Assessing importance of urban green spaces, lakes *etc.*
- Identifying key sites for conservation
- Predicting impacts of human activities on local species' distribution

Why make a bird atlas?

Key story 4: breeding waders mostly declining



Why make a bird atlas?

Key story 10: mostly good news for birds of prey

Buzzards are now widespread in Britain, and in much of Ireland, in the breeding season



Systematic Bird Atlases in India

Mysuru Bird Atlas

Kerala Bird Atlas

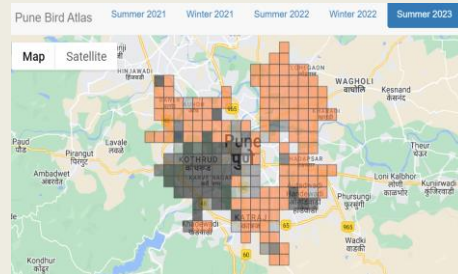
Coimbatore Bird Atlas

Pune Bird Atlas

Goa Bird Atlas

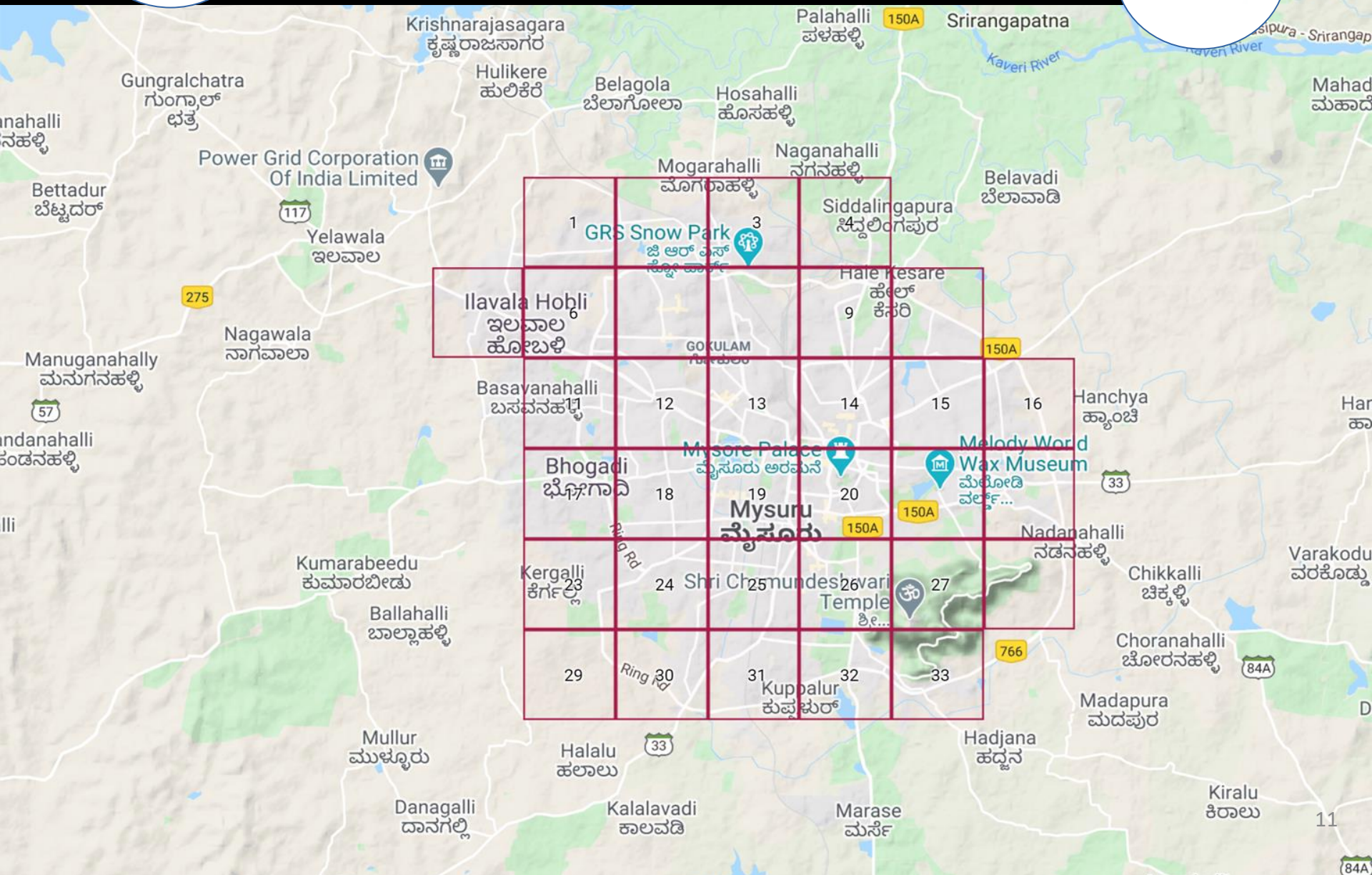
Tirupati Bird Atlas

Bhagalpur Bird Atlas





Mysore City Bird Atlas

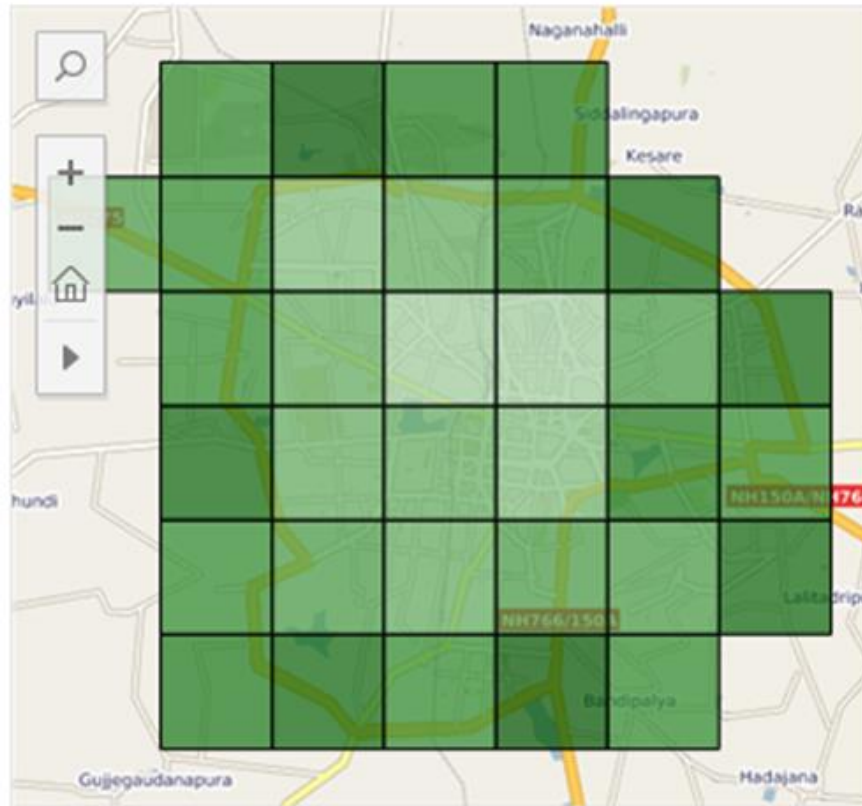




Mysore City Atlas



Unique Species



Species Observed

- Alpine Swift
- Ashy Drongo
- Ashy Prinia
- Ashy-crowned Sparrow-Lark (Ashy-crowne
- Asian Brown Flycatcher
- Asian Koel
- Asian Openbill
- Asian Palm-Swift
- Baillon's Crake
- Bar-headed Goose
- Barn Swallow
- Barred Buttonquail
- Bay-backed Shrike
- Baya Weaver
- Black Drongo
- ...

