

Tribal Medicinal Studies on Sriharikota Island, Andhra Pradesh[#]

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Abstract

Sriharikota Island in Andhra Pradesh is an elliptical land mass sandwiched between Bay of Bengal in the East and Pulicat Lake in the West. Sullurpet is the nearest railway station which is 18 km from Sriharikota Island and it is on Chennai-Kolkata trunk line and 90 Km away from North of Chennai.

An aboriginal tribe called **Yanadi** dwells in Sriharikota. It is similar to Chenchu community elsewhere in Andhra Pradesh. In spite of the community being drifted from their natural way of life due to agro-rural development activities, a few aged tribal men are still able to furnish traditional ethno-medicinal data. So far no ethno-botanical studies are conducted in this area except for a list of 50 plants reported by the senior author and co-researchers (1989). Therefore a detailed study on tribal medicine in this area is undertaken. During this work 190 species are collected having a variety of ethno-pharmacological values. However this article deals with 23 species only, having remedial effect for arthritis and rheumatism. Out of them 10 species having anodyne properties from first hand ethnic information.

Introduction

An aboriginal tribe called **Yanadi** dwells in Sriharikota. It is similar to Chenchu community elsewhere in Andhra Pradesh. In spite of the community being drifted from the natural way of life due to agro-rural development activities a few aged tribal men are still able to furnish traditional ethno-medicinal data. In Sriharikota Island about 450 tribal families are living in 3 colonies viz. Penubakam, Kothachenu and Chengalpalem.

Topography

Sriharikota Island geographically is located at 80° 21' E and 13° 22' to 14° N. It is a spindle shaped land mass sandwiched between Bay of Bengal on the East and Pulicat lake on the West. It is 18 km east of Sullurpet, the nearest railway Station connecting Chennai -Kolkata trunk line. Chennai is 98 km away from Sriharikota.

Materials and Methods

Intensive medico-ethnobotanical survey is under taken in Sriharikota Island since one year. Regular periodical field work is conducted covering all the seasons so as not to miss seasonal elements having pharmaceutical value and collected a large number of specimens in their, respective phenological stages. Ample

field notes recorded pertaining to frequency, abundance, edaphic and morphological characters which cannot be deduced from exsiccata. Local tribal men are contacted to record data related to medicinal uses, drug preparation and mode of administration etc. After identification, samples are properly processed, mounted on herbarium boards and deposited in Visvodaya Govt. College Herbarium. (VGCH) and a duplicate set at SHAR Herbarium, Sriharikota.

Results and Discussion

During these studies a good number of ethno-medicinal plants are collected. However in this article 23 species having remedial effect on arthritis and rheumatism are enumerated. Latest name followed by relevant synonyms if any, local name and collection number are given. Habit, flowering and fruiting season and ethno-medicinal data are furnished for each species. *Ailanthus excelsa*, *Caesalpinia bonduc*, *Dodonaea viscosa* are under threatened condition owing to degradation of scrub jungles, removal of countryside natural hedges and implementation of agro-rural development schemes. Plants marked (asterisk (*)) are reported here first time for their anodyne properties. Their other medicinal uses adopted in the island and elsewhere also are given. (Table 1).

Enumeration

**Ailanthus excelsa* Roxb. (Simroubaceae)

Ln: Peddamanu; 9054 RBK

Large trees, near tribal habitations. Vegetative. Fl. & Fr. November- February.

Stem bark warmed and applied to give relief from rheumatic complaints.

Atalantia monophylla (Linn.) (Rutaceae)

Ln: Adavinimma or Munkudu: 9421 RBK

Small trees, common in closed scrubs and forests. Fl.& Fr.: August- September.

Seed oil applied on painful joint pains.

Breynia vitis-idaea (Burm.f.) Fischer. (Euphorbiaceae)

= *Breynia rhamnoides* (Retz.) Muell.

Ln: Adavimunaga; 9174 RBK

Small trees or shrubs, common in forests. Fl. & Fr.: February- July.

Leaves warmed along with leaves of *Dodonaea viscosa*, *Dalbergia paniculata* and applied for 2-3 days regularly to cure swellings of legs and testis.

**Caesalpinia bonduc* (Linn.) Roxb. (Caesalpinaceae)

= *Caesalpinia crista* Linn.

Ln: Gacchakaya; 9209 RBK

Short trees, common on hedges impenetrable thickets in forests. Fl.: September, Fr.: October.

