



NON-WOODY BACK MANGROVE, MANGROVE ASSOCIATES AND BEACH FLORA OF PUDUCHERRY COAST AND THEIR PHARMACOLOGY

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ABSTRACT

Mangroves are situated at the confluence of land and open sea, mostly at river mouths, around lagoons and land with brackish water. Mangroves protect the coastline against strong sea waves action and strong winds thereby preventing the sand erosion. In the present study 32 plant species belonging to 31 genera and 23 families were enumerated in Coromandel Coast along the Puducherry of India. In our study we identified 8 back mangroves and 18 mangrove associates, out of which five are grasses namely *Aristida adscensionis*, *Bulbostylis barbata*, *Cynodon dactylon*, *Fimbristylis feronia*, *Scirpus grossus*, and one sub-shrub *Suada nudifera*. Further we also identified sand dune flora such as *Cannavelia dineate*, *Gisekia pharnaceoides*, *Glinus lotoides*, *Ipomoea pes-caprae*, *Launaea sarmentosa*, *Phyla nudiflora*, *Sida cardifolia*, *Spinifex littoreus* and *Vinca rosea*. Most of the plants occur besides the coastal river at Murungapakkam Bridge in Ariyankuppam, and estuary region of pommayarpalayam, kanagachettikulam, pillaichavadi and kottakuppam. Some of them are present on the banks of the rivers, such as Thenkaithittu River, Ariyankuppam, fallow lands and agricultural fields in Ariyankupam. During the year 2011, these back mangroves, mangrove associates, and beach flora were affected by thane cyclone. Further the construction of blackly stone guard belt and bridge constructions at highways resulted in decline of the mangrove population. Over utilization of mangroves by man is another reason for extinction of mangroves. All the non-woody back mangroves and mangrove associate found in the Coromandel coast exhibits many pharmacological effects like galactogenic, blistering agent, antihelmenthic, antipyretic, antidiuretic, anti haemorrhages, anti leukaemias, antiinflammatory etc., Hence, the authors reviewed the back mangroves mangrove associates, and sand dune flora found in the Puducherry coast in the light of pharmacological effects.

KEY WORDS: *Alternanthera sessili*, *Ammannia baccifera*, *Ipomoea pes-caprae*, *Spinifex littoreus*, *Vinca rosea*, Galactogenic, dyspepsia, leukaemias

INTRODUCTION

The term coast is applied to the wider strip of land situated up to a distance of 50m from the sea. It includes water and the adjacent shore side strongly influenced by each other. Among world level mangrove forest, South America has indicator species in the region of Overwash Forest species found in *Rhizophora*, *Anadara*, *Ucides*, *Crassostrea*, Fringe Forest *Rhizophora*, *Avicennia*, *Ucides*, *Anadara*, *Iguana*, *Uca*. Riverine Forest *Laguncularia*, *Rhizophora*, *Cardisoma*, Basin Forest *Avicennia*, *Conocarpus*, *Melampus*, *Cardisoma*, *Uca*. Hammock Forest *Rhizophora*, *Avicennia* and Scrub Forest *Rhizophora*, *Avicennia* of physiographic type Category (Macintose, and Ashton, 2003). In tropical African mangrove forest recorded 10 main species, 5 mixed species, and 3 species for economic and firewood value (FAO, UNEP. 1981). In China, Taiwan and Hong Kong overall 24 species was enumerated (Spalding *et al.*, 1997). From the Twenty three mangrove flora species the number of bioactive actinomycetes isolated, and investigated that highest activities shown in *Micromonospora* and *streptomyces*, *Actinomadura*, *Nocardia* and *Nonomuraea mycophytes* investigated anti-tumor cell activity in China (Hong *et al.*, 2009). The mangrove forest in India *Heritiera sp.*,

