

# AVIAN DIVERSITY OF WESTERN GHATS

DR SATISH PANDE

ELA FOUNDATION

PUNE





# BIO-DIVERSITY HOTSPOTS IN INDIA

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- EASTERN HIMALAYAS
- ANDAMAN & NICOBAR ISLANDS
- WESTERN GHATS



# WESTERN GHATS

8° N TO 21° N; 1600 KM

160000 SQKM AREA

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- NORTHERN GHATS
- CENTRAL GHATS FROM GOA GAP
- SOUTHERN GHATS FROM PALGHAT GAP
  
- EASTERN OFFSHOOTS  
(MAHADEO, AJANTA, NILGIRI, BR BETTA, PALANI HILLS)
  
- ARABIAN SEA - WEST
- DECCAN PLATEAU - EAST



# WESTERN GHATS

NORTH  
CENTRAL  
SOUTH



# WESTERN GHATS

## STATES & NO. OF DISTRICTS

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- GUJARAT – 3
- MAHARASHTRA – 11
- GOA – 2
- KARNATAKA – 10
- TAMIL NADU – 7
- KERALA – 14
- TOTAL - 47





# SALIENT FEATURES

- LACK SEVERAL GUILDS UNIQUE TO TROPICAL FORESTS : (Antbirds, Hummingbirds, Birds of Paradise, etc.)
- POOR REPRESENTATION OF OTHER GUILDS (Pittas-1/12 SEA; Frogmouths-1/5 SEA; Trogons-1/5 SEA; Sunbirds-7/76 Africa)
- DISJUNCT DISTRIBUTION (RAINFOREST BABLERS, LAUGHING THRUSHES IMPOVERISHMENT-56 NE INDIA)
- PATCHY DISTRIBUTION-LOCAL EXTINCTION

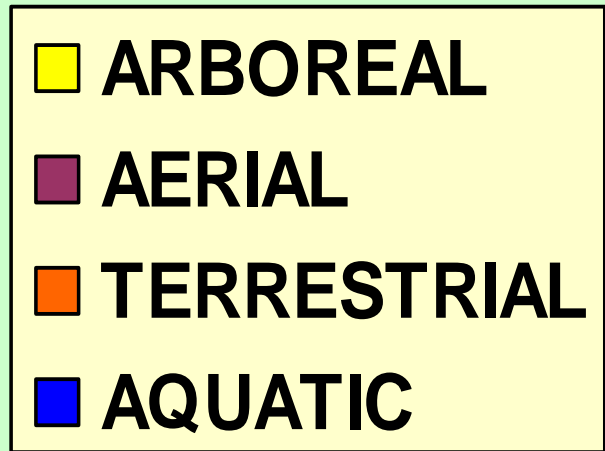
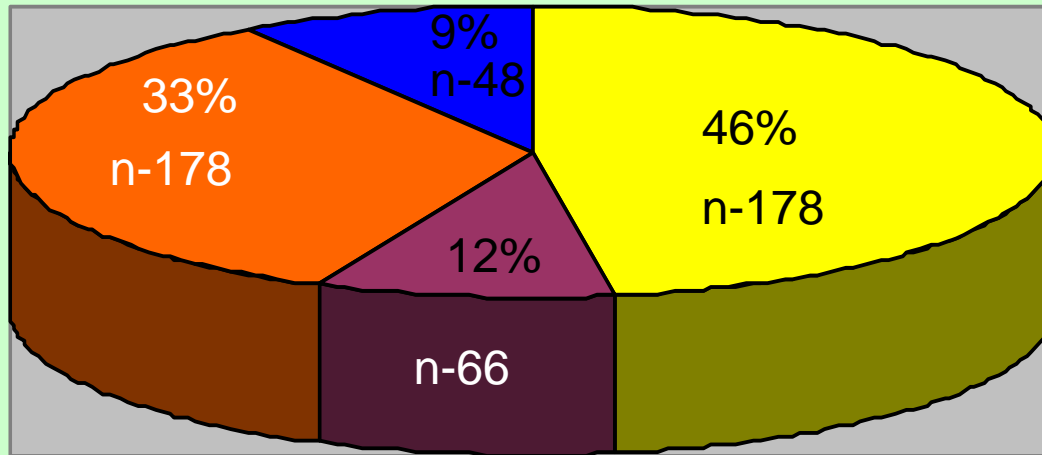
# BIO-DIVERSITY



- BRYOPHYTES – 803 / 200 (25%) ENDEMIC
- GYMNOSPERMS – 4500 / 1720 (38%) ENDEMIC
- INVERTEBRATES – SEVERAL (>5000 SP. IN MAJOR TAXA)  
BUTTERFLIES – 330 / 37 (11%) ENDEMIC;  
DRAGONFLIES & DAMSELFLIES – 178 / 70 (39%) ENDEMIC
- FISHES – 225 FRESH-WATER / 123 (55%) ENDEMIC
- AMPHIBIANS – 138 / 110 (80%) ENDEMIC
- REPTILES – 161 / 99 (61%) ENDEMIC
- MAMMALS – 120 / 12 (10%) ENDEMIC
  
