AN UPDATED REVIEW ON TAMILNADIA ULIGINOSA

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Abstract: Tamilnadia uliginosa, also known as Randia uliginosa (Retz.), a member of the family Rubiaceae. Tamilnadia- Genus based on name of the state of Tamilnadu in India. The plant is grown in dry deciduous forests, native to Bangladesh, India, Sri Lanka, and Thailand. The different parts of the plant are used for various ailments like Cholera, diarrhea, dysentery, eye complaints, pimples, diuretic, tonic properties, biliousness, aphrodisiac etc. Other than these pharmacological uses, the koyaguda local people named this plant as kumudmara and they used raw fruits as vegetables. The fruits are eaten boiled or roasted, either alone or in curries. The unripe fruit is astringent. It is used in dyeing as a colour intensifier. The leaves are boiled and eaten. They are used as fodder for deer and cattle. Flowers yield an essential oil similar to Gardenia oil.

Key words: Tamilnadia uliginosa, Rubiaceae, Biliousness, Diuretic and Colour intensifier

INTRODUCTION

The plants are indispensable to man for his life. Nature has provided a complete store house of remedies to cure all ailments of mankind1. Plants and natural products have long been recognized as important sources for the therapeutically effective medicines. Herbal medicines have become more popular in recent years because it is believed that these do not have any side or toxic effects as compared to the modern medicines2. Tamilnadia uliginosa, also known as Randia uliginosa (Retz.), a member of the family Rubiaceae. Tamilnadia- Genus based on name of the state of Tamilnadu in India tah-nil-nil-DEE-uh, uliginosa- grows in bogs and swamps -- ew-li-gi-NO-suh3. The plant is grown in dry deciduous forests, native to Bangladesh, India, Sri Lanka, Thailand.

TAXONOMIC CLASSIFICATION: 4, 5

Table- 1: Taxonomic Classification of Tamilnadia uliginosa

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Plantae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phylum</td>
<td>Magnoliophyta</td>
</tr>
<tr>
<td>Class</td>
<td>Magnoliopsida</td>
</tr>
<tr>
<td>Order</td>
<td>Rubiales</td>
</tr>
<tr>
<td>Family</td>
<td>Rubiaceae</td>
</tr>
<tr>
<td>Genus</td>
<td>Tamilnadia</td>
</tr>
<tr>
<td>Species</td>
<td>uliginosa</td>
</tr>
<tr>
<td>Binomial name</td>
<td>Tamilnadia uliginosa</td>
</tr>
</tbody>
</table>

SYNONYMS: 6, 7

Gardenia uliginosa Retz., Catunaregam uliginosa (Retz.) Manilal & Sivar, Randia uliginosa(Retz.) Poir , Xeromphis uliginosa (Retz.) Maheshw, Gardenia pomfera Wall, Posoqueria uliginosa (Retz.) Roxb, Solena uliginosa (Retz.) D.Dietr.

VERNACULAR NAMES: 3, 8

Table- 2: Vernacular names

<table>
<thead>
<tr>
<th>LANGUAGE</th>
<th>VERNACULAR NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telugu</td>
<td>Adavimanga, peddamanga, devatamalle</td>
</tr>
<tr>
<td>English</td>
<td>Gray emetic nut, Divine jasmine</td>
</tr>
<tr>
<td>Hindi</td>
<td>Bharani, katul</td>
</tr>
<tr>
<td>Tamil</td>
<td>Wagatta, kalikarai</td>
</tr>
<tr>
<td>Kannada</td>
<td>Banbugri, doddakare</td>
</tr>
<tr>
<td>Sanskrit</td>
<td>Devatamalla, pindalu</td>
</tr>
<tr>
<td>Malayalam</td>
<td>Kara, malankara</td>
</tr>
</tbody>
</table>

Figure: Tamilnadia uliginosa
BOTANICAL DESCRIPTION: 9-13

It is a very rigid, ramous, dry deciduous, small armed tree with quadranular branches up to 7.5m height and 1.2m in girth, bear one or two pairs of short thorns. 6 bear one or two pairs of short thorns and is hardly against frost and drought. The rate of growth is moderate, with a mean annual girth increment of 14-28mm.

Branches are erect rigid, quadrangular, thick set with short, rigid round, diverging branchlets. Short lateral shoots, each of which terminally produces one or two pairs of short thorns. Leaves opposite on young shoots, or fascicled at the end of branchlets, short-petioled, oblong, shining, entire, 2-3 inches long by 1.5 inch broad.