Bruguiera, *Ceriops sp.*, *Rhizophora sp.*, *Heritiera sp.*, *Sonneratia*, *Avicennia*, and *Excoecaria*. Also Shrubs and palms are few, *Acanthus sp.* and *Nypa fruticans* being the most common, the type occurs in the delta of the Ganga and Brahmaputra west of Raimangal branch (FAO, UNEP. 1981). According to Saravanan (2005) who studied the ecological distribution of Puducherry mangroves, the seven species, like *Rhizophora apiculata* and *Rhizophora mucronata* were introduced to this ecosystem under social forestry scheme. *Avicennia marina* is the dominant mangrove found in almost all the sites. Data available on the existence of Puducherry mangroves are much limited. Study on the existing biodiversity helps to understand the wealth of Puducherry mangroves. The principle and objective of this study is to enumerate the taxonomic features and pharmacology of Non-Woody mangroves of Puducherry coast. Though, the coastal area of Puducherry is enriched with 1% of the India's total mangrove species, due to the expansion of highway bridges the coastal mangrove is much destroyed. So it is highly essential to derive the data on distribution and features of Non-Woody mangroves of Puducherry coast. The aim of our study is to evaluate mangrove related taxonomic, medicinal, and conservational important considerations.

METHODOLOGY

The survey of Non-Woody plants present in the coastal region of the sea-shore side was carried out by field visits in the months of February and March 2007. The Plants collected in the field were identified by using Flora of Presidency of Madras (Gamble 1935), and flora of Tamil Nadu Carnatic (Mathew, 1983). Essential floristic details such as the vegetation types, habit, locality, Economic important were recorded in the field itself. The medicinal values were collected from Indian medicinal plant (Kirtikar and Basu, 1984). The nomenclature found in this report is essentially from Flora of Central Tamilnadu India (Nair and Hendry, 1983). The enumeration follows alphabetical order of the binomials, family name, habit, and habitat locality of plant and its economic importance (Table 1).

Study Area

Puducherry is situated on the eastern coast at about 180 km south of Chennai. It is bounded by Bay of Bengal on east and Cuddalore on west. It has area of 290 sq. km containing 11 enclaves. It lies between 11°46' and 12°03' N latitude, 79°36' and 79°52' E longitude. The main river in Puducherry is Gingee River (Sankarabarani River) and is believed to originate from Gingee. On approaching Puducherry it bifurcates into Ariankuppam River and Chunnambar River. Ariankuppam River makes a circle around the Thengaithittu Island before it mixes with sea. Maximum mangrove vegetation is found in Ariyankuppam river banks towards estuary. The soil type is alluvium consisting of black compact clayey materials. A hot tropical maritime climate exists. The mean annual temperature is 28.7 °C, humidity is 0.75%, and rainfall is 98.3cm (Anon, 2006). Puducherry has coast line of about 45 Km shows in Fig. 1a and Fig. 1b.



FIGURE 1 a. Study area of Murungapakkam river



FIGURE 1 b. Thengaithittu estuary region * Shows the species study area.
Source: www.wikimapia.com (Fig 1 a & 1 b)

RESULTS AND DISCUSSION

In the present study 32 plant species belonging to 31 genera and 23 families were enumerated (Table 1). It covers 7 Back Mangroves, 18 associates and 10 beach flora (Fig 2 and 3), of these five are patches of grasses (*Aristida adscensionis*, *Bulbostylis barbata*, *Cynodon dactylon*, *Fimbristylis feronia*, *Scirpus grossus*) and one sub-shrub (*Suada nudifera*). Most of the plants are present

besides the Coastal river at Murungapakkam bridge in Ariyankuppam, and estuary region of Pommayarpalayam, kanagachettikulam, Pillaichavadi and Kottakuppam. Some of them are present on the bank of rivers. Few seen in the fallow land and agricultural field of Ariyankuppam showed that many plants are economically pharmacological important (Fig 3).