- AVES – 508 / 18 ENDEMIC (3.5%) ENDEMIC



# AVIAN HABITS



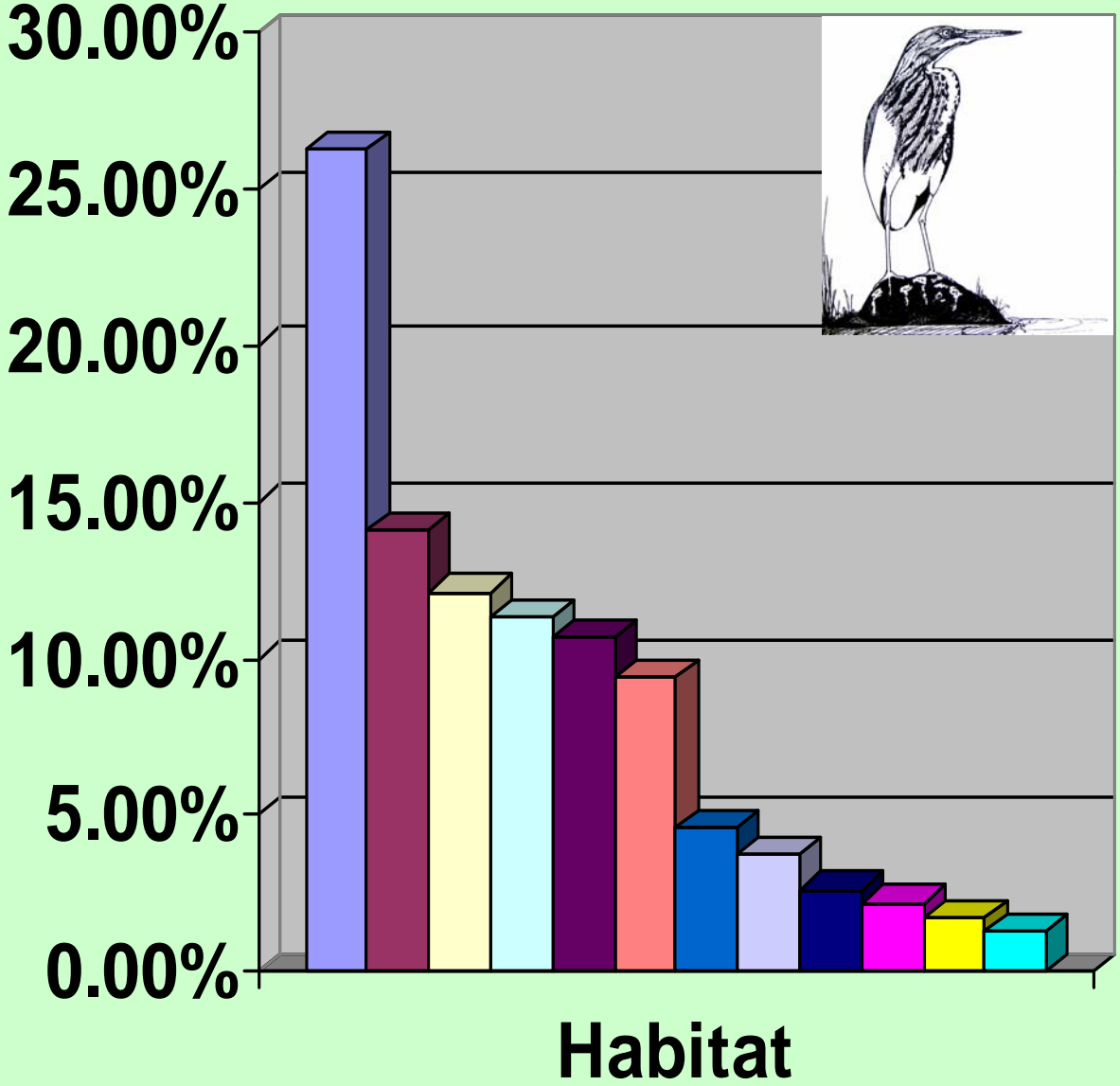


# VEGETATION

- TROPICAL EVERGREEN
- MONTANE EVERGREEN
- TROPICAL MOIST/DRY-DECIDUOUS / SEC.
- TROPICAL THORN – SHRUB
- MONTANE GRASSLAND - SHOLAS
- WETLANDS – DAMS, SWAMPS, WATERFALL, LITTORAL  
*MYCTERIA* STANDS, PEAT BOGS
- PLANTATIONS, GROVES