Unique Species



2014



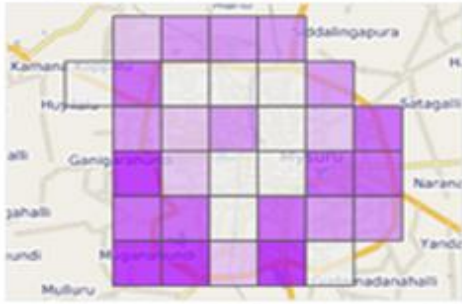
June



2015



2016



Average



Percentage



@Subhadra Devi

Local Movement of Black Drongo

Kerala Bird Atlas

- A systematic equal-effort bird survey across the state

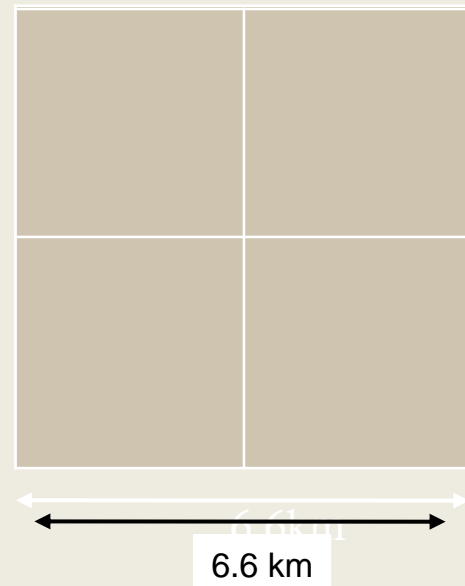
Kerala Bird Atlas

- A systematic equal-effort bird survey across the state
- Atlas resolution at 6.6 x 6.6 sq km



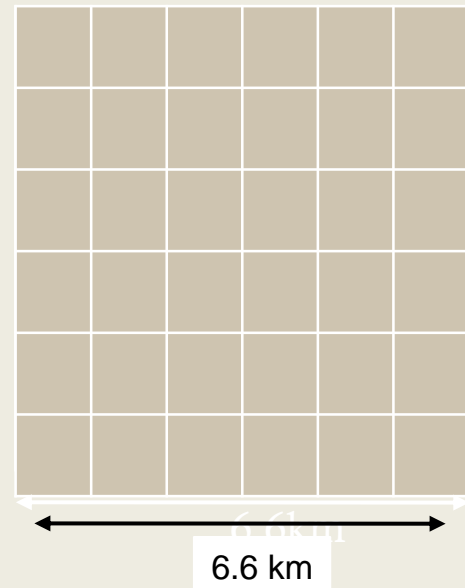
Kerala Bird Atlas

- A systematic equal-effort bird survey across the state
- Atlas resolution at 6.6 x 6.6 sq km
 - Divide this into four quadrants.



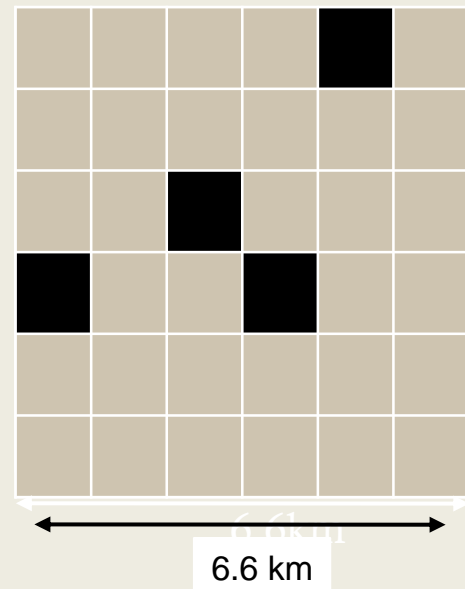
Kerala Bird Atlas

- A systematic equal-effort bird survey across the state
- Atlas resolution at 6.6 x 6.6 sq km
 - Divide this into four quadrants.
 - Each quadrant divide into 9 sub-cells



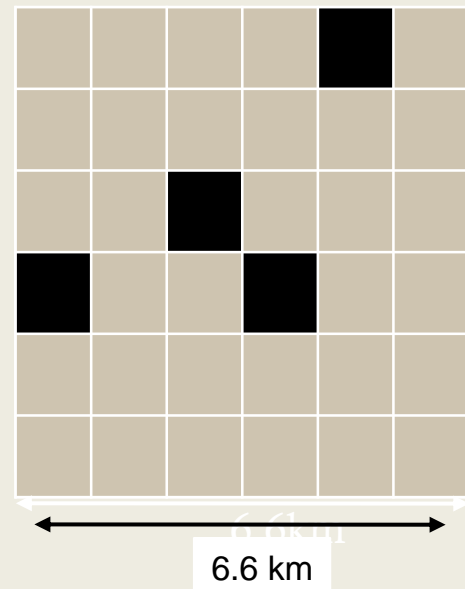
Kerala Bird Atlas

- A systematic equal-effort bird survey across the state
- Atlas resolution at 6.6 x 6.6 sq km
 - Divide this into four quadrants.
 - Each quadrant divide into 9 sub-cells
 - Sample 1 random sub-cell in each quadrant
 - A sub-cell is 1.1 x 1.1 sq km
 - Coverage: ~10% of the state



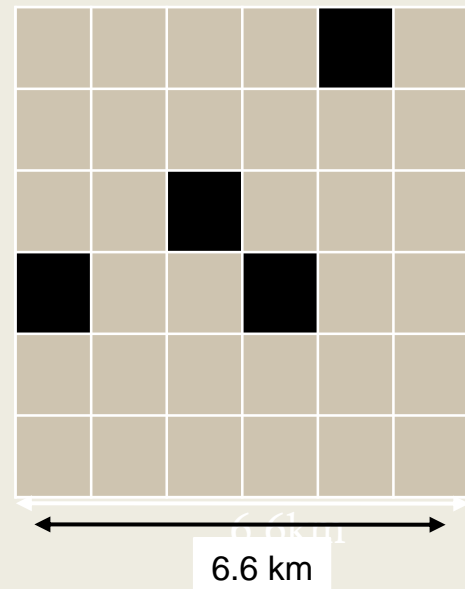
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- Timing & Duration: 60 days (9 weekends)
 - Wet Season: Jul-mid – Sep-mid
 - Dry Season: Jan-mid- Mar-mid



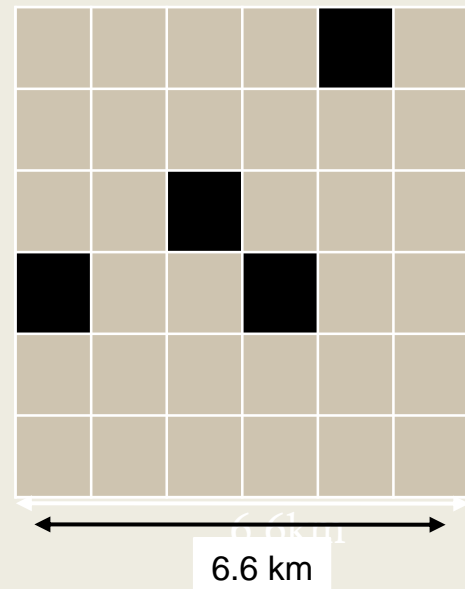
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- No of birders: 2-5 with 1 expert birder