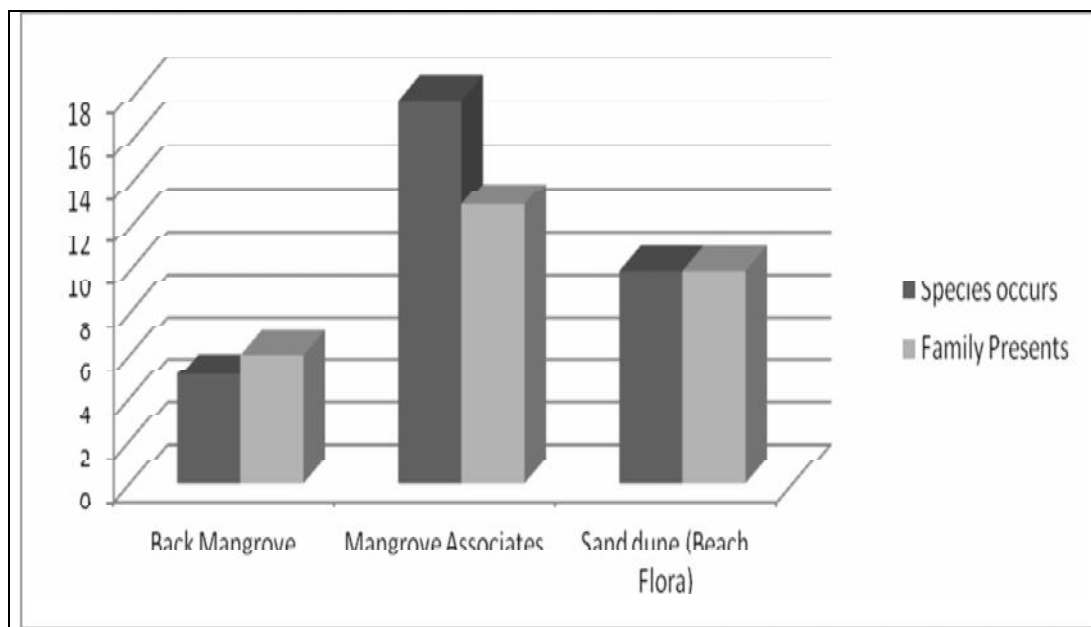


FIGURE 2. Comparison result of Coromandel floral elements and family

Pharmacological effect to *Homo sapiens*

The leaves of *Alternanthera sessilis* used as leafy green, presently investigated as calcium oxalate crystals are present in stem and leaves, phytochemical Phenols, flavonoids, tannins and saponins in leaves (Anitha and Kanimozhi, 2012). The Chloroform fraction of *A. baccifera* exhibited wound healing activity on rats (Rajasekaran *et al.*, 2011). Previous investigation, the grass *Aristida adscensionis* in aqueous extracts and leachates of root, shoot, and litter had an inhibiting potential on the number of root nodules in *Indigofera cordifolia* (Sreedhara murthy and Shihora, 1977), also Bromatologic composition of *Asystacia gangitica* found this typical species (Silva *et al.*, 2011), and 29.60% hemicelluloses content present in of the Northeastern Brazil Caatinga (Ensermu, 1994). Also it is used for antifungal, antibacterial in Nigeria, and vermifuge, anthelmintic, antiasthmatic, bronchospasmolytic and as an anti-inflammatory in African traditional medicine (Hwang *et al.*, 1996). *Blumea lacera* methanolic extract reported the highest cytotoxicity level IC50 0.01–0.08mgmL⁻¹ (Shaikh *et al.*, 2011). *Cleome gynandra* displays age-dependent plasticity of C4 decarboxylation biochemistry (Sommer *et al.*, 2011). *Cleome gynandra* are used as leafy green, and the canavanine synthesis obtained

by ornithine carbamyltransferase, argininosuccinate synthetase, and argininosuccinate lyase from *Cannavelia lineata* (Hwang *et al.*, 1996). Weedy grass of *Cynodon dactylon* cultivation is not essential. It is explored for human benefit from natural habitat (Wu Ai, 2000). The present endeavor provides information to explored natural resources among researchers (Rita *et al.*, 2012). *Cynodon dactylon* as used in pharmacological actions (toxicity studies, anti-diabetic activity, anti-arrhythmic activity, anti-inflammatory activity, cardio protective activity, central nervous system related activity, immunomodulatory activity) and is also executes antioxidant activity, chemo-preventive activity, anti-nephrolithiasis activity), since *C.dactylon* is a non-toxic, proved as control various diseases, including inflammation, carcinogenesis and oxidative stress-induced pathogenesis (Kumar *et al.*, 2011). Embankment vegetation is mostly dominated by *F.ferruginea*, *S.maritima*, *A.ilicifolius*, *A.marin*, *calophyllum inophyllum* in Murungapakkam River. *Gisekia* acts as negative significance character, but possesses distinct combinations (Gilbert, 1993), because *Gisekia pharanceoides* has no really unique, and proved by characters of seed coat that proceedings by ovoid-suborbicular shape, 1.1 * 0.9 size, single number,

TABLE 1. List of Non-Woody Back mangrove, Mangrove Associates, and Sand dune floristic elements in Puducherry Coromandel Coast, India

