

Coringa mangroves in relation to local environmental conditions on the East coast of India

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INTRODUCTION

- ❖ Coringa is one of the chief wetland ecosystems (second largest mangrove formation: 235.07 km²) on the east coast of India.
- ❖ The Government of Andhra Pradesh declared this forest as 'Wildlife Sanctuary' in 1978.

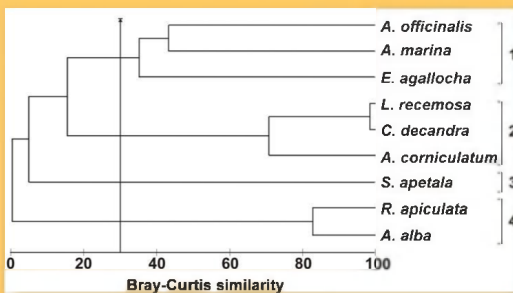
METHODOLOGY

- ❖ 12 sample sites (at 4 km intervals) were investigated during pre-monsoon, monsoon and post-monsoon periods (1998-'99).
- ❖ At each site, we have obtained -

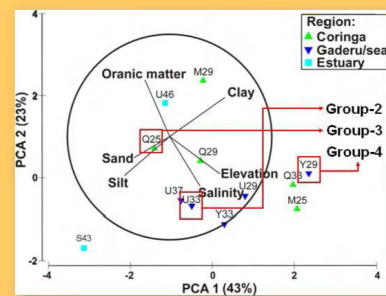
1. Tree structural variables (PCQ-Method); 2. Water salinity (Atago® hand refractometer); 3. Elevation (Lynx dumpy level); 4. Distance from the sea (ArcView GIS); 5. Sediment sample (for textural and organic matter analysis).

RESULTS AND DISCUSSION

- ❖ The region-wise distribution has indicated high floral diversity (8 out of 9) in Gaderu/seaward channels, while Coringa and estuary represented similar taxa (3-4 species).
- ❖ A strong neritic incursion at Gaderu/seaward channels is responsible for higher salinity (21.8‰), in contrast to Coringa and estuary which are regularly influenced by freshwater discharge (11-17‰).
- ❖ The sediments are of silty-clay and located at 0.9-2.6 m above the Mean Sea Level.



- ❖ While Group-1 species are distributed widely, the species in Groups – 2 to 4 were observed only at single sites.
- ❖ The sites in proximity to their environment were clearly separated. For example,
 - higher salinity/elevation close to Gaderu (Groups - 2 & 4), and
 - high silt levels at Coringa/estuary (Group-3).



CONCLUSION AND FUTURE PERSPECTIVES

- ❖ Coringa mangroves are under considerable human impingement over the decades.
- ❖ In view of possible vegetation structural changes due to sustained human intervention, it is necessary to evaluate their distribution on long-term field-based observations.
- ❖ The present results would be able to assist future investigations in this area for better monitoring/management.

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