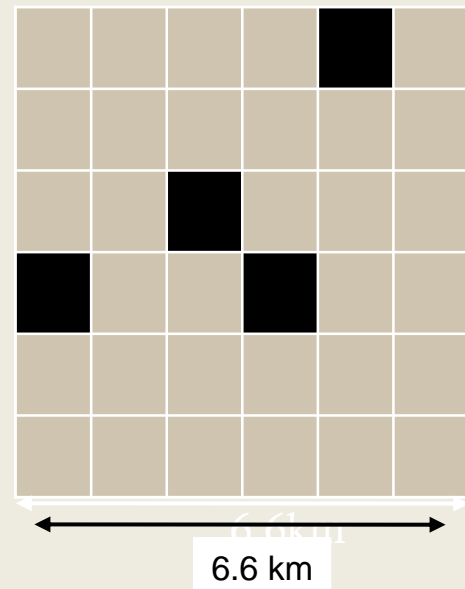
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- No of birders: 2-5 with 1 expert birder
- Use eBird as backbone
 - Four 15-minute complete lists in each sub-cell



Kerala Bird Atlas

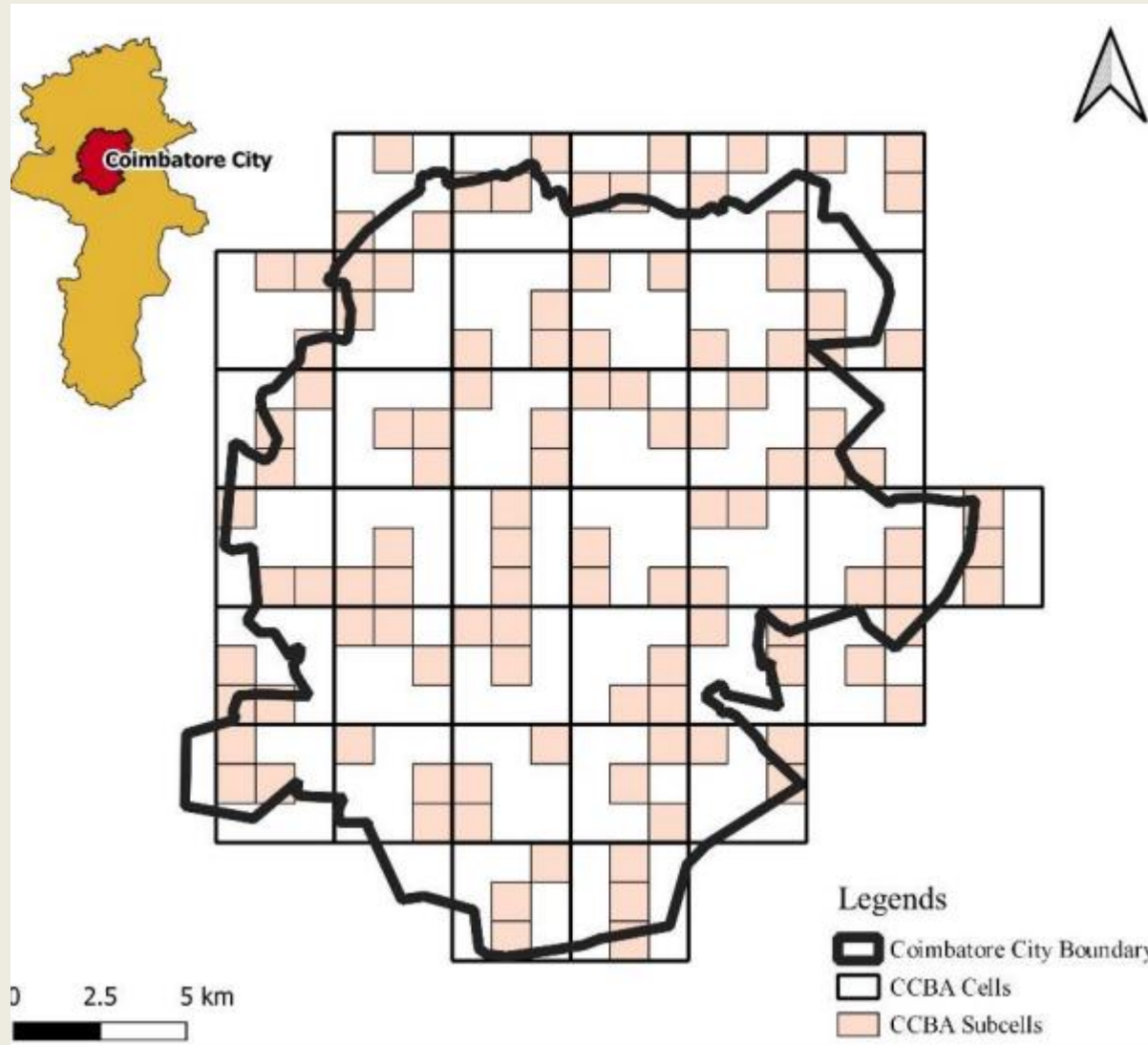
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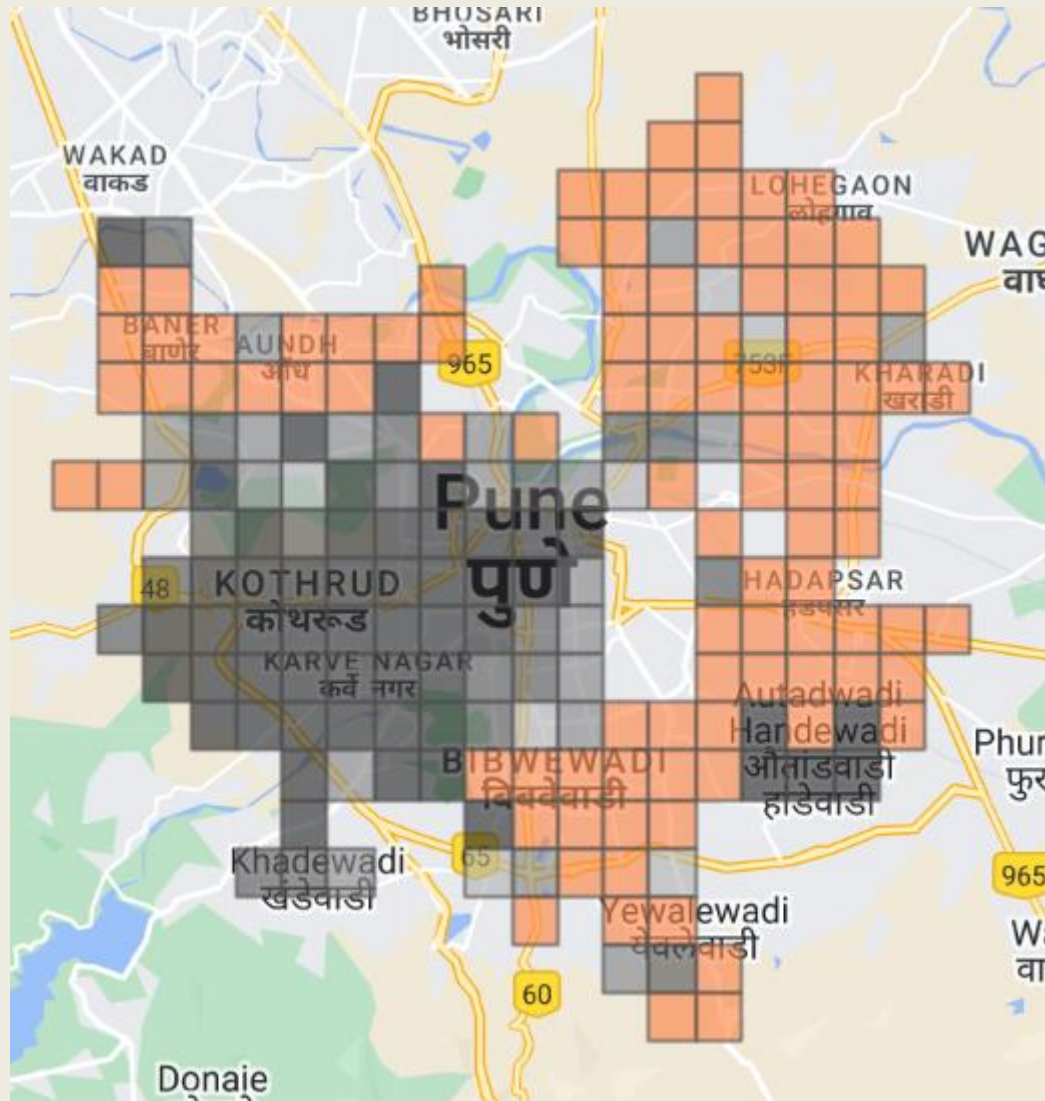
A Typical Atlas list in eBird