Sl. No	Bionomial	Vegetation type			Habit and Habitat	LT Y	Economic Important
		B M	A	B F			
1	<i>Alternanthera sessilis</i> (L.)R.Br.ex DC., (AMARANTHACEAE)		Δ		Prostrate branched herb under the bridge. (£)	MP	Used as galactogenic.
2	<i>Ammannia baccifera</i> L. (LYTHRACEAE)		Δ		Erect herb gregarious along the bridge	KK	Blistering agent and roots for fevers. Making brooms.
3	<i>Aristida adscensionis</i> L. (POACEAE)			Δ	Common grass, culms densely tufted, besides the coastal river region	MP	
4	<i>Asystacia gangitica</i> (L.) T. Anderson (ACANTHACEAE)			Δ	Perennial herb, the sea shore side of the pond	AK	Used as a anti-helmenthic, swelling and rheumatism. Used as antipyretic, diuretic, deobstruant and stimulant.
5	<i>Blumea lacera</i> (Burm.f.)DC., (COMPOSITAE)			Δ	Strongly scented sand dune herb, along the river banks. (£)	AK	
6	<i>Bulbostylis barbata</i> (Roth) C.B. Clarke. (CYPERACEAE)			Δ	Common grasses	AK*	
7	<i>Cannavelia dineate</i> L. Callus (FABACEAE)				Common straggler. §	MP	
8	<i>Cleome gynandra</i> L. (CAPPARIDACEAE)		Δ		Foetid, and annual herb, lived in embankment, follow land and agricultural field.	AK	Used as Leafy green.
9	<i>Cynodon dactylon</i> (L.) Pers. Dhub. (POACEAE)			Δ	Perennial grass estuary region of Pomayar-palayam swamp. (£)	PP	Used as haemoptysis, diarrhea, haemorrhages wounds.
10	<i>Fimbristylis ferruginea</i> (L) Vahl. Enum. (CYPERACEAE)			Δ	Small perennial grasses Coastal soil land region. (£)	MP	Used as Broom sticks
11	<i>Fuirena ciliaris</i> . (L.) Roxb. (CYPERACEAE)			Δ	Sand dune Herb, near the coastal region	K	
12	<i>Gisekia pharnaceoides</i> L. (GISEKIACEAE)			Δ Δ	Sand dune Herb, near the coastal region	CK*	
13	<i>Glinus lotoides</i> L. (MOLLUGINACEAE)			Δ Δ	Sub erect / spreading sand dune herb Common in Murungapakkam river. (£)	MP	
14	<i>Hybanthus enneaspermus</i> (L.) F. V. Muell. Fragm. (VIOLACEAE)			Δ	Herb Common in the murunga pakkam bridge and near to the Mangrove vegetation region	MP	
15	<i>Ipomoea aquatica</i> Forssk. Fl. (CONVOLVULACEAE)			Δ	Profusely branched sand dune herb Near the coastal region. (£)	NC	

16	<i>Ipomoea pes-caprae</i> (L.) R. Br. (CONVOLVULACEAE)	Δ	Prostrate sand dune succulent perennials herb along the coastal area. § (£)	K, KC, PC, KK and AK	Used as swellings, monorrhagia, and haemorrhagia.
17	<i>Leucas aspera</i> (Willd.) Link (LABIATAE)	Δ	Scabrid, erect / diffuse sand dune herb, near to the sea shore area	K, KC, PC, KK and AK	Used as dyspepsia, verminosis, cough, dysmenorrhoea and amenorrhoea.
18	<i>Launaea sarmentosa</i> (Willd.) Schults-Bip.ex Kuntze (ASTERACEAE)	Δ	Prostrate sand dune herb with milky sap mostly seen in the underneath of <i>Cocos nucifera</i> on coastal region. (coastal sandunes)	CK* and KK*	
19	<i>Ocimum canum</i> Sims. (LABIATAE)	Δ	Strongly aromatic sand dune herb The river region on coastal side.	AK	Used for rheumatism, and dysentery. used for anti-inflam
20	<i>Opuntia stricta</i> (Haw.) (CACTACEAE)	Δ	sand dune	CK	matory properties (Supple, 2011) Used as
21	<i>Pedaliium murex</i> (L.) (PEDALIACEAE)	Δ	Sand dune herb the waste land.	KK* AK* and V*	demulcent, diuretic, antispasmodic spermatorrhoea and gonorrhoea.
22	<i>Pergularia daemia</i> (Forssk.) chiov. (ASCLEPIADACEAE)	Δ	Sand dune straggler, in the pedal of the coastal region.	KK and MP	
23	<i>Phyla nudiflora</i> (L.)Greene. (VERBINACEAE)	Δ	Annual herb, Mangrove river regional	AK*	Used as Washout dandruff. Used as
24	<i>Scirpus grossus</i> L.f. (CYPERACEAE)	Δ	Annual sand dune grasses along the sea shore and plans from coast.	CK	laxative, alexiteric, diuretic, vomiting, diarrhea, and gonorrhoea. Antioxident, Anti-
25	<i>Sida cardifolia</i> L. (MALVACEAE)	Δ	Sand dune herb the waste land.	CK* K* PP*	inflammatory, used in liver diseases in Burkina faso (Konaté <i>et al</i> 2011).
26	<i>Sesuvium portulacastrum</i> (L.) L. (AIZOACEAE)	Δ	Succulent spereading / substract sand dune perennials herb, Mangrove river regional. (£)	MP	
27	<i>Solanum trilobatum</i> L. (SOLANACEAE)	Δ		MP	