Seed paste applied externally on inflammatory swellings and in arthritis.

Citrullus colocynthis (Linn.) Scrad. (Curcubitaceae)

Ln.: Yetipuccha or Yerripuccha; 8974 RBK.

Trailing scabrid herb, common on dry open scrubs especially near coasts. Fl. & Fr.:

August – September.

Leaf juice applied on rheumatic swellings.

Note: Root was reported as a remedy for rheumatism in earlier records.

**Clerodendrum plomides* (Linn.) L.f. (Verbenaceae)

Ln.: Peddanelli or Takkeda; 9203 RBK

Shrubs, occasional in forests. Fl. & Fr.: December-February.

Warmed leaves applied for relief from rheumatic and filarial swellings.

**Coccinia grandis* (Linn.) Voigt. (Cucurbitaceae)

= *Coccinia indica* Wt. & Arn.

Ln.: Donda; 9106 RBK

Climber, common in forests and also cultivated. Fl. & Fr.: September- January.

Root tubers well ground and juice (Milk) warmed with *Foeniculum vulgare* and it is applied for curing rheumatic pains.

Crotalaria laburnifolia Linn. (Fabaceae)

Ln.: Gilakati or Peddagirakati; 9249 RBK

Tall erect herbs, occasional in open scrubs. Fl. & Fr.: July- September.

Leaves ground with coconut oil and applied on affected parts for relief of joint swellings.

Dalbergia paniculata (Linn.f.) Roxb. (Fabaceae)

Ln.: Pacchari; 9431 RBK

Trees, common in forests. Fl.: April-May; Fr.: June-July.

Leaves used in combination with *Dodonaea viscosa* and *Breynia vitis-idaea* (See above).

Deonix elata (Linn.) Gamble. (Caesalpiaceae)

Ln.: Vathaneredu or Vathanarayana; 8997 RBK

Trees, planted near colonies. Fl. & Fr.: December – June.

Leaves warmed with pepper, grind to prepare pills taken inside to give relief from rheumatic swellings.

**Derris scandens* (Roxb.) Benth. (Fabaceae)

Ln.: Konnatiteega or Minaputeega or Pacchari; 8912 RBK.

Lianes, common in forests. Fl. & Fr.: September- February.

Tender stems and twigs crushed, warmed and applied on painful parts for relief of rheumatic pains.

Dichrostachys cinerea (Linn.) Wt. & Arn. (Mimosaceae)

Ln.: Veluturuchettu; 9172 RBK

Shrubs, common in open dry scrub jungles, Fl. & Fr.: May – December.

Root and leaves made into paste, warmed and applied on painful parts and taken head bath to give relief from rheumatic pains.

Dodonaea viscosa (Linn.) Jaq. (Sapindaceae)

Ln. : Bandaru; 9328 RBK.

Under shrubs, common. Leaves suppurative. Fl. & Fr.: October-January.

Midrib of leaves separated, lamina warmed and spread on the affected part and bandaged, to give relief from rheumatic pains and swellings.

Ficus benghalensis Linn. (Moraceae)

Ln.: marri; 9344 RBK.

Trees, common in forests. Fl.& Fr.: July- October.

Latex applied to give relief from joint pains and muscular pains.

Holoptelea integrifolia (Roxb.) Planch. (Ulmaceae)

Ln.: Peddamanu or Tabasu; 9196 RBK.

Trees, occasional in forests. Fl. & Fr.: October – December.

Root bark warmed and applied to cure rheumatism.

Pisonea aculeata Linn. (Nyctaginaceae)

Ln.: Peetrinchi; 9401 RBK

Herbs, occasional in scrubs forming impenetrable bushes at Sriharikota Island. Fl. & Fr.: January – March.

Root bark and leaves warmed and applied to cure swellings and rheumatic–arthritis.

****Pongamia pinnata*** (Linn.) Pierre. (Fabaceae)

Ln.: Kanuga; 8924 RBK

Small trees, common. Fl.& Fr.: August-December.

Poultice of leaves applied to give relief from rheumatic arthritis.

****Ricinus communis*** Linn. (Euphorbiaceae)

Ln.: Amudam; 9152 RBK

Planted at Penubakam and Chengalpalem. Fl.& Fr.: December –January.

Paste of seeds applied in curing joint-swellings and in rheumatic arthritis.

****Solanum trilobatum*** Linn. (Solanaceae)

Ln.: Mullamustiteega; 9159 RBK

An occasional gregarious climber along hedges. Fl. & Fr.: September – December.