Location	Sreekrishnapuram Central School, Palakkad County, Kerala, IN (Map) (Hotspot)	Edit Location
Date and Effort	Mon Mar 06, 2017 6:58 AM	Edit Date and Effort
	Protocol: Traveling	
	Party Size: 2	
	Duration: 15 minute(s)	
	Distance: 0.2 kilometer(s)	
	Observers: Bird Atlas Palakkad (Group Account) List , Praveen J	
	Comments: Palakkad Bird Atlas Sub-cell: 85,23,1 Birders: Praveen J, Anup Raj Flowing Waterbody: No Standing Waterbody: No Fruiting Fig: No Lantana: No Mikania: No Payal: No Hyacinth: No	
	Submitted from eBird Android, version 1.5.1	
Species	26 species (+3 other taxa) total	Edit Species List Review List

More city atlases - Coimbatore



More city atlases - Pune



Atlas Grid Generator

Atlas Grid Generator

Grid Size	No of Grids	Subcells per Grid
6.6km x 6.6km	45	36

Input Shape File kml or shp (with associated files)

Browse... No file

Select spatial coverage

11%

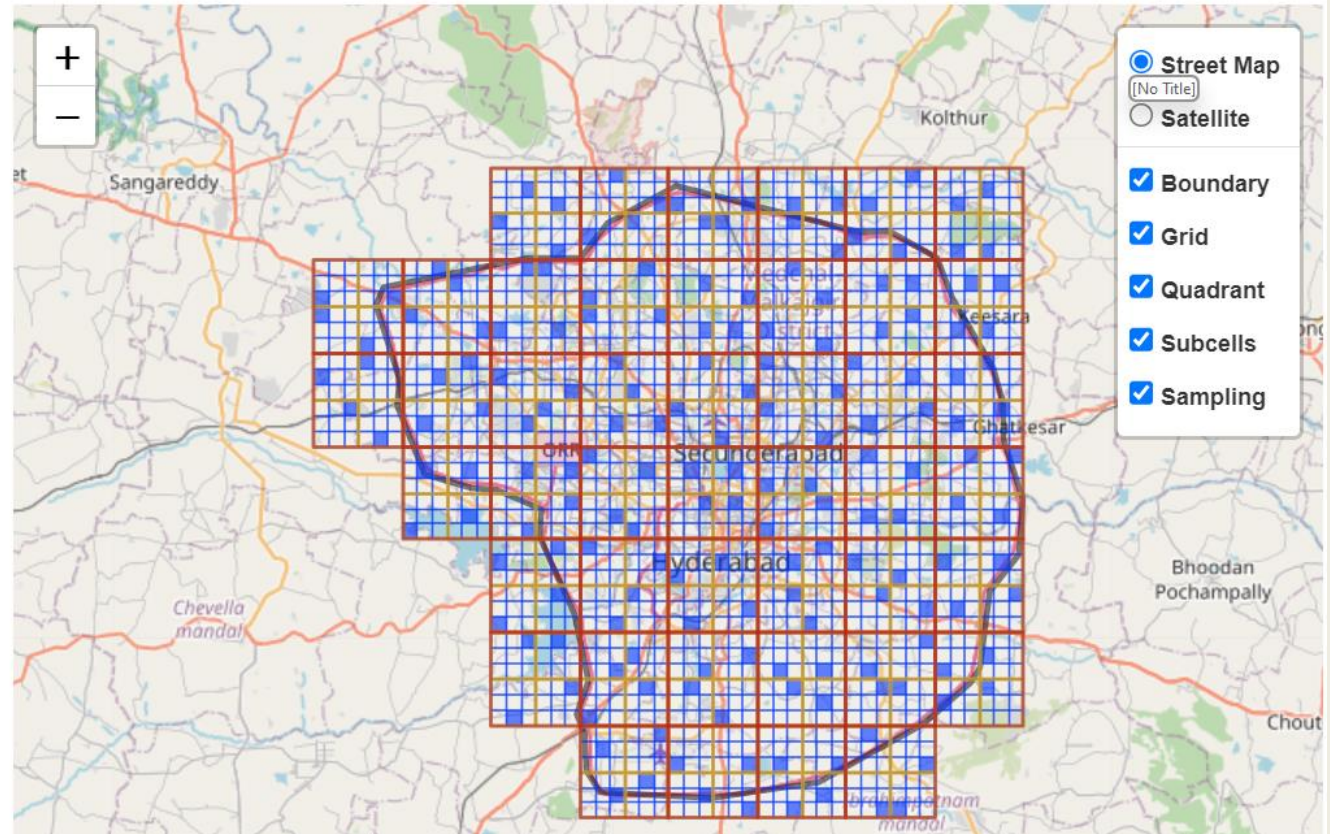
Set Seed

1

Select download shapefile format

.kml
 .shp

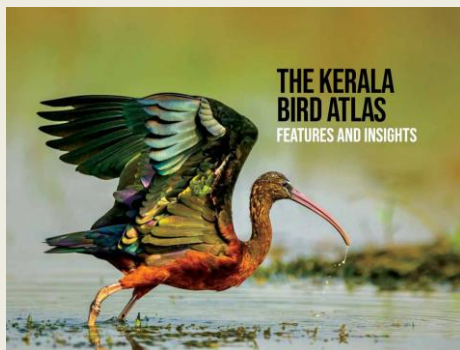
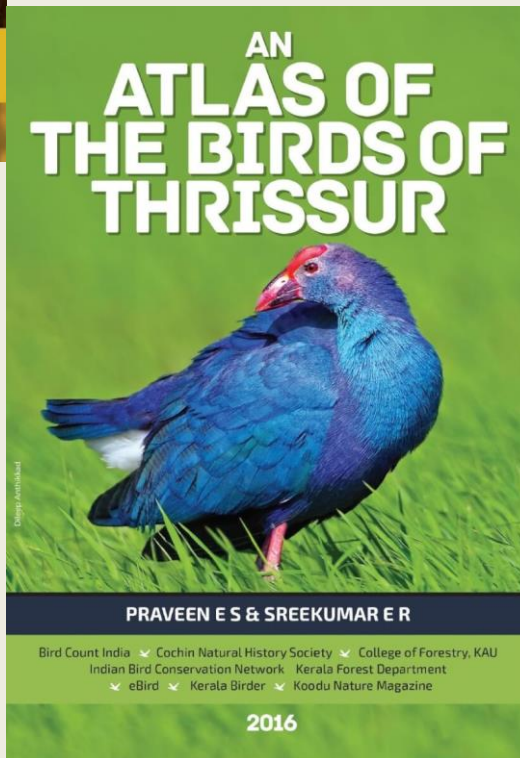
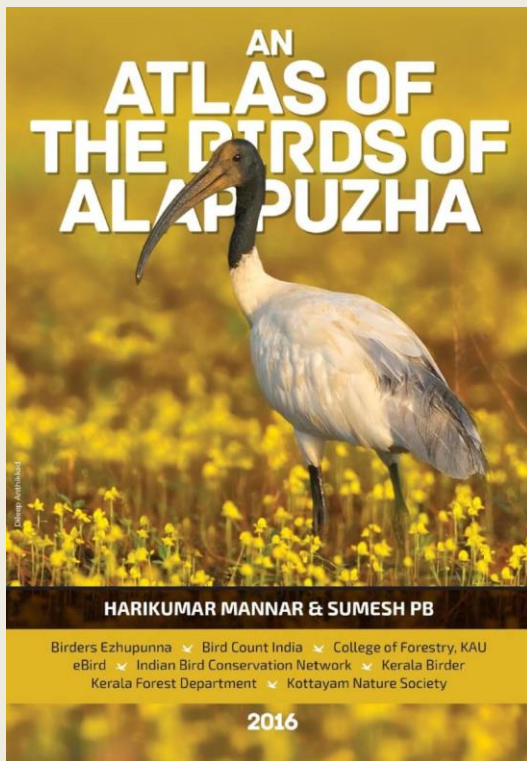
Download Files



Proto-atlas

- Study the feasibility of the birdwatcher network
- During GBBC (4 days, 1 weekend), attempt 1/8th of the actual atlas
 - 1 random sub cell (instead of 4) in a grid
 - 2 checklists instead of 4
- Familiarisation of the protocol
- Coverage of the birder network and the black-holes
- Other potential issues

Atlas Publications



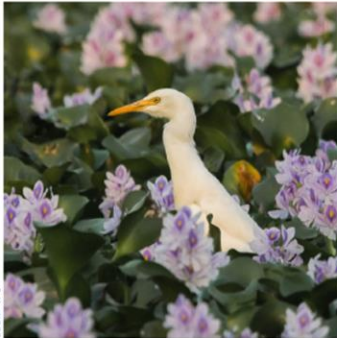
Kerala Bird Atlas




92
KERALA BIRD ATLAS

Cattle Egret
Bubulcus ibis

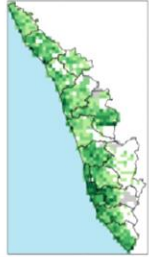
കാലിമുണ്ടി



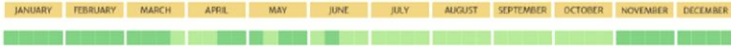
Wet Season
6.3% of lists



Dry Season
27.9% of lists




SIBIN, K. S.

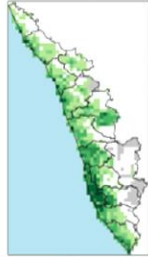


Indian Pond-Heron
Ardeola grayii

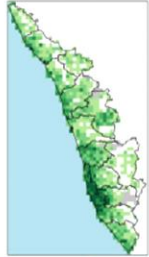