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28	<i>Spinifex littoreus</i> (Burm.f.) Merr. (POACEAE)	Δ	Prostrate sand dune herb, the coastal follow land. (§)	AK* and CK*	For special propagating mechanism.
29	<i>Suaeda maritima</i> (L.) Dumort.FL (CHENOPODIACEAE)	Δ	Annual / perennial gregarious, low, spreading subshrub, on the bank of the river. (£)	MP	
30	<i>Trianthema decandra</i> L. (AIZOACEAE)	Δ	Prostrate sand dune herb, 50 meters away from the seashore.	CK, PK, KK, and AK.	
31	<i>Trianthema portulacastrum</i> L. (AIZOACEAE)	Δ	Prostrate / ascending sand dune herb, seen frequently in the coastal region.	CK	
32	<i>Vinca rosea</i> L. (APOCYNACEAE)	Δ	Prostrate / ascending sand dune herb, seen frequently in the coastal region.	NC*	Used to treat leukaemias and lymphomas by action of <i>vinblastine</i> (Vel be), <i>vincristine</i> (Oncovin), and <i>vindesine</i> (E ldisine)

Abbreviation Used

Vegetation type	Back Mangroves (BM)	Mangrove Associate Herbs (A)	Beach Flora (BF)
Locality (LTY)	Murungapakkam (MP), Kottakuppam (KK), Ariankuppam (AK), Pomayarpalayam (PP), Kalapet (K), Kanagachattikulam (KC), Pillaichavadi (PC), Chinna Kalapet (CK), Veerampattinam (V), Peria Kalapet (PK), Near the coastal region (NC), Sand dune flora from Tuticorin coast (*). West Bengal and Orissa (§). Plant species in the Mekong Delta Wetland species (£).		

Figure 3. Distribution of Back Mangrove Herbaceous, Associate Species and Beach Flora in Puducherry Coromendal Coast, India.



- A. *Alternanthera sessilis* (L.) R.Br. ex DC., (AMARANTHACEAE)
- B. *Ammannia baccifera* L., (LYTHRACEAE)
- C. *Aristida adscensionis* L., (POACEAE)
- D. *Asystasia gangetica* (L.) T. Anderson (ACANTHACEAE)
- E. *Blumea lacera* (Burm f.) DC., (COMPOSITAE)
- F. *Bulbostylis barbata* (Roth) C. B. Clarke (CYPERACEAE)
- G. *Cleome gynandra* L., (CAPPARIDACEAE)
- H. *Gisekia pharnaceoides* L., (GISEKIIDACEAE)
- I. *Hybanthus enneaspermus* (L.) F. V. Muell. Fragm., (VIOLACEAE)
- J. *Ipomoea aquatica* Forssk. FL (CONVOLVULACEAE)
- K. *Ipomoea pes-caprae* (L.) R. Br., (CONVOLVULACEAE)
- L. *Launaea sarmentosa* (Willd.) Schults.-Bip. ex Kuntze (ASTERACEAE)
- M. *Ocimum canum* Sims., (LABIATAE)
- N. *Sesuvium portulacastrum* (L.) L., (AIZOACEAE)
- O. *Spinifex littoreus* (Burm.f.) Merr., (POACEAE)
- P. *Suaeda maritima* (L.) Dumort. FL (CHENOPODIACEAE)