Flowering time at the beginning of hot season or in some measure all the year. Flowers dimorphic, white and fragrant. The flowers of this species as well as the beauty of the entire shrub, render it deserving of a conspicuous place in the flower garden. Flowers 1-3 upon their proper short pedicles at the extremities of the branchlets, large, white, and fragrant. Calyx above, tubular, obtusely five-toothed, permanent.

The wood is whitish grey or light-brown, close-grained, hard and fairly heavy and without heartwood it is not used for any special purpose, but is one of the possible box-wood substitutes; it is suitable for turning small articles.

Berry ellipsoid or globose or ovoid solitary 5-6cm long, yellowish brown, crowned with persistent calyx; stalk 2 cm long; seeds about 6mm long by 3mm thick. The unripe fruit is astringent. It is used dyeing as a colour intensifier. The leaves are boiled or roasted, either alone or in curries. The unripe fruit is astringent. It is used for bone fractures, turmeric and calcium...

FLOWERING AND FRUITING: April-June 14

GEOGRAPHICAL DISTRIBUTION: 3, 10, 15-16

The plant is grown in all dry districts in open forests, native to Bangladesh, India, Sri Lanka, Thailand, and Vietnam. The plant is grown at an altitude of 1000m common in the sub-Himalayan tracts from the Yamuna eastwards and in eastern central and southern India. In Andhra Pradesh it is available in all districts.

TRADITIONAL USES: 10, 13, 17-21

Fruits -- Used as astringent, Cholera, diarrhea, dysentery, eye complaints, headache, pimples and sores.

Roots --- Used as cooling, diuretic, tonic properties, biliousness, boil in children, diarrhea, aphrodisiac and dysentery.

Pulp-- The roasted pulp is used as a remedy in diarrhea and dysentery, especially during pregnancy and pulp is applied on boils.

Unripe fruit --The unripe fruit is employed as fish-poison.

CHEMICAL CONSTITUENTS: 10, 22

On dry wt basis destructive distillation of wood gave charcoal- 30.4; tar- 9.6; pyroligneous acid- 39.7 [acid 5.0; ester 3.7; acetone 2.7; methanol-1.4]; pitch and losses1.7; and gas 18.5%. Analysis of the edible matter gave carbohydrates-12.5; calcium- 33mg; phosphorous- 13mg; calorific value- 56 cal. /100g.

RECENT DEVELOPMENTS IN THE RESEARCH AREA OF TAMILNADIA ULIGINOSA:

A.B. Prusti, et al. 23 in 2007 Ethnobotanical Exploration of in 2007 they conducted a survey in Malkangiri District of Orissa, this survey describes that koyaguda local people named this plant as kumudmara, they used raw fruits as vegetable.

K. Venkata Ratnam et al. 24, in 2008 they conducted a survey in adivasis of Eastern Ghat, Andhra Pradesh. The local name of the plant is adavijama. Stem bark of Tamilnadia uliginosa was used for bone fractures ground with white layer of country egg, turmeric and calcium.

M.K.R.Narayanan et al. 25, In 2011 they conducted a survey in the Wayanad Wildlife Sanctuary on floristic and ethnobotanical studies; locally they called as Pindichakka and found that tender fruits are used as vegetables.

Sudhakar K et al.
K. N. Reddy et al.26, In 2000-2005 they conducted an Ethno pharmacological survey in Chittoor, Cuddapah, East Godavari, Guntur, Khammam, Krishna, Kurnool, Srikakulam,Visakhapatnam, Vijayanagaram and West Godavari districts of the rural people and forest ethnic people (Chenchus,Erukulas, Lambadas, Koyas, Kondareddies, Nukadoras, Yanadis).They found that the stem bark of Helicteres isora Linn along with that of Tamilnadia uliginosa and a whole plant of Bacopa monnieri Wettst (10 gm. each)are used in treatment of Cold and Cough.

Suman D et al.27, Studies on the food and feeding habits of Gaur Bos gaurus H. Smith (Mammalia: Artiodactyla: Bovidae) in two protected areas of Goa, They conducted a survey in Mahaveer Wildlife Sanctuary and found that leaves are consumed during winter season.

Wongsatit Chuakul et al.28, They conducted a survey on medicinal plants in Kutchum District, Yasothon Province, Thailand. The decoction of wood of Tamilnadia uliginosa was used in treatment of diabetes mellitus.