കുളിക്കൊക്ക്



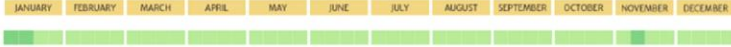
Wet Season
24.2% of lists



Dry Season
24.4% of lists



ROSHRATH RAMESH





District-wise Pamphlets

Kasaragod Bird Atlas

Species count	Dry	Wet
Total	222	153
Endemic	18	15
Threatened	1	0
Near threatened	5	3
SoIB 'High'	9	6
SoIB 'Moderate'	72	50

Key Threatened species

Grey-headed Bulbul, Black-headed Ibis, Oriental Darter, Woolly-necked Stork

Key Endemic species

Rufous Babbler, Nilgiri Flowerpecker, Crimson-backed Sunbird, Malabar Grey Hornbill, Flame-throated Bulbul, Dark-fronted Babbler, Malabar Barbet, Malabar Lark, Malabar Parakeet, Malabar Woodshrike, White-bellied Blue Flycatcher

KASARAGOD BIRD ATLAS

..... ❖

Rufous Babbler

About Kerala Bird Atlas

Time period: 2015-2020
 Survey months: Jan-Mar (Dry) Jul-Sep (Wet)
 Sites covered: 4000
 Total checklists: -25000
 Total species recorded: 382
 Total bird records: - 3 lakhs
 Total volunteers: >500

For more details, visit - birdcount.in/kerala-bird-atlas/

Few most common species

Common Name	Dry	Wet
White-cheeked Barbet	77.5	56.1
Red-whiskered Bulbul	58.7	55.1
Greater Coucal	43.0	54.1
Common Tailorbird	40.1	56.2
House Crow	43.5	44.4
Rufous Treepie	42.7	43.8
Purple-rumped Sunbird	38.1	45.8
Spotted Dove	37.8	41.7
Greater Racket-tailed Drongo	35.9	36.7
White-throated Kingfisher	29.0	37.4
Vernal Hanging-Parrot	33.6	30.5
Black-hooded Oriole	25.0	33.5
Common Iora	28.5	29.9
Black-rumped Flameback	28.3	28.4
Red-vented Bulbul	26.1	27.8
Rock Pigeon (Feral)	30.2	17.7
Grey-breasted Prinia	11.9	34.5
Common Myna	23.6	22.4
Large-billed Crow	25.0	20.4
Oriental Magpie-Robin	26.7	18.5

Few most abundant avian families

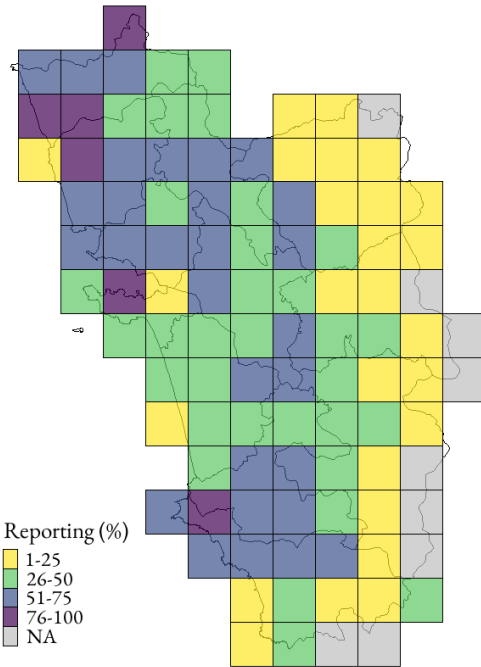
Species count map shows the number of conservation dependent species recorded in every quadrant (3.3 km x 3.3 km). Panchayats of conservation significance outside the protected areas have been outlined.