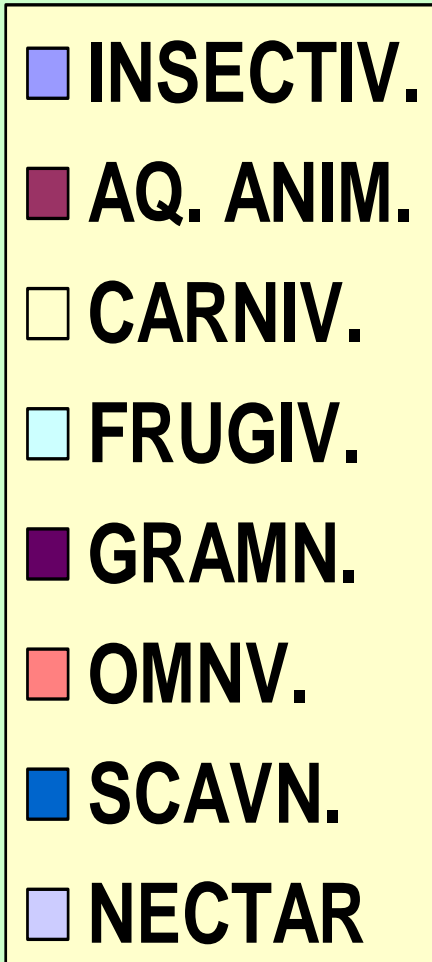
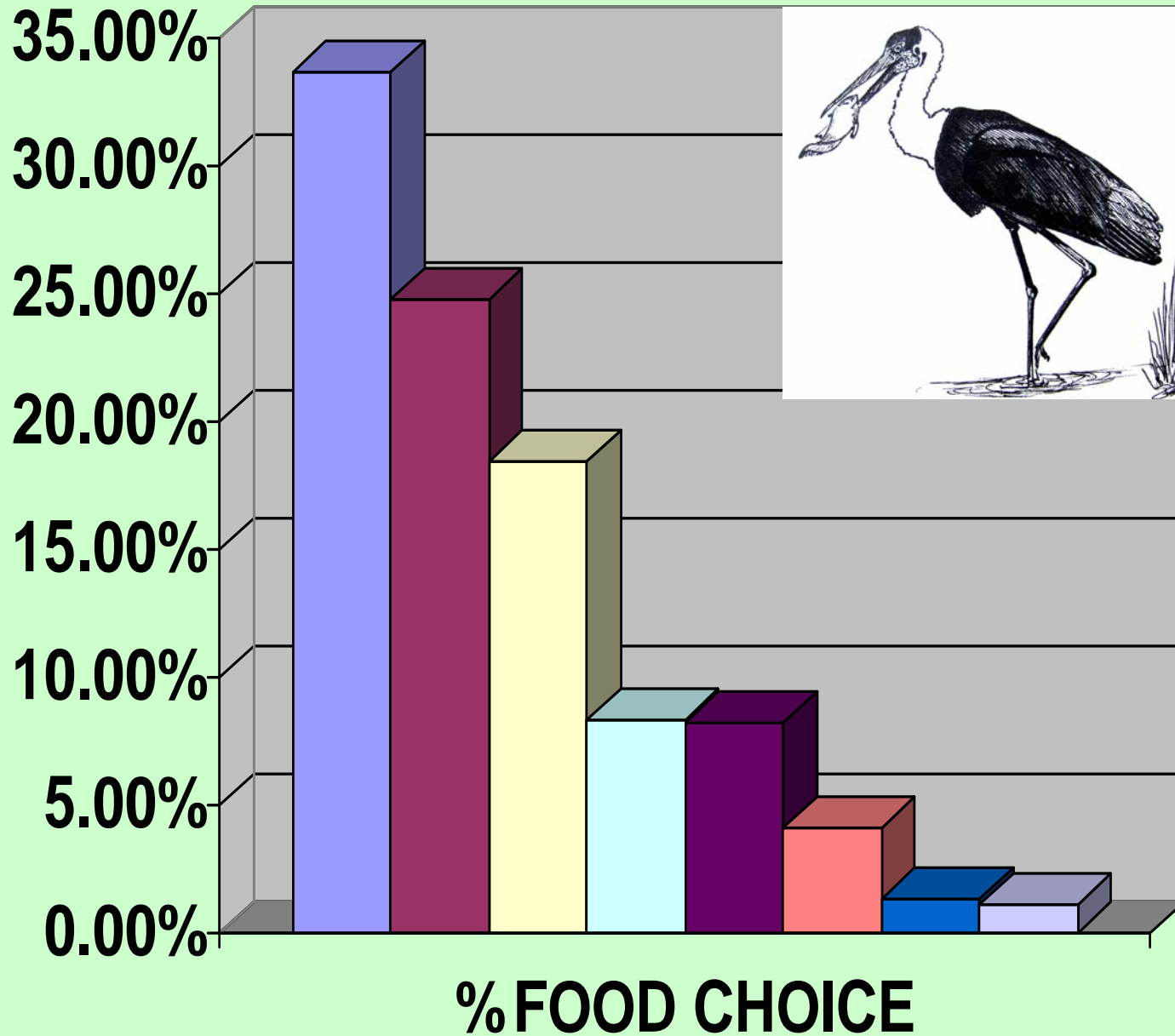


# % HABITAT OCCUPATION BY BIRDS

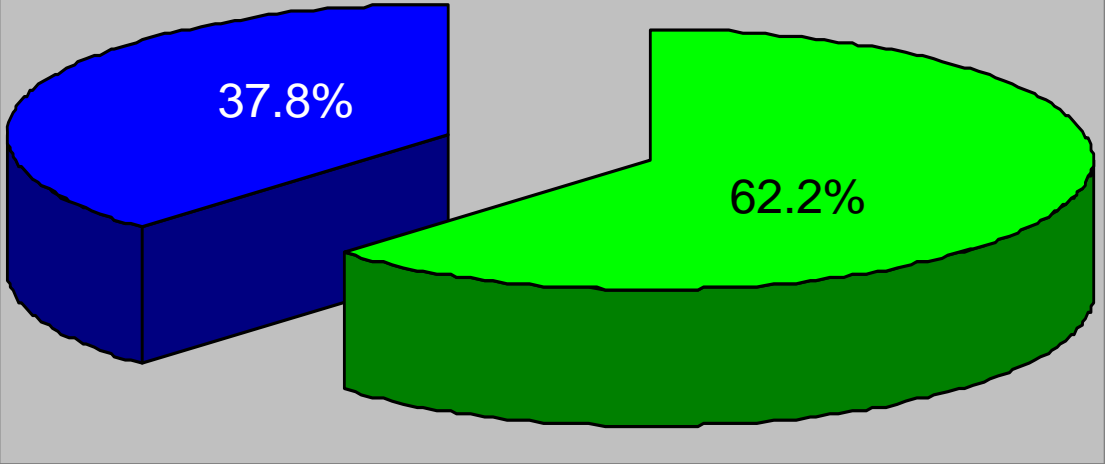


- Dec/Semi-Dec
- Scrub
- Coast/Mang
- Ev-Gr/Semi-EG
- Marsh
- Water
- Agr
- Cliff
- Urban
- River
- Grove
- Grass