dark brown/black color, unsculpture coat surface, and penta-hexagonal epidermal cell shape missing highly significant character, whereas members of the Molluginaceae have more or less reniform seeds and seed of Aizoaceae vary from reniform to rounded reniform, or orbicular to suborbicular (Nasr *et al.*, 2005). Methanolic extract of *Ipomoea pes-caprae* reported as antinociceptive properties including inflammatory and analgesic by ailment treatment (Maria de Souza M. *et al.*, 2000). The qualitative dominant free amino acids (*Gly*, *Pro*, and *Ser*) on root + stem seedlings and mature + young stem vegetative parts than other amino acid investigated in *Ipomoea pes-caprae* (Chakraborty *et al.*, 2012). Antioxidant activity of the *Opuntia stricta* flowers extracts were active *in vitro* towards four bacteria and two fungal strains evaluated activity against *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and *Escherichia coli* by the 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical method, and its potential preservative use in food (Imène Ammara *et al.*, 2011). *Opuntia stricta* (OS) mucilages reported as low acute toxicity levels. It seems to regard physico-chemical properties and acute toxicity levels higher in mucilage of OS than *Opuntia ficus-indica* (OFI) also, moisture sorption property of OS (76.9%). both species mucilages (12% dispersions), pH of *Opuntia stricta* shows 5.87, conductivity (12% w/v) 9.31 mS/cm, viscosities (12% w/v) 10,060 mPas, and surface tension of the aqueous dispersions 39.7 mN/M. The study proved that the mucilage of OS was superior to OFI mucilage for use as food and pharmaceutical excipients and the true density of mucilage from OFI (1.52 g·ml⁻¹) was significantly higher than that of OS (1.36 g·ml⁻¹) have good flow ability. The moisture content of OS (11.72%) presence of relatively higher lipid/fats in OFI's mucilage than in OS (Naod Gebresamuel and Tsige Gebre-Mariam, 2012). The differences in swelling power have abilities to absorb moisture-water holding capacity (WHC). Due to the presence of phenolic and flavonoid compounds in the aerial parts of *Pergularia daemia* PDME inhibited the tumor formation as well as decreased the levels of lipid

peroxidation by products and enhanced the antioxidant defence mechanisms as compared to DMBA painted hamsters (Karthishwaran, and Mirunalini, 2012). *Scirpus grossus* had sustainable above-ground shoot and flower biomass production but compare to *Typha angustifolia* could not sustain from three units of free water surface (FWS) constructed wetlands treating domestic wastewater under tropical conditions (Jinadasa *et al.*, 2008). Recently cloned P152 salt-tolerance gene of *S. portulacastrum* by the extraction of total RNA from this mangrove associates plants (Zeng, H. Deng and Zhang 2006). *Sesuvium portulacastrum*, *Rhizophora lamarckii*, *Suaeda monica*, *Avicennia officinalis* and showed 50% Cholinesterase inhibitory activity to both TChE and BChE at concentrations less than 2 mg/mL when compared to other plant extracts, which was comparable to the standard drug Donepezil (Suganthi *et al.*, 2009). Salt tolerant, inducible isoform of plasma membrane H⁺ATPase gene in rice remains constitutively expressed in natural halophyte, *Suaeda maritima* (Sahu and Shaw, 2009) contain dominant malic acid, oxalic acid, ammonium compound, glycinebetaine and betaine (Flowers and Hall, 1978), High phenotypic plasticity observed under hypoxic conditions (Wetson *et al.*, 2012). In *Trianthema decandra*, the antibacterial and antifungal activity was more in root callus extract than root extract (Radfar *et al.*, 2011). Also presently reported the effects of Biskhapra (*Trianthema portulacastrum* Linn.) leaves extract in adriamycin induced nephrotic syndrome used in renal disorders (Karim *et al.*, 2011). *Spinifex littoreus* is an interesting plant in the sense that it has a special propagating mechanism found in the high tide line, during dry summer the whole plant gets uprooted, get rolled and carried to very long distances by the seashore wind, its capable maintaining dune stability, colonize patches, build and restore the sand dune of Ariyan-kuppam and Chinakalpet, It was observed that the root extract of *Spinifex littoreus* was more potential in term of analgesic and anti-inflammatory properties (Yogamoorthi and Sathya Priya, 2004) and studied anti microbial effect (Ramanathan *et al.*,