Values show percentage of checklists in which the species appeared.

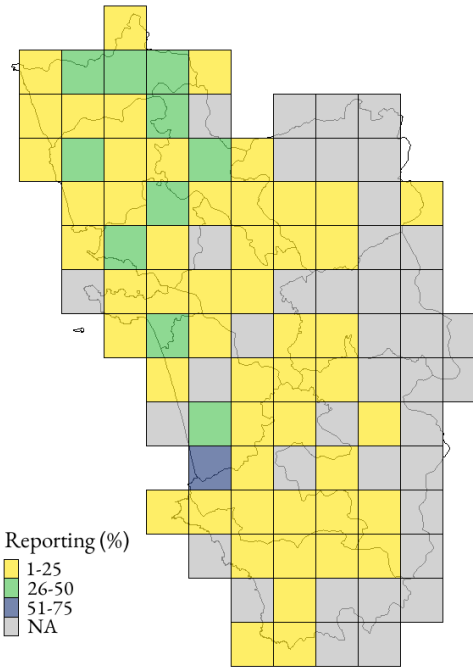
Wet Season Distribution of Sunbirds in Goa



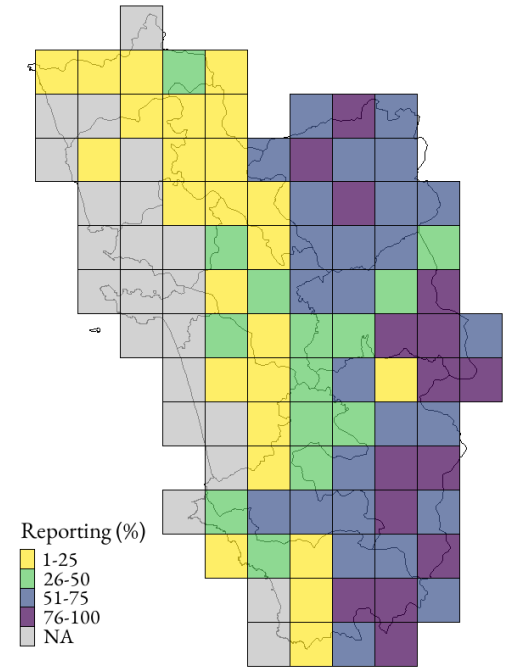
Purple-rumped Sunbird



Purple Sunbird



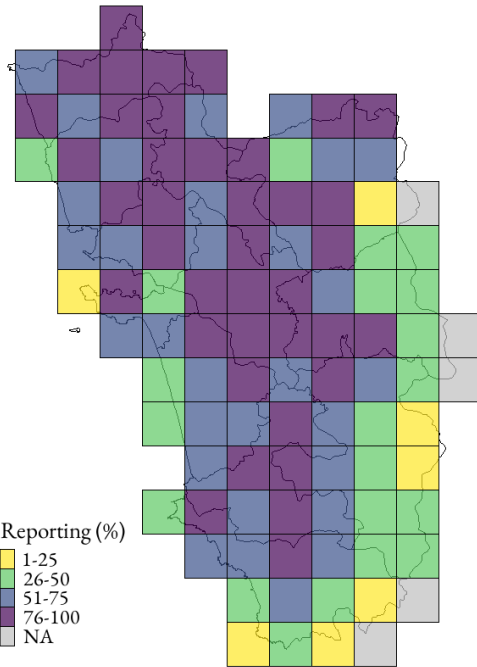
Crimson-backed Sunbird (Small Sunbird)



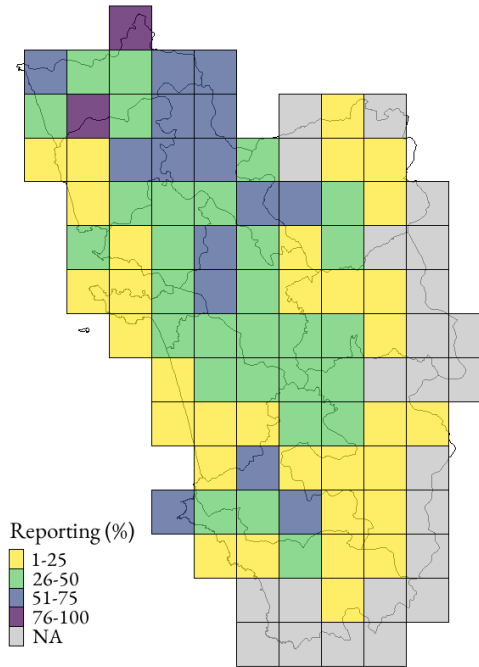
Wet Season Distribution of Bulbuls in Goa