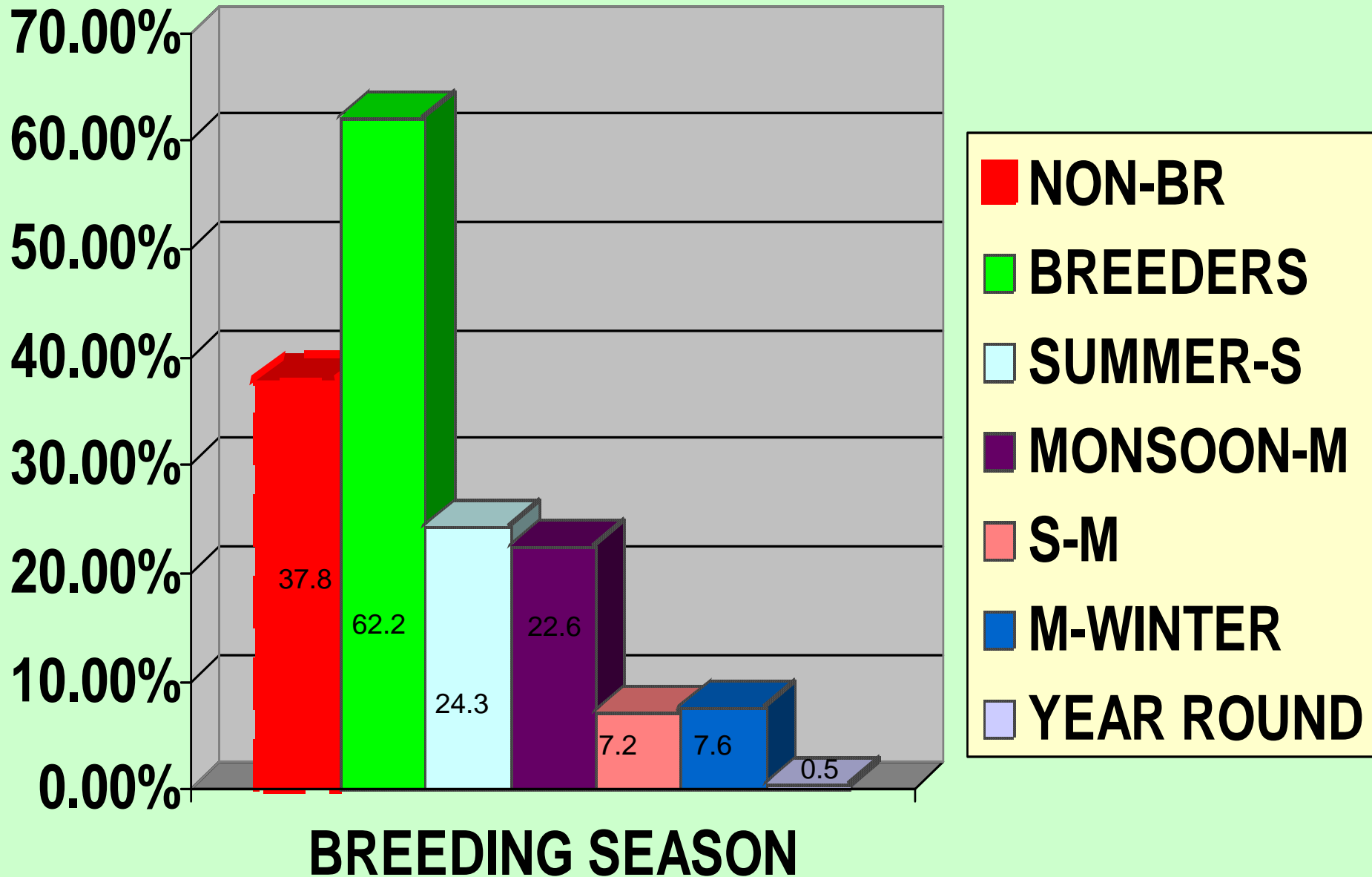
# AVIAN FOOD PREFERENCES



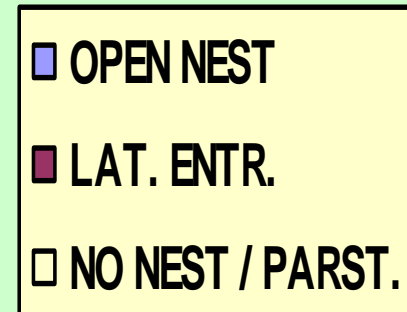
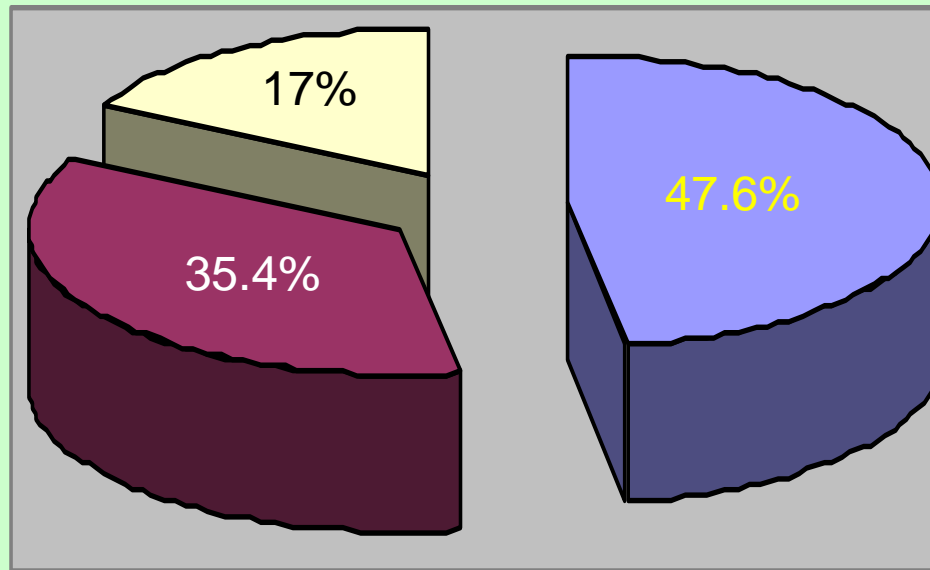
# RESIDENTIAL STATUS



