

BIRD COMMUNITY STRUCTURE IN THE SACRED GROVES OF NORTHERN KERALA

Jyothi K. M. and Nameer P. O.

Department of Wildlife Sciences, College of Forestry, KAU, Vellanikkara, Thrissur

Introduction

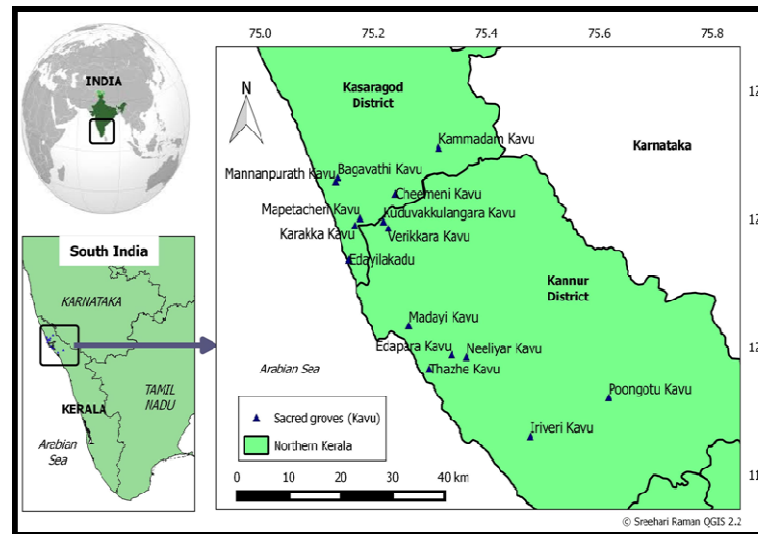
Sacred groves :-

- wooded land conserved beyond any legal legislation, due to fear of deity
- one of the *insitu* Conservation method
- repositories of many flora and fauna
- conserve threatened and endemic species
- maintain microclimate of the region
- recharge surrounding area and maintain water table throughout the year

Objectives of study:-

1. To study the bird community structure in the sacred groves of northern Kerala
2. To understand significance of the sacred groves in conserving the threatened and endemic birds

