

PROSOPIS JULIFLORA, THE PRECOCIOUS CHILD OF THE PLANT WORLD*

By

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Prosopis juliflora! What a sweet name! After hearing the tongue-twisting botanical names such as *Atylosia scarabaeides* and *Calycopteris floribunda* and the lewd sexy names such as *Erithrocydon monogynum* and *Mimusops hexandra*, it is like listening to melodious Veena after the blaring bazaar band. *Prosopis* belongs to the enthralling beauties of the botanical world such as *Gloriosa superba*, and *Butea frondosa*. Yet, I cannot understand why people want to banish this lady of charm, perfume and permanence from their territories. Anantapur Zillaparishad passed a resolution that *Prosopis juliflora* should not be allowed to be propagated! Yet, we meet here today to celebrate the centenary of *Prosopis* stepping ceremoniously into Andhra Pradesh in 1877! Well, the lady defiantly exhibited her power and vigour by building her green bowers even on the bare hills; and smiling at her persecutors from the gneissic heights. Wherefrom and how this charming lady came to India?

Her sister was a very old resident of Bharat. *Prosopis spicigera*, the Samee Vriksha or Jammi Vriksha of Mahabharat fame had, perhaps, accompanied Aryans when they marched into India from the desolate regions of the Middle East. This lady is venerated and worshipped *abhorred*.

Lt. Col. R. H. Peddome, the Conservator of Forests of Northern Circle (Madras) wrote to the Secretary, Revenue Department, Madras on 24-2-1876 (vide proceedings of Madras Government (Revenue Department,) dated 7-3-1876) about the excellence of *Prosopis juliflora* and the expediency of inviting her to settle down in India thus :

"The *Prosopis dulcis* (called Algarbo & St. Joh's locust), the *Prosopis pubescens* (the Screw Bean and Screw Mesquite or Tornillo of the Mexicans) and *P. glanulosa* (the Mesquite of Texas)—trees widely spread over Central and South America—are stated to grow best on a dry arid soil. They yield hard and valuable Timber and also an abundance of sweet succulent pods which are used for cattle feeding and also ground into meal. It is very desirable to introduce these trees into the fuel plantations in our dry districts; and I have the honour to suggest that the British Consuls at Galveston and San Francisco should be applied to for the seed. The *Prosopis juliflora* is a species growing in Jamaica which I should be very glad to get seed of".

The Board of Revenue replied that the application would be made to the Secretary of the State for the seeds.

The application was made and the seeds were obtained from South America and sown successfully at Camalapur (Kamalapuram, a Taluk Headquarters in Cuddapah district) in the same year. Lt. Col. Beddome while reporting on the Red Sanders and other Railway

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Fuel Plantations in Cuddapah district to the Secretary to Government, Revenue Department on 25-1-1877 (Proceedings of Board of Revenue No. 1571, dated 9-11-1877) mentions:—

"The *Prosopis juliflora* seeds, which I lately procured from South America a tree likely to succeed in our most arid soils and climates has come up very well in a nursery on this Plantation (Camalapur fuel plantations)".

Thus in 1876, the sweet lady of fragrant flowers and succulent pods came to India right royally, invited by the great pioneering Forest Officer Lt. Col. Beddome and established her-self first in Andhra Pradesh at Camalapur (Kamalapuram in Cuddapah district). The Forest Department and the Agriculture Department of the erstwhile Madras State worked hard to serve this exotic lady of South America and provided all amenities and comforts. The alien soil, and the hostile people made it hard for *Prosopis chilensis* syn. *P. juliflora* to establish herself on Indian sub-continent. The shy plant which was nursed and nurtured in mud pots for being planted in the blowing sands and bellowing winds even in forties of the century, along the Hagari river in Bellary District (now in Karnataka) has been now marching defiantly unaided to establish her domain on sterile and saline patches and shifting sand dunes.

The rebellious sands are subdued and the inhospitable soils are colonised. The dreary scene of dry districts is changed to that of green belts. The bleak tree-less landscape is painted with splashes of brown, green and yellow. The monotony is broken for the traveller and the sheep and goats happily munch and crunch the proteinous pods. The rural folk, whose lands were getting buried under drifting sands are grateful to the Forester and *Prosopis*, and the poor folk who had no fuel to burn in their hearths now have *Prosopis*, the "Kalpa Taru" all around the houses. They collect the fuel in their leisure and sell in towns for a decent price. A rapid survey of fuel consumption in urban countries of Rayalaseema in 1972-73 indicated that 30% of fuel consumed is of *Prosopis juliflora*.

While the expanding agricultures allowed all the tree lands in the vicinity of the villages, the rural communities started burning dung as fuel. For each tonne of dung consumed as fuel, the cultivator has been losing 8 kg of Nitrogen or nitrate. The benefit of good tilth that the dung provides and other trace elements which are invaluable are lost for the farmer. *Prosopis* is freely and easily available in many rural areas and has even colonised road margins and field bunds.

According to "Timber Trends and Prospects in Dadia (1960-1975)" by Sri P. Venkata Ramany, the projected fuelwood requirement of India in 1975 would be 343 million tonnes. We can take this figure for convenience of calculation as 300 million tonnes. This requirement is met in the following manner:—

	Million tonnes	Ratio
From Forests	10	1
Unrecorded sources	60	6
Cattle dung	120	12
Agricultural refuse	110	11

On Prorata basis, the fuel requirement of Andhra Pradesh now should be 30 million tonnes which on the basis of All India Pattern is met as follows :—

	Million tonnes
From Forests	1
Unrecorded sources	6
Cattle dung	12
Agricultural refuse	11
Total	<u>30</u>

(According to the Annual Administration Report of Andhra Pradesh Forest Department, the actual production of fuel from Forests in 1975-76 was 0.7 million tonnes).