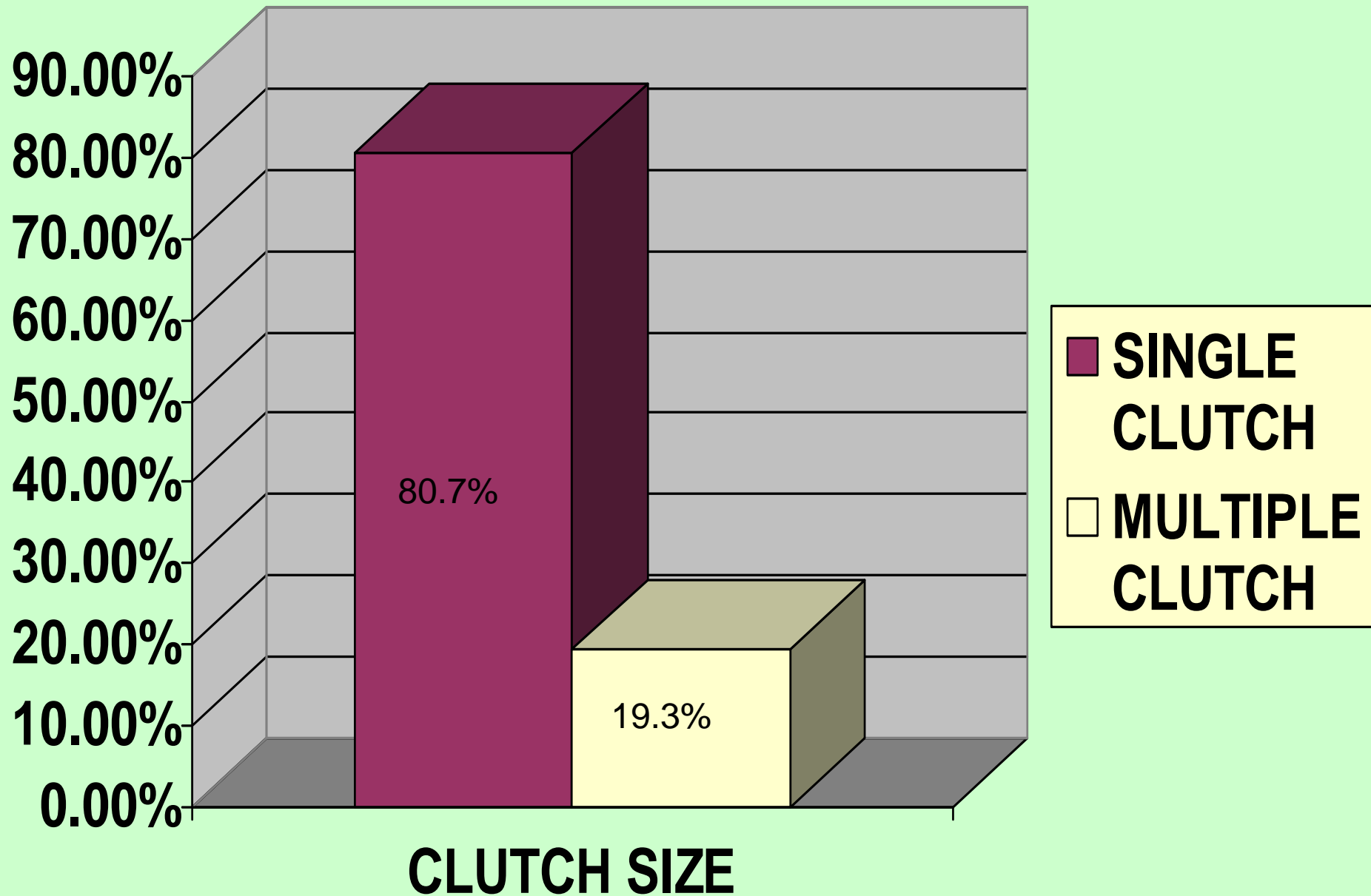
# NESTING PERIOD OF LOCAL BREEDERS



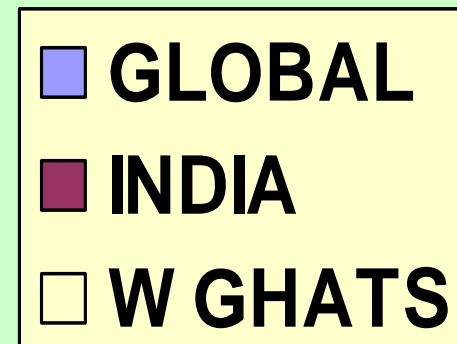
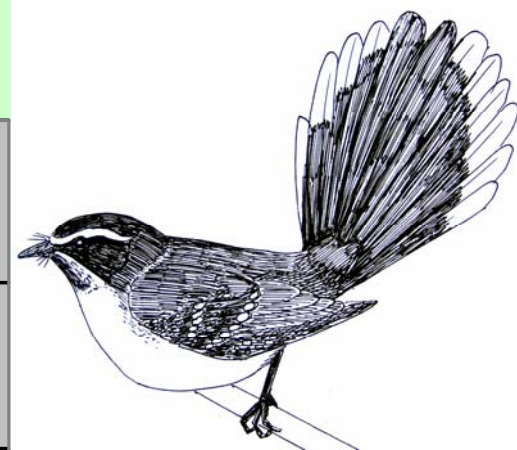
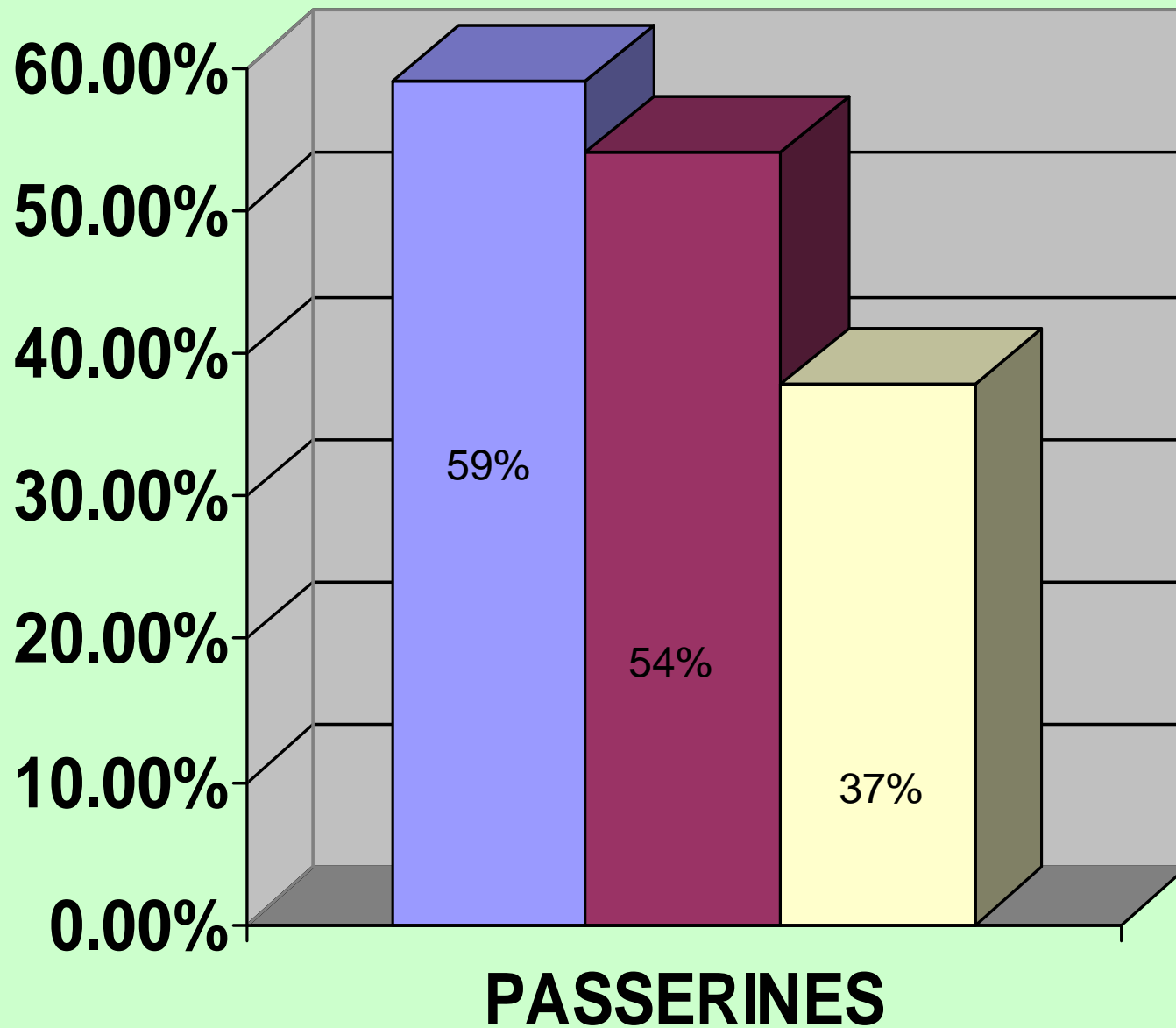
# NEST TYPES OF 336 BREEDERS



