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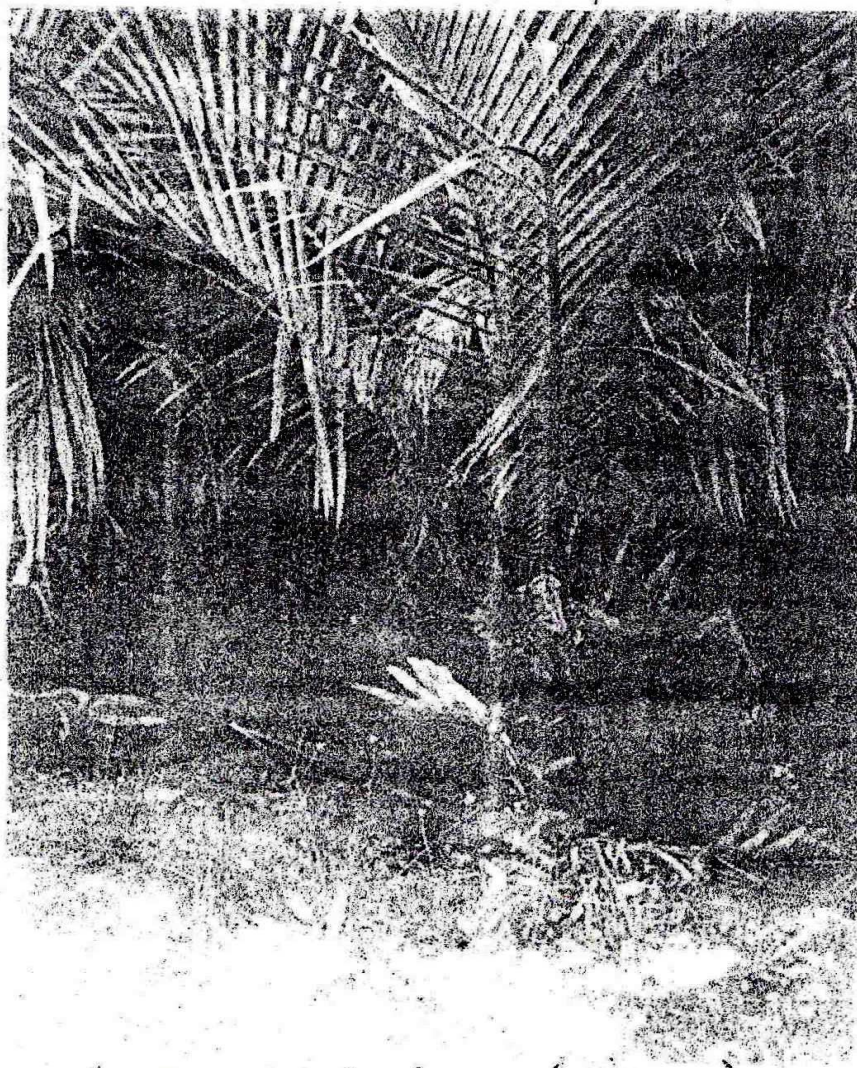


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THE NYPA FRUTICANS THREAT AND INTEGRITY OF MANGROVE ECOSYSTEM FUNCTIONING: A SHORT COMMUNICATION

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The Nypa palm (*Nypa fruticans*)

1. The Nypa palm was introduced from SE Asia into the Cross River estuary in 1906
2. The aim was to check erosion and provide a crop of better economic value than the traditional mangroves.
3. The Eastern Nigeria Department of Agriculture (ENDA) initiated the importation of more Nypa seedlings into the Niger Delta in 1945.
4. The aim, was still to provide the Delta inhabitants with a crop more valuable than the indigenous mangroves.
5. Therefore Nypa was a protected species .

6. East of the Niger Delta, *Nypa* occurs in the Cross/River/Calabar River estuary, Kwa Iboe River estuary, Imo River estuary and the interriverine creeks that link these estuaries to each other behind the beachridge sands.
7. *Nypa* has displaced the natural mangroves along the water channels of these estuaries.
8. *Nypa* spread is east-west in direction, and is gradually invading the central axis of the Niger Delta.
9. SW Trades transport *Nypa* seeds into the deltaic tributaries.
10. The dispersal of *Nypa* seeds is aided by the buoyancy of the seeds, in addition to dynamic tide transport.
11. *Nypa* seeds germinate in water during transport to available substrates.
12. *Nypa* plants colonize rapidly due to formation of rhizomes.
13. *Nypa* growth can be classified according to physiographic habitat types e.g. freshwater/saline interface swamps; basin wetlands; braided island swamps etc.
14. Habitat morphology is an indicator of *Nypa* abundance and competition level with the mangrove species.
15. Flood tolerance by *Nypa* communities is variable when occurrence is in mixed stands with the mangroves.
16. Vegetation succession sequence displaces mangroves inland while *Nypa* colonizes the fore shore,
17. *Nypa* is dominant on the braided channel, distributary and interdistributary basin mangrove habitats.
18. *Nypa* crown cover is an ecological factor that suppress competition from mangrove species.
19. Once established *Nypa* initiates a change in the physical and chemical properties of tidal soils e.g. changes bulk density and soil texture.
20. *Nypa* invades mudflats in primary successions as pioneer colonizers.
21. It is also the secondary invader of any destroyed mangrove community.
22. *Nypa* spread to brackish/freshwater interface poses threat to non-mangrove species.
23. *Nypa* is a destroyer of the mangrove ecosystem.
24. It has negative effect on aquatic life, as compared to the indigenous *Rhizophora*.
25. *Nypa* has resulted in shoreline retreat due to destruction and displacement of mangrove germplasm.

Mangrove Ecosystem Management and Containment of *Nypa* threat

1. The displacement of mangrove by *Nypa* has threatened the existence of coastal inhabitants.
2. Inhabitants will support actions that will eliminate *Nypa* palm.
3. In the long-term, a holistic approach to *Nypa* control is needed:
 - (a) Institutional framework
 - (b) Environmental planning and management
 - (c) Co-ordination of research efforts
 - (d) Stakeholder participation
4. Integrated coastal zone management (ICZM) is advocated to contain *Nypa* threat:

5. The scope and focus of Integrated Coastal Management is outlined in Agenda 21 and can be made application to the mangrove ecosystem in Nigeria.
6. In the short-term:
 - (a) Hydraulic works could be used to alter habitat conditions and make them unfavourable to *Nypa* growth.
 - (b) Regular pruning of *Nypa* to change habitat micro-climatic condition and encourage re-establishment of mangrove propagules.
 - (c) Mangrove sapling trapping and picking .
7. The above should be tested in pilot schemes and the success evaluated.