Root and fruit paste in castor oil used as an ointment for rheumatic swellings.

****Toddalia asiatica*** (Linn.) Lam. (Rutaceae)

Ln.: Mirapagandra; 9021 RBK

Armed shrubs, occasional along hedges. Fl. & Fr.: September – December.

Root and fruit paste in castor oil as an ointment for rheumatic swellings.

****Trichosanthes cucumerina*** Linn. (Cucurbitaceae)

Ln.: Pamudonda; 9219 RBK

Climber, rare on hedges. Fl.& Fr.: November – February.

Root tuber grind well and juice is mixed with *Foeniculum vulgare* powder

warmed and made in to paste. It is applied 2-3 days for cure on joint swellings.

Trichosanthes tricuspidata Lour. (Cucurbitaceae)

= *Trichosanthes palmata* Roxb.

Ln.: Papara; 9204 RBK

Climber, occasional on hedges. Fl. & Fr.: October – December.

Leaf juice applied to give relief from joint pains.

Vitex negundo Linn. (Verbenaceae)

Ln.; Vavili; 9125 RBK

Shrubs; common, abundant in forests. Fl.& Fr.: Through out the year.

Root and leaves warmed and applied to cure joint swellings and in rheumatic pains.

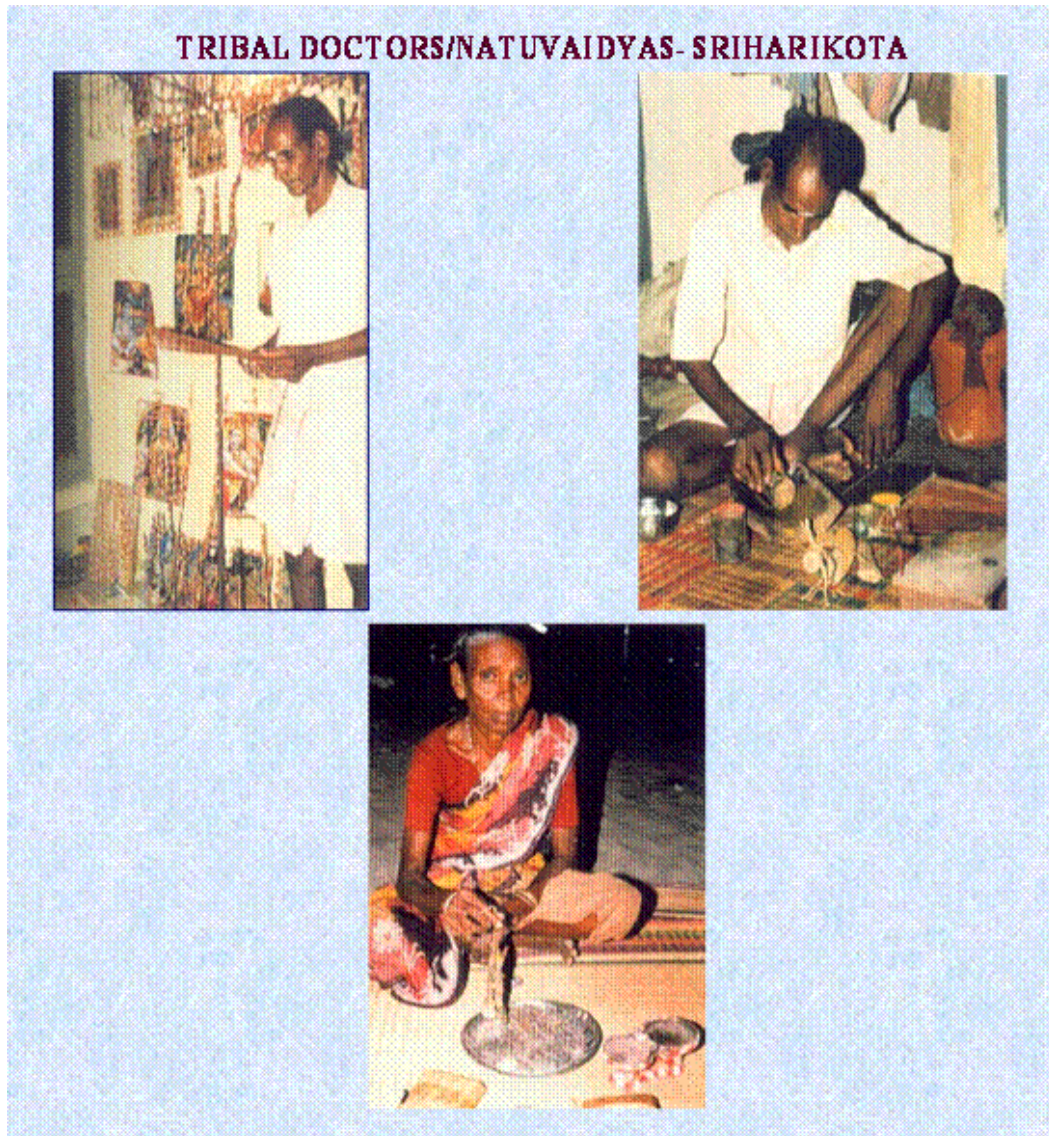


Table 1. Other Medicinal Uses For Plants of Anodyne Properties Reported First Time from Sriharikota Island.

Other uses

S.No.	Plant Name, Loc. Name & Family	Island Use(s)	Elsewhere
1	2	3	4
1.	<i>Ailanthus excelsa</i> Ln. Peddamanu SIMAROUBACEAE	Wood used in furniture making	Bark febrifuge, tonic, expectorant, antiseptic, asthma, diarrhoea, chronic bronchitis
2.	<i>Caesalpinia bonduc</i> = <i>Caesalpinia crista</i> Ln: Gacchakaya CAESALPINIACEAE	Leaves warmed and applied on stomach to relieve pains.	Leaves in liver disorders. bark febrifuge, anthelmintic
3.	<i>Clerodendrum plomides</i> Ln.: Peddanelli or Takkeda VERBENACEAE	Paste of root bark applied 2-3 times on deep cut wounds. The two parts of the wound gets united and healed.	Although this species is known as a remedy for measles, diarrhea, etc. ailments. Its use for rheumatism is reported first time.
4.	<i>Coccinia grandis</i> = <i>Coccinia indica</i> Ln.: Donda CUCURBITACEAE	Root tuber grind (milk) and juice warmed with <i>Foeniculum vulgare</i> applied in nerves - disorders and pains.	It is noticed earlier as remedy for diabetes, gonorrhoea and external eruptions