# CLUTCH SIZE – CONSERVATION ANGLE

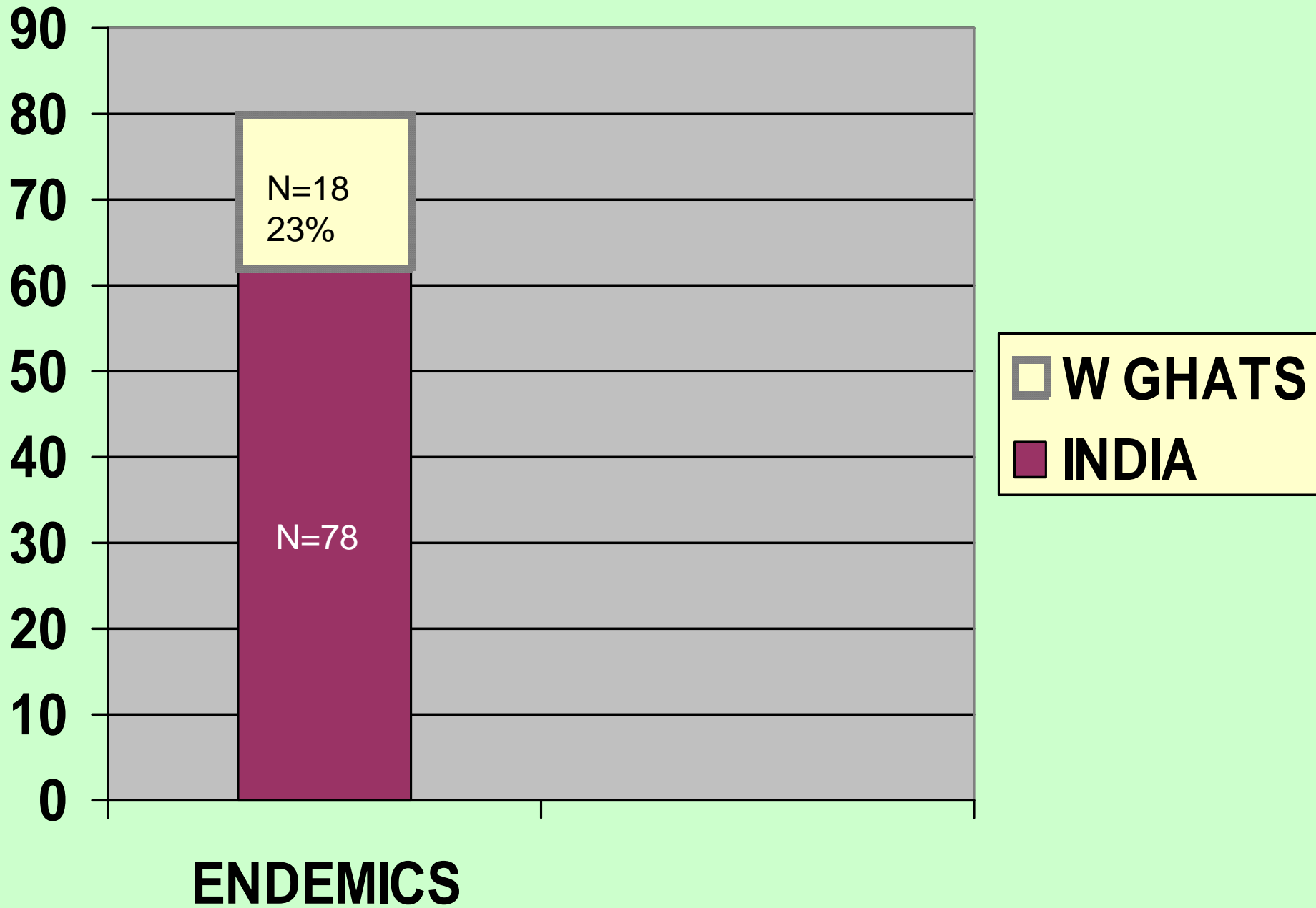


# % DISTRIBUTION OF PASSERINES





# RELATIVE DISTRIBUTION OF AVIAN ENDEMICS



# LIST OF ENDEMIC BIRDS

\*also recorded outside region

## ■ Low Elevation Rainforests

1. Malabar Parakeet *Psittacula columboides* \*
2. White-bellied Tree-Pie *Dendrocitta leucogastra*
3. Grey-headed Bulbul *Pycnonotus priocephalus*
4. Rufous Babbler *Turdoides subrufus* \*
5. White-bellied Blue Flycatcher *Cyornis pallipes*
6. Malabar Whistling Thrush *Myiophonus horsfieldii* \*
7. Small Sunbird *Leptocoma minima*
8. Malabar Woodshrike *Tephrodornis sylvicola*



# LIST OF ENDEMIC BIRDS

\*also recorded outside region

## ■ Semi-Deciduous Forest

1. White-cheeked barbet *Megalaima viridis* \*
2. Malabar Grey Hornbill *Ocyrceros griseus*
3. Malabar White-headed Starling *Sturnia blythii*

## ■ Montane Forest

1. Nilgiri Wood-Pigeon *Columba elphinstoni* \*
2. Black-and-Orange Flycatcher *Ficedula nigrorufa*
3. Nilgiri Flycatcher *Eumyias albicaudata*
4. Rufous-breasted Laughing-Thrush *Garrulax cachinnans*
5. Kerala Laughing-Thrush *Trochalepteron fairbanki*
6. Wynaad Laughing-Thrush *Garrulax delesserti*
7. Nilgiri Blue Robin *Myiomela major*
8. White-bellied Blue Robin *Myiomela albiventris*
9. Nilgiri Pipit *Anthus nilghiriensis*
10. Nilgiri Flowerpecker *Dicaeum concolor*