Study area



Results

Orders- 17

Families 48

Species richness 107

Endemic birds to WG 4

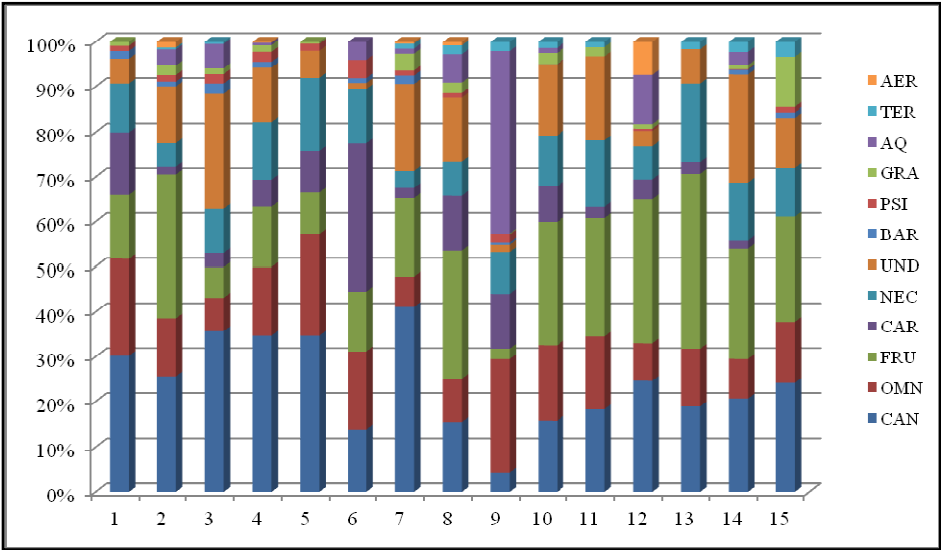
Migratory bird 13

Raptors and Owls 9

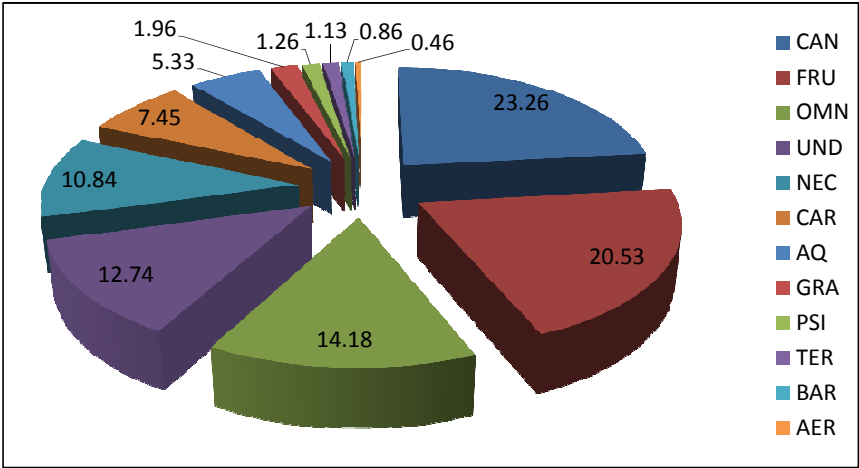
Sacred grove	No of Species	Abundance
Mannanpurath Kavay	35	1069
Cheemeni Kavay	55	1926
Mapetachery Kavay	46	1249
Karakka Kavay	40	1464
Bagavathi Kavay	23	866
Edayilekadu	31	1224
Kammadam Kavay	44	1236
Madayi Kavay	43	1617
Thazhe Kavay	42	2237
Edappara Kavay	36	1282
Irriveri Kavay	36	1200
Poongotu Kavay	36	827
Neeliyar Kavay	32	1316
Verikkara Kavay	54	1738
Kudakolangara Kavay	37	1574

Diversity in sacred groves of northern Kerala

Camp	Shannon Index (log base 10)	Gini Simpson Index (1-D)
Mannanpurath Kavu	1.33	0.94
Cheemeni Kavu	1.51	0.96
Mapetachery Kavu	1.4	0.95
Karakka Kavu	1.36	0.94
Bagavathy Kavu	1.19	0.92
EdayilaKadu	1.17	0.89
Kammadam Kavu	1.45	0.95
Madayi Kavu	1.43	0.95
Thazhe Kavu	1.36	0.94
Edapara Kavu	1.34	0.94
Iriveri Kavu	1.27	0.91
Poongotu Kavu	1.32	0.93
Neeliyar Kavu	1.28	0.92
Verikkara Kavu	1.39	0.93
Kudakolangara Kavu	1.42	0.95



Feeding guild structure in sacred groves of northern Kerala



Overall Feeding guild structure of birds in the sacred grove of northern Kerala

Threats to sacred groves of Kerala



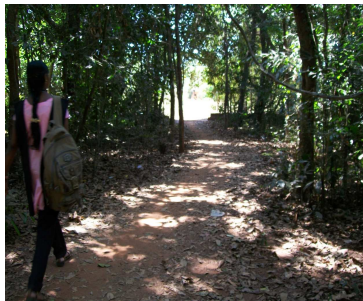
New construction



Plastic disposal



Anti-social activities



Passages inside the SG

Conclusion

- Social fencing of sacred groves provides excellent protection to the biodiversity of the locality
- Support diverse species of birds, including raptors, owls, forest birds, endemic birds and migratory birds
- Bird species richness was more in Cheemeni Kavu
- Canopy Insectivores and Frugivorous were the dominant feeding guild
- Cheemeni Kavu and Kammadam Kavu supported birds of all feeding guilds
- Threats - dumping of plastic waste, encroachment, extensive use of passage as short-cuts and general quality deterioration due to the urbanisation of surrounding areas
- urgent steps should be taken towards the conservation of these crucial biodiversity repositories, else we might lose them