5.	<i>Crotalaria laburnifolia</i> Ln.: Gilakati/Peddagirakati FABACEAE	Leaf paste with lime stone water and applied on burnings.	It is so for known to give throat Inflammation.
6.	<i>Derris scandens</i> Ln.:Konnatiteega/Pacchari FABACEAE	Root is pasted with garlic and applied for tooth ache on damaged tooth as medicine	Plants as fish poison. Fibre from bark for weaving mats.
7.	<i>Pongamia pinnata</i> Ln.: Kanuga FABACEAE	Poultice of leaves applied in skin diseases. Root paste warmed and applied on boils on head	Seed oil is known earlier as a remedy for rheumatism Root antiseptic as wash for wounds.
8.	<i>Ricinus communis</i> Ln.: Amudam EUPHORBIACEAE	Leaves warmed and smeared with castor oil applied on stomach to give relieve pains and uneasiness.	Seed paste is known earlier as a remedy for head ache, boils, scorpion stings.
9.	<i>Solanum trilobatum</i> Ln.: Mullamustiteega SOLANCEAE	Root decoction used in fever epilepsy. Fruits prepared as curry and taken inside for one week, acts as a tonic for general ailments	Earlier berries are reported for use in cough
10.	<i>Toddalia asiatica</i> Ln.: Mirapagandra RUTACEAE	Root bark used in curing fever	Ripe berries are used for pickles. Fresh leaves are eaten for pains in bowels. Infusion of root bark is stimulating tonic, carminative and used in diarrhea.
11.	<i>Trichosanthes cucumerina</i> Ln.: Pamudonda CUCURBITACEAE	Root tuber grind well and juice is mixed with <i>Foeniculam vulgare</i> powder warmed it is applied to back pain and nerves pains	So for it was reported for a variety of medicinal uses other than rheumatism

12. *Trichosanthes tricuspidata* Leaves warmed and applied on -----
= *Trichosanthes palmata* boils.
Ln.: Papara
CUCURBITACEAE
-

Conclusion

A critical study of 23 plants having anodyne properties collected from Sriharikota Island revealed that 10 plants are first hand report as pain killer plants used by local ethnic tribe. In addition to the already known conventional uses for these 10 plants additional pharmaceutical uses as reported by Yanadies also are given. (Annexure) Three species viz. under threatened state. They need be conserved in this area and propagated for their proper utilization and exploitation.