LIST OF SPECIES OF IN RANDIA GENUS:29

<table>
<thead>
<tr>
<th>Randia aciculiflora Borhidi &amp; Saynes</th>
<th>Randia capitata DC</th>
<th>Randia echinocarpa Moc. &amp; Sessé ex DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Randia altiscandens (Ducke) C.M.Taylor</td>
<td>Randia chiapensis Standl</td>
<td>Randia ferox (Cham. &amp; Schltdl.) DC.</td>
</tr>
<tr>
<td>Randia amazonsensis steyerm</td>
<td>Randia ciliolata C.Wright</td>
<td>Randia genipifolia (Standl. &amp; Steyerm.) Lorence</td>
</tr>
<tr>
<td>Randia annae (K.Schum.) ined.</td>
<td>Randia cinerea (Fernald) Standl</td>
<td>Randia genipoides Dwyer</td>
</tr>
<tr>
<td>Randia aristequietae Steyerm.</td>
<td>Randia confusa Borhidi &amp; Diego</td>
<td>Randia gentryi Dwyer</td>
</tr>
<tr>
<td>Randia armata (Sw.) DC.</td>
<td>Randia cookii Standl</td>
<td>Randia grayumii Dwyer &amp; Lorence</td>
</tr>
<tr>
<td>Randia asperifolia (Sandwith) Sandwith</td>
<td>Randia coronata Borhidi</td>
<td>Randia canescens Greenm.</td>
</tr>
<tr>
<td>Randia boliviana Rusby</td>
<td>Randia costata Borhidi</td>
<td>Randia dumetorum(Retz.)</td>
</tr>
<tr>
<td>Randia brachysiphon Borhidi &amp; Salas-Mor.</td>
<td>Randia cubana Borhidi</td>
<td>Randia guerrerensis Lorence &amp; Rodr.Acosta</td>
</tr>
<tr>
<td>Randia brenesii Standl.</td>
<td>Randia denticulata Borhidi</td>
<td>Randia hebecarpa Benth</td>
</tr>
<tr>
<td>Randia brevipes Steyerm.</td>
<td>Randia dioica H.Karst.</td>
<td>Randia hidalgensis Lorence</td>
</tr>
<tr>
<td>Randia calycina Cham</td>
<td>Randia diversiloba Standl.</td>
<td>Randia hondensis H.Karst.</td>
</tr>
<tr>
<td>Randia itatiae Silva Neto &amp; Ávila</td>
<td>Randia killipii Standl.</td>
<td>Randia laetevirens Standl.</td>
</tr>
</tbody>
</table>

Sudhakar K et al. 187
Randia laevigata Standl.  Randia laevigatoides Borhidi  Randia lanuginosa Borhidi & García Gonz.

Randia lasiantha (Standl.) Standl.  Randia longifolia C.Gust.  Randia longiloba Hemsl.

Randia malacocarpa Standl.  Randia martinicensis (Urb.) Standl  Randia matudae Lorence & Dwyer

Randia mayana Lundell  Randia mendozae Ined.  Randia micracantha (Lillo) Bacigalupo

Randia mira Dwyer  Randia mixe Borhidi & E.Martínez  Randia mollifolia Standl.

Randia monantha Benth.  Randia mossica (A. Chev.) A. Chev.  Randia nelsonii Greenm

Randia nicaraguensis Lorence & Dwyer  Randia nitida (Kunth) DC  Randia nodifolia Borhidi & García Gonz.


Randia ovalifolia Borhidi  Randia parana Ined.  Randia parvifolia Lam.

Randia pascualii Borhidi & Salas-Mor  Randia petenensis Lundell  Randia pittieri (Standl.) Standl.

Randia platysepala Standl.  Randia portoricensis (Urb.) Standl.  Randia pringlei (S.Watson) A.Gray

Randia pteroocarpa Lorence & Dwyer  Randia pubiflora Steyerm.  Randia pubistyla C.Gust.

Randia retroflexa Lorence & M.Nee  Randia rotundifolia Ruiz & Pav.  Randia serboi Borhidi & Saynes

Randia sonorensis Wiggins  Randia spinifex (Roem. & Schult.) Standl.  Randia st兰dleyana L.O.Williams

Randia tessmannii Standl  Randia tetracantha (Cav.) DC.  Randia thurberi S.Watson

Randia venezuelensis Steyerm.  Randia wigginsii Standl. ex C.Gust  Randia xalapensis M.Martens & Galeotti

CONCLUSION

Tamilnadul uliginosa is a wonder plant since each and every part of it can be used for its medicinal values. Other parts of the plants such as fruit, root, pulp and unripe fruits which are documented possess important medicinal uses and pharmacological effects. In further studies the other plant parts as well as isolated components need to evaluate in scientific experimental animal models and clinical trials to understand the molecular mechanism of action.

Acknowledgements

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