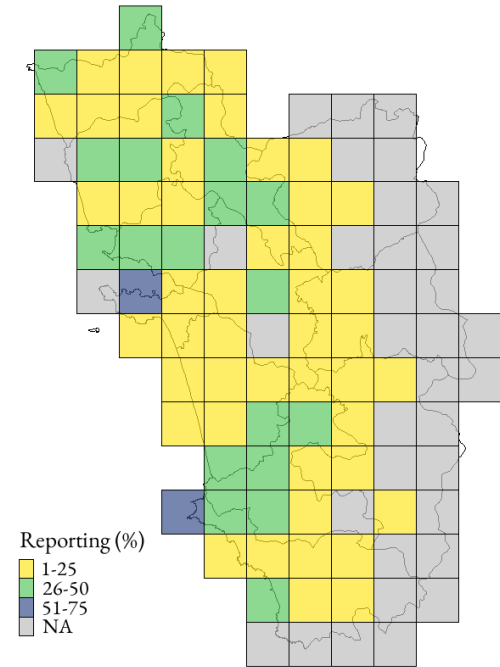
Red-whiskered Bulbul



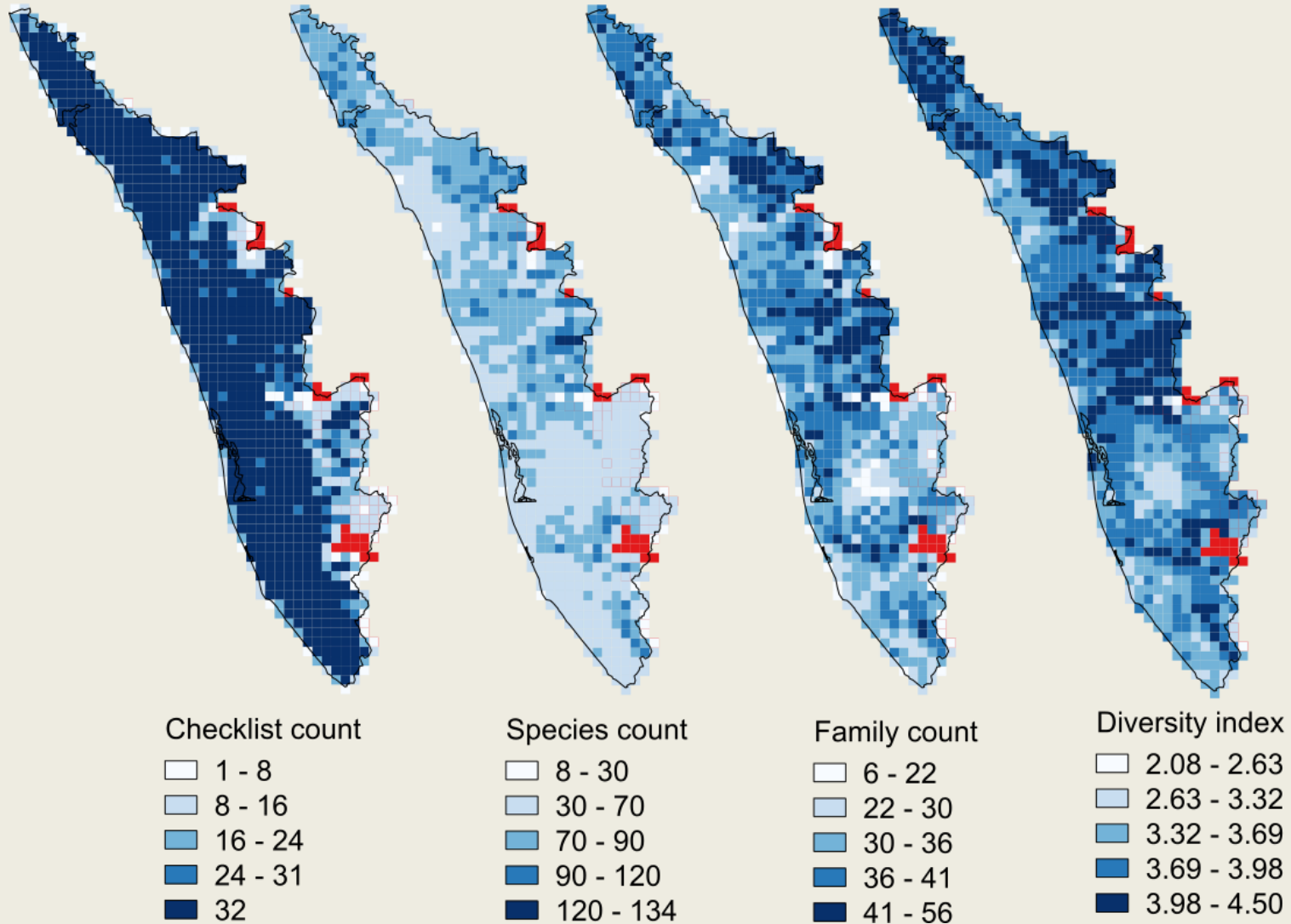
Red-vented Bulbul



White-browed Bulbul

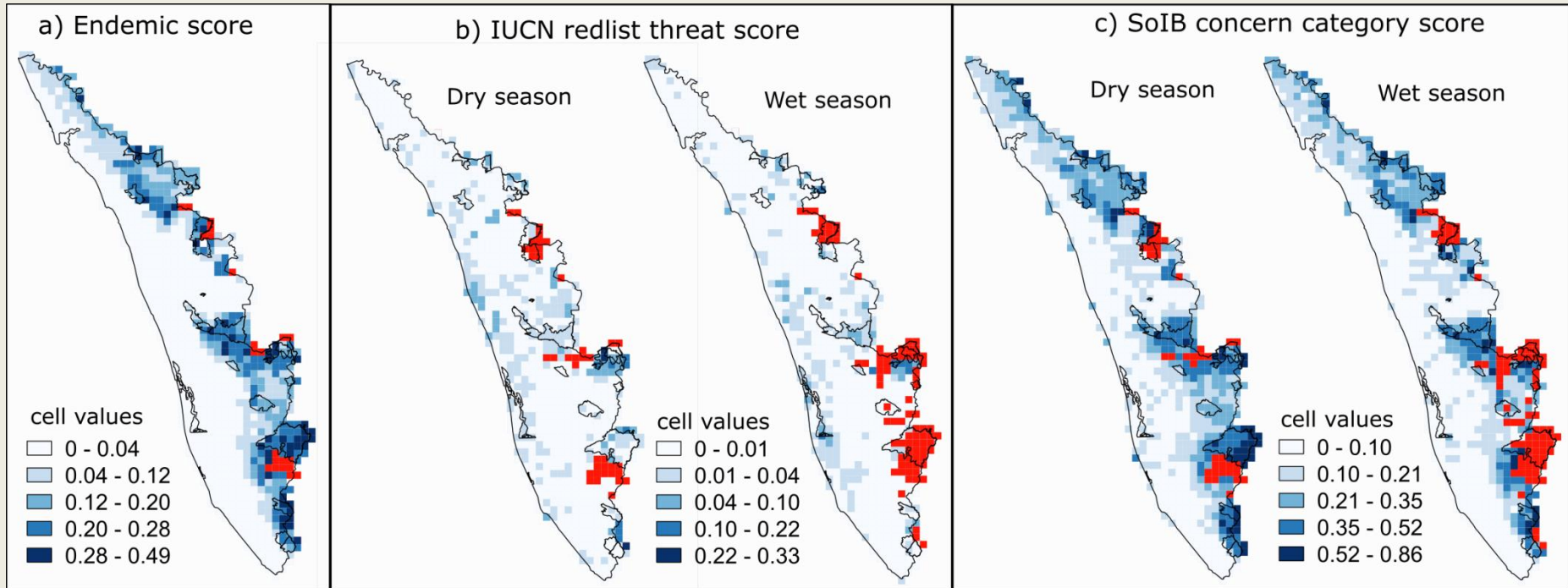


Kerala Bird Atlas: Diversity patterns



* R package 'vegan v.2.5-7' (Oksanen et al. 2020)