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A Few Tribal Medicinal Plants from Sriharikota Island



Breynia vitis-idaea –Leaf paste for rheumatism



Atalantia monophylla –Seed oil for rheumatism



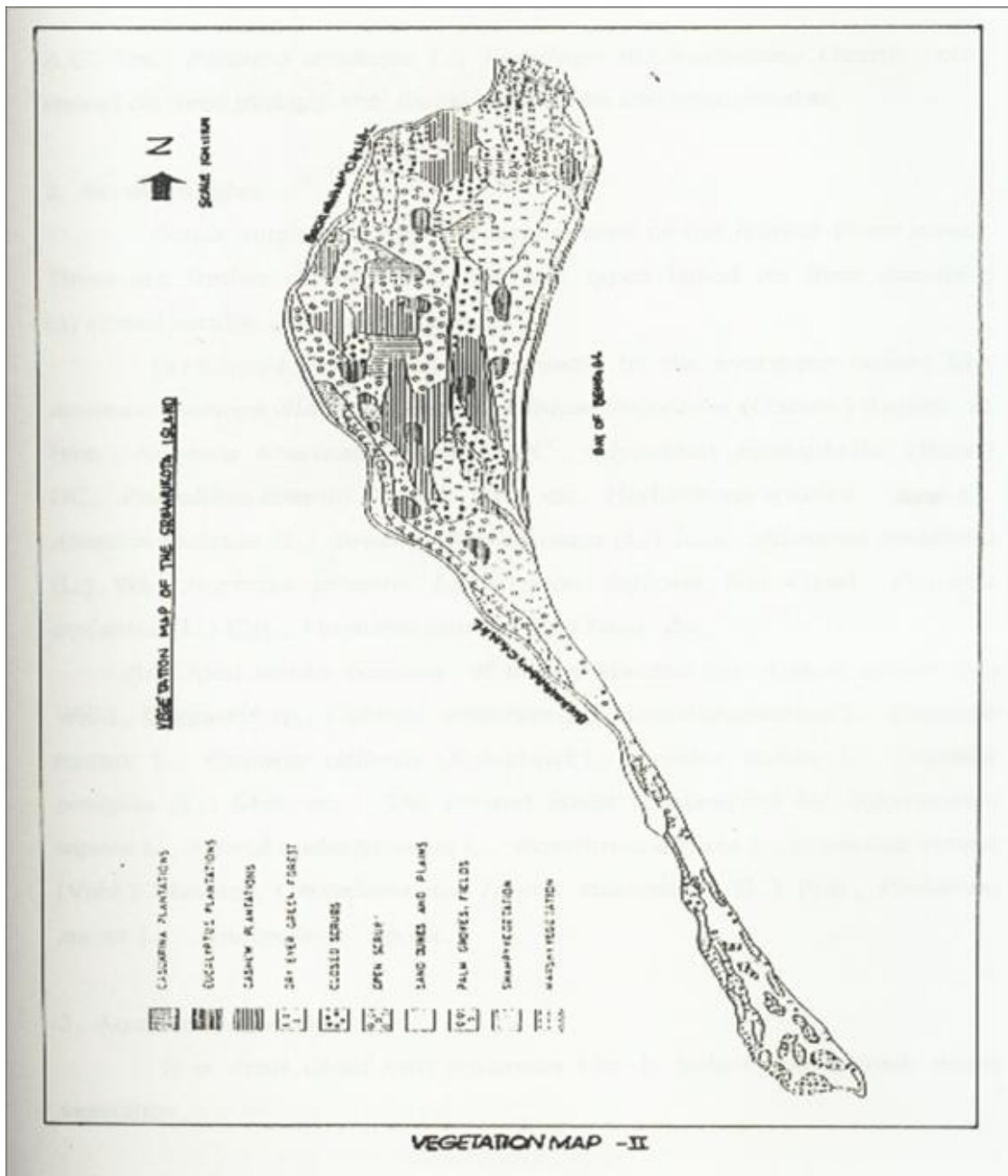
Dalbergia paniculata - Leaf paste for rheumatism



Ipomoea pestigritis – Leaf paste applied on painful swellings



Crinum defixum –scale leaves of tuber layers applied on swellings of testis



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