2010). *Vinca.rosea* cream was more effective for the treatment of verruca vulgaris, plantar warts and flat warts and less effective in the genital warts, (Chattopadhyay and Das, 1990) isolation of reserpine, vinceine, vincaine, ursolic acid (Basu and Sarkar, 1958). Comparable studies on sand dune of Tuticorin coast 8 Non-Woody species like *Bulbostylis barbata*, *Gisekia pharnaceoides*, *Launaea sarmentosa*, *Pedaliium murex*, *Phyla nudiflora*, *Sida cardifolia*, *Spinifix littoreus*, and *Vinca rosea* (Muthukumar and Selvin Samuel, 2011), Wetland plant

species in the Mekong Delta 9 species like *G.lotoides*, *S.portulacastrum*, *A.sessilis*, *B.lacera*, *S.maritima*, *I.aquatic*, *I.pes-caprae*, *F. ferruginea*, *C.dactylon* (Buckton *et al.*, 1999), west Bengal and Orissa 3 herb species like *I.pes-caprae*, *S.squrossus*, *C.rosea* shows that optimum to minimum similarity, with Puducherry Non-wood mangrove Coromandel coast site (PNMCCS). Over dominant play a vital role in PNMCCS, other then Tuticorin coast, Melkong Delta, and west Bengal and Orissa.

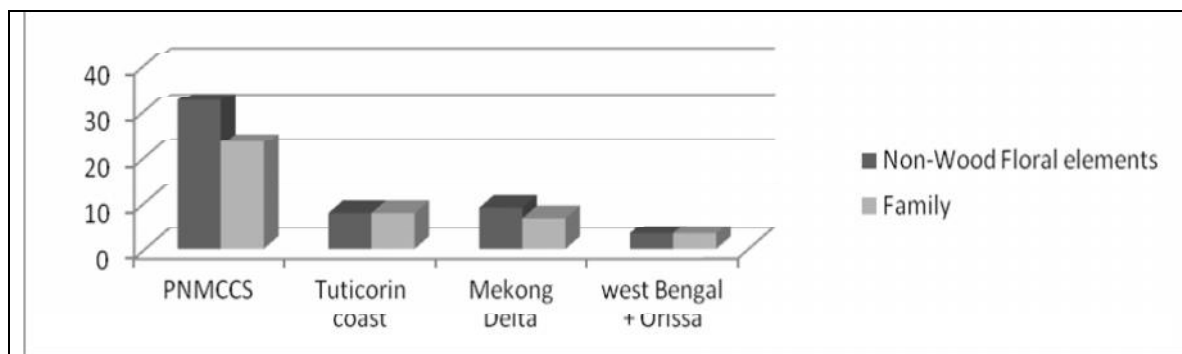


FIGURE 4. Quantitative comparison of Non Timber floral elements and family of PNMCCS, Tuticorin coast, Melkong Delta, and west Bengal + Orissa habitats.

CONCLUSION

In 1991 coastal regulation is managed under Environment Protection Act (1986). However, the implementation is not sufficient even though blackly stone guard belt, road bridge proceed a protective layer to coastal region. Further it is disturbed sand dune vegetation, back mangrove and associates herb members by the pressure of coastal black protective belt and development coastal landuse change. Also Invasive species like *Prosopis juliflora*, *lantana camara*, *Asystasia gangetica* and *Parthenium hysterophorus* are highly disturbed this ecological coastal vegetation naturally. Our findings exhibit the maintenance, protection, and dynamics of back mangrove, mangrove associate include sand dune flora for fisher man. Ethnomedicinal data provide for further discovery of phytochemistry, pharmacology and pharmacognosy field was highlighted. Therefore, Isolation of active principles, pharmacological investigations, and the potent antimicrobial activity optimum number of herbs was published, and this provides new sources of herbal drugs, help to understand the molecular basis of their activities. The exploitation of molecular level medicinal value mangroves lead to the extinction by anthropogenic influence.

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