Kerala Bird Atlas: Distribution of species of conservation concern



Endemic*	Species count
Yes	33
No	328

IUCN status	Species count
CR	2
EN	3
VU	11
NT	18
LC	327

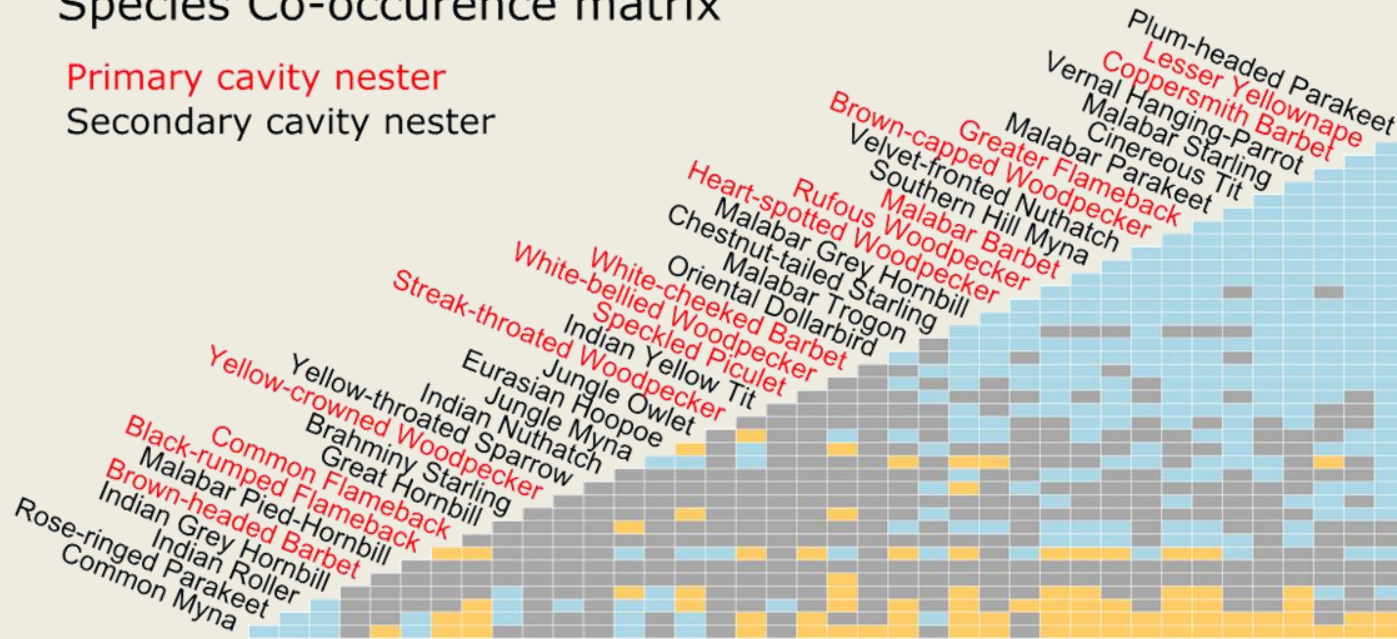
SoIB status	Species count
High	25
Medium	135
Low	201

Do the secondary cavity nesters co-occur with primary cavity nesters ?

Species Co-occurrence matrix

Primary cavity nester

Secondary cavity nester



negative
 random
 positive



Training Volunteers



Canacona, GA, India
Canacona, Canacona, 403702, GA, India
Lat 14.999306, Long 74.058977



GPS Map Camera

Margao, Goa, India
7XRF+8GM, Borda, Margao, Goa 403602, India
Lat 15.290821°
Long 73.973723°
31/08/23 09:57 AM GMT +05:30



Media & Celebrities



കേരളത്തിലെ മുഴുവൻ പക്ഷികളുടെയും ഇനവും എണ്ണവും രേഖപ്പെടുത്താനുള്ള പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു

കിളിപാടുംനാടിന് പക്ഷിഭൂപടം

സി. സുനിൽകുമാർ

സമ്പൂർണ്ണസാക്ഷരതയെ ഉറപ്പാക്കാനും സാമൂഹികവും സാമ്പത്തികവും ഉറപ്പാക്കാനും പക്ഷിഭൂപടം വളരെയധികം സഹായകരമാണ്. ഇതിന്റെ ഭാഗമായി കേരളത്തിലെ പക്ഷികളുടെയും എണ്ണയും രേഖപ്പെടുത്തുന്ന പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു. ഇതിന്റെ ഭാഗമായി കേരളത്തിലെ പക്ഷികളുടെയും എണ്ണയും രേഖപ്പെടുത്തുന്ന പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു. ഇതിന്റെ ഭാഗമായി കേരളത്തിലെ പക്ഷികളുടെയും എണ്ണയും രേഖപ്പെടുത്തുന്ന പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു.



നൂറുക്കണക്കിന് പക്ഷികളുടെയും എണ്ണയും രേഖപ്പെടുത്തുന്ന പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു. ഇതിന്റെ ഭാഗമായി കേരളത്തിലെ പക്ഷികളുടെയും എണ്ണയും രേഖപ്പെടുത്തുന്ന പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു.

38,000 കിലോമീറ്റർ സ്ക്വയറിനുള്ള കേരളത്തിന്റെ രാഷ്ട്രീയഭൂപടത്തെ 3,000-ലധികം ചെറുസ്ഥലങ്ങളായി തിരിച്ച്, ആ സ്ഥലങ്ങളിലെ പക്ഷികളുടെ എണ്ണവും ഇനങ്ങളും ഓരോ പതിനഞ്ചുമിനിറ്റിലും കാണുന്ന രേഖപ്പെടുത്തിയാണ് പക്ഷിഭൂപടനിർമ്മാണം. ഓരോ 'സെല്ലിംഗും' ഒരുമണിക്കൂർ നേരം നിരീക്ഷിക്കും. ഇതിനെ 15 മിനിറ്റിലുള്ള നാലുഭാഗങ്ങളായി തിരിച്ചാണ് ഇനവും എണ്ണവും രേഖപ്പെടുത്തുക. കൂടാതെ ഈ സ്ഥലങ്ങളിലെ ജലസാന്നിധ്യം, ആൽമരങ്ങൾ, അധിനിവേശസസ്യങ്ങൾ എന്നിവയെയും രേഖപ്പെടുത്തുന്നുണ്ട്.

ഇന്ത്യയുടെ 'കേരളത്തിലെ പക്ഷികൾ' വായിച്ച് പക്ഷിനിരീക്ഷണത്തിനിറങ്ങിയ തലമുറയ്ക്ക് ഇന്ന് സഹായത്തിന് പുതിയ സാങ്കേതികവിദ്യകളുണ്ട്. പുതുതായി ഈ രംഗത്തെത്തിയവരുടെ ഫോണിൽ 'കിളി' ആപ്ലിക്കേഷനും ഉപയോഗിക്കാവുന്നതാണ്.

പുരയിടങ്ങളിലും പട്ടണങ്ങളിലും പക്ഷികൾക്ക് ഇടം നൽകുന്നതിനും പക്ഷികളുടെ സംരക്ഷണത്തിനും പക്ഷിഭൂപടം വളരെയധികം സഹായകരമാണ്. ഇതിന്റെ ഭാഗമായി കേരളത്തിലെ പക്ഷികളുടെയും എണ്ണയും രേഖപ്പെടുത്തുന്ന പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു.



പക്ഷിഭൂപടനിർമ്മാണത്തിന്റെ ഭാഗമായി കേരളത്തിലെ പക്ഷികളുടെയും എണ്ണയും രേഖപ്പെടുത്തുന്ന പക്ഷിഭൂപടം (ബേർഡ് അറ്റ്ലസ്) ഒരുങ്ങുന്നു.

കേരളത്തിലെ ഗ്രാമമേഖലകളിലെ കിളികളുടെ വിന്യാസത്തെക്കുറിച്ച് ഇതുവരെ നടന്ന പഠനങ്ങൾ



കേരളത്തിലെ ഗ്രാമമേഖലകളിലെ കിളികളുടെ വിന്യാസത്തെക്കുറിച്ച് ഇതുവരെ നടന്ന പഠനങ്ങൾ

The Selfie times – its fun !







Photo: Abhijit Mishra