The Planning Commission estimated in 1971 (NCAER) that in India Rural population purchases only 20% of their fuelwood requirements. Since the rural population forms 80% of the total population, their requirement of fuel in Andhra Pradesh met from unrecorded sources, cattle dung and Agricultural refuse (on the presumption that they get no forest fuel) would be 6, 12, 11 million tonnes respectively. Even conceding that the 'unrecorded sources, and agricultural refuse continue to be used as fuel, the cattle dung has been mostly substituted by *Prosopis* fuel in rural India. However, to be modest in the claim, it can be taken that only 50% of dung or 6 million tonnes are substituted by *Prosopis* fuel. The value of 6 million tonnes would be easily Rs. 180 millions.

Each tonne of cowdung contains about 8 kg. of nitrate the value of which may be Rs. 20/-. The value of Nitrate made available to the agricultural crops by the availability of 6 million tonnes of fuel would be Rs. 120 million.

The other benefits of the use of dung as manure would be the improvement of soil tilth and texture and addition of trace elements to the soil fertility and these could be valued at Rs. 5/- per tonne. These benefits would thus be valued at Rs. 30 millions.

Atleast one tenth of the population or four millions of Harijans and other economically backward people in Andhra Pradesh get off season employment due to the aggressive presence of *Prosopis* around their habitations and waste lands. These people collect *Prosopis* fuel of all sizes, shave off thorns in their leisure time, and take it to the nearest town in hired carts once a month and make Rs. 10/- to Rs. 15/-. It is doubtful if all the Governmental schemes designed to improve the lot of the poorer sections could give more assured income than what the prolific presence of *Prosopis* provides to them. Thus about one million families earn Rs. 10 millions a month and Rs. 120 millions in a year from *Prosopis* fuel. Thus the monetary benefit *Prosopis* confers on Andhra Pradesh annually is estimated to be $180 + 120 + 30 + 120 =$ Rs. 450 millions.

Other indirect benefits due to avoidance of over-exploitation of forests and consequent denudation averted may be enormous. The protinous pods used as cattle feed and the gum that can be used as sizing material also confer substantial benefit to the society.

Prosopis has grown to timber-sizes on sand dunes in Kurnool and Anantapur districts. The timber is strong and durable. The heartwood plants of *Prosopis* with a width of 32 cm. Obtained from 25 year old plantations at Guliam in Kurnool have remained un-affected by any insect and have been used for furniture with advantage. The villagers use this timber for various agricultural implements. The *Prosopis* gum is used for sizing cloth and paper. The tender leaves of *Prosopis* ground with jaggery and applied to scorpion bites are said to give instant relief.

The fear that *Prosopis* drains off all the sub-soil moisture and increases aridity in the already arid districts is yet unfounded.

Prosopis juliflora has crossed the continents and oceans and has come to India at the invitation of the Foresters. She has served the poor and the Forest Department faithfully for years. If Teak has been the Royal Timber *Prosopis* has been the Loyal Timber of the Poor. She completes a century of colonisation, stabilisation and expansion in 1977 and let us celebrate the centenary of *Prosopis juliflora* and sing her saga of achievements and glory.

SUMMARY

The paper gives a summary of experience relating to introduction of *Prosopis juliflora* in Andhra Pradesh. The potentialities of this species in meeting the fuelwood requirement of local people and to afforest as much of the available waste, denuded or otherwise uncultivable lands as possible are discussed. The paper also aims to introduce the merits of this notable species.

पादप जगत का अकालपक्व बालक—प्रोसोपिस जुलीफ्लोरा

लेखक सी० वी० कोण्डारेड्डी

सारांश

इस अभिपत्र में आंध्र प्रदेश में प्रोसोपिस जुलीफ्लोरा लगवाने के सम्बन्ध में प्राप्त हुए अनुभवों का सारांश दिया गया है। स्थानीय जनता की ईंधन की आवश्यकताएं पूरा करने में इस वृक्ष जाति की संभावनाओं और उपलब्ध बंजर तथा मिट्टी कटने अथवा किन्हीं और कारणों से परती (अकृष्य) बनी अधिकाधिक भूमि पर इसका वन लगाने पर विचार किया गया है। इस अभिपत्र का लक्ष्य इस असाधारण वृक्ष जाति के गुणों को बतलाना भी है।

Prosopis juliflora-der frühreife Junge der Pflanzwelt

C.V. KONDA REDDY

ZUSAMMENFASSUNG

Der Artikel gibt eine Zusammenfassung der Erfahrung von der Einführung der *Prosopis juliflora* im Andhrapradesh. Man hat die Leistungsfähigkeiten dieser Art, den brennstoffe Forderungen der örtliche Leute zu begegnen, und die mögliche benutzbare Ödelanderei und andere unkultivierbare Länder, entblößen oder wegen anderer Gründe, zu aufforsten, diskutiert. Der Artikel auch zielt die Werte dieser merkwürdige Art bekannt zu machen auf.

Prosopis juliflora—l'enfant précoce du règne végétal
par C.V. KONDA REDDY

Résumé

Cet article fait état des expériences relatives à l'introduction de *Prosopis juliflora* dans l'Andhra Pradesh. Le potentialité de celle-ci pour pourvoir aux besoins du peuple de la région, en matière du bois de chauffage, est discuté. On parle également de l'importance de reboisement autant que possible, de tout terrain en friche et inculte, avec cette espèce. Aussi, l'article vise-t-il à exposer les mérites de cette espèce notable.