# LIST OF ENDEMIC BIRDS

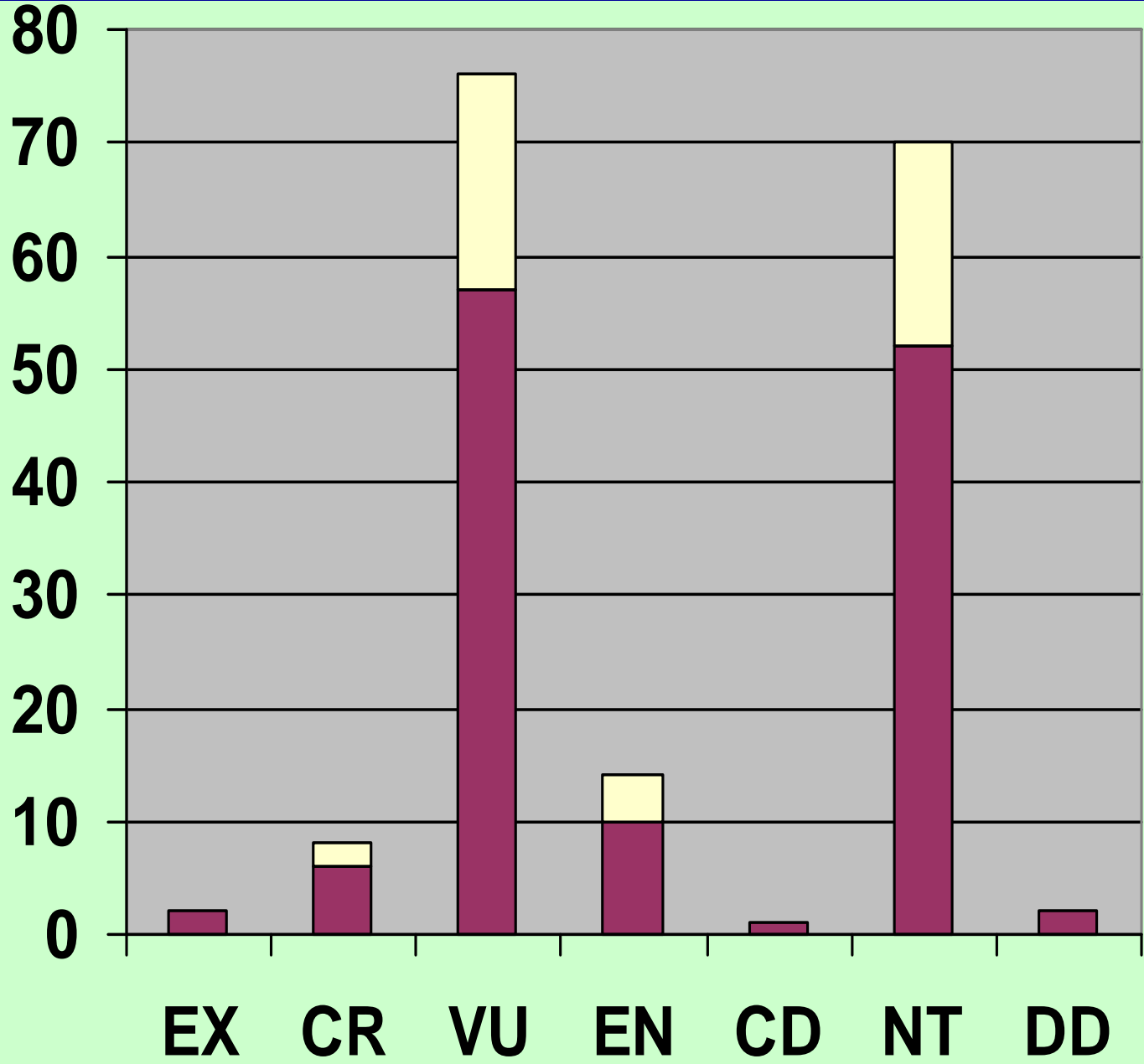
\*also recorded outside region

- Higher Grasslands

1. Malabar Lark *Galerida malabarica*
2. Indian Broad-tailed Grassbird *Schoenicola platyura*



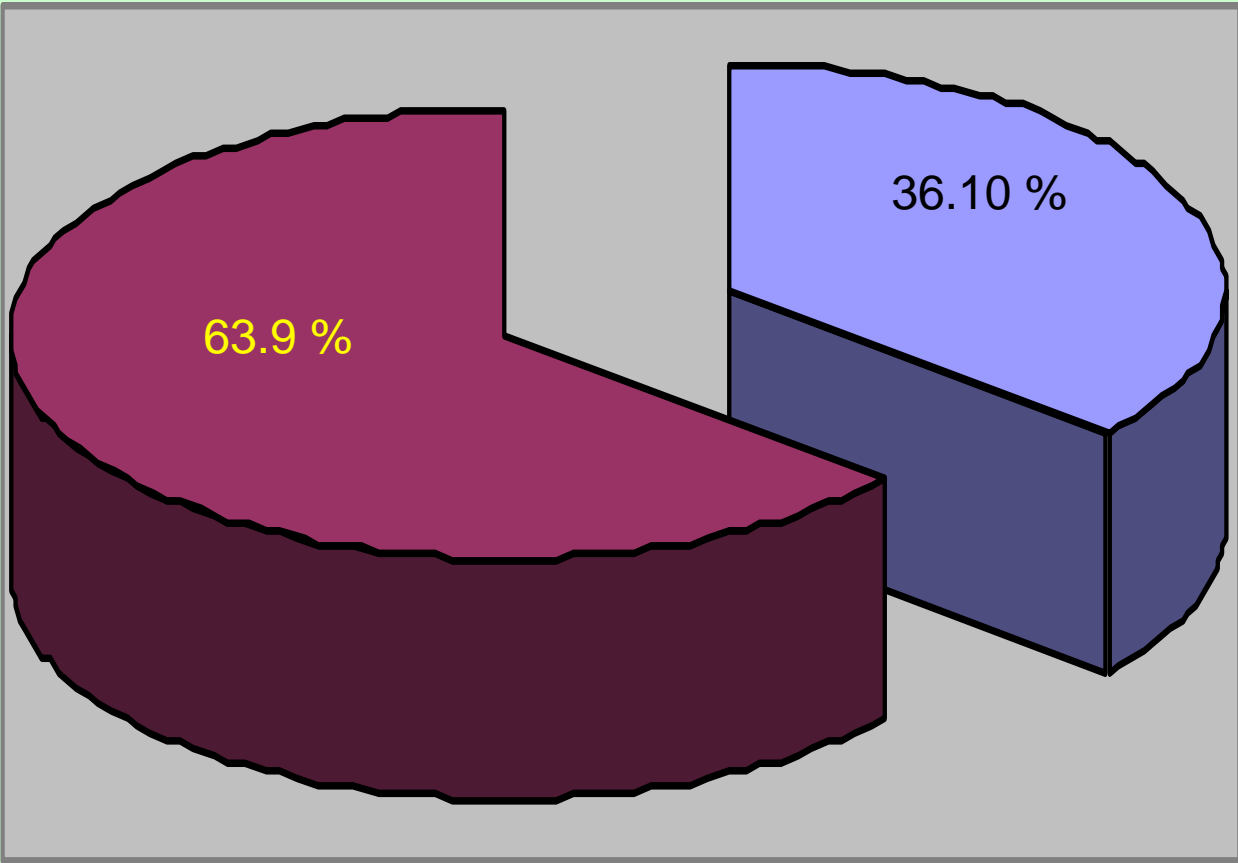
# RELATIVE % OF THREATENED BIRDS : CATEGORY WISE



W GHATS  
INDIA



# CULTURAL SIGNIFICANCE OF BIRDS – CONSERVATION ANGLE



■ KNOWN  
■ NOT KNOWN



# THREATS

> 12000 BP THREATS EXIST



- LOGGING
- TIMBER & FIREWOOD COLLECTION
- DEFORESTATION - MINING, ROADS, TOWNSHIPS AND DAMS
- FOREST FIRES
- ISOLATION – FRAGMENTATION
- HABITAT MODIFICATION/TRANSFORMATION
- HUNTING, POACHING, TRADE

# PROTECTION MEASURES

## PROTECTED AREAS (PA's)

- GUJARAT – 2 (1 NP, 1 WLS)
- MAHARASHTRA – 10 (2 NP, 8 WLS)
- GOA – 6 (1 NP, 5 WLS)
- KARNATAKA – 17 (4 NP, 13 WLS)
- TAMIL NADU – 9 (3 NP, 6 WLS)
- KERALA – 15 (3 NP, 12 WLS)
- TOTAL - 59
  
- ELEPHANT RESERVES – 4 (KERALA & TN)
  
- 14,140.36 SQKM IN WG (9% IN PA NETW)







# RECOMMENDATIONS

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- STRICT ENFORCEMENT OF LAWS
- ENVIRONMENTAL EDUCATION
- SENSITIZATION OF LOCAL POPULATION –  
FIELD GUIDES, POSTERS, WORKSHOPS, ETC.
- IN DEPTH ECOLOGICAL & BIODIVERSITY  
STUDIES OF LOWER / NEGLECTED TAXA
- INVENTORIES - FAUNAL AND FLORA
- ETHNOLOGICAL STUDIES



# CREDITS

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- **SKETCHES** – AMIT PAWASHE
- **PHOTOGRAPHS** – VIVEK VISHWASRAO  
SATISH PANDE, PRAMOD DESHPANDE,  
NIRANJAN SANT
- **ASSISTANCE** – DR ANIL MAHABAL





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- ALI, S. AND S. DILLON RIPLEY 1969. *Handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka*. Vol.3. New Delhi: Oxford University Press.
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- RASSMUSEN, P. C. AND ANDERTON, J. C. (2005) *Birds of South Asia. The Ripley Guide*. Vols. 1 and 2. Smithsonian Institution and Lynx Edicions, Washington, D. C. and Barcelona.

THANK YOU

