

LivelyWaters!: Nallusamy Wetland Restoration Project

Observations on presence & threats of the following plant species, *Caralluma adscendens* var. *bicolor*, *Cordia diffusa*, *Crotalaria wilddenowiana* in Coimbatore, Tamil Nadu

1. *Caralluma adscendens* var. *bicolor* (V.S. Ramach., S. Joseph, H.A. John & Sofiya) Karupp., Ugraiah & Pull.

Distribution: The species is endemic to India. It is found in Tamil Nadu, Andhra Pradesh (POWO 2025) and Kerala (Anilkumar et al. 2013).

In Tamil Nadu: Bharathiar University Campus (BSI 2024; Ramachandran et al. 2011), Maruthamalai hills, and Karunya Nagar (Ramachandran et al. 2011).

Habitat: Grows in scrublands, in gravelly soil.

Survey date: 02 October 2024

Observations: The species was located in dry, open areas of scrublands and grasslands of around 0.7 km², at the foothills of Maruthamalai hills inside Bharathiar University Campus, 500 m after the Swimming pool centre inside the campus. The terrain was rugged, non-uniform with a series of small canyons and mounds characterized by red soil & sand with rocky substratum. We found at least one individual every 20 m, from our random walk of at least 300 m. Most of the individuals were found under the shade of *Dodonaea viscosa* and some under grasses. Each plant was of up to 60 cm height with 2–7 arms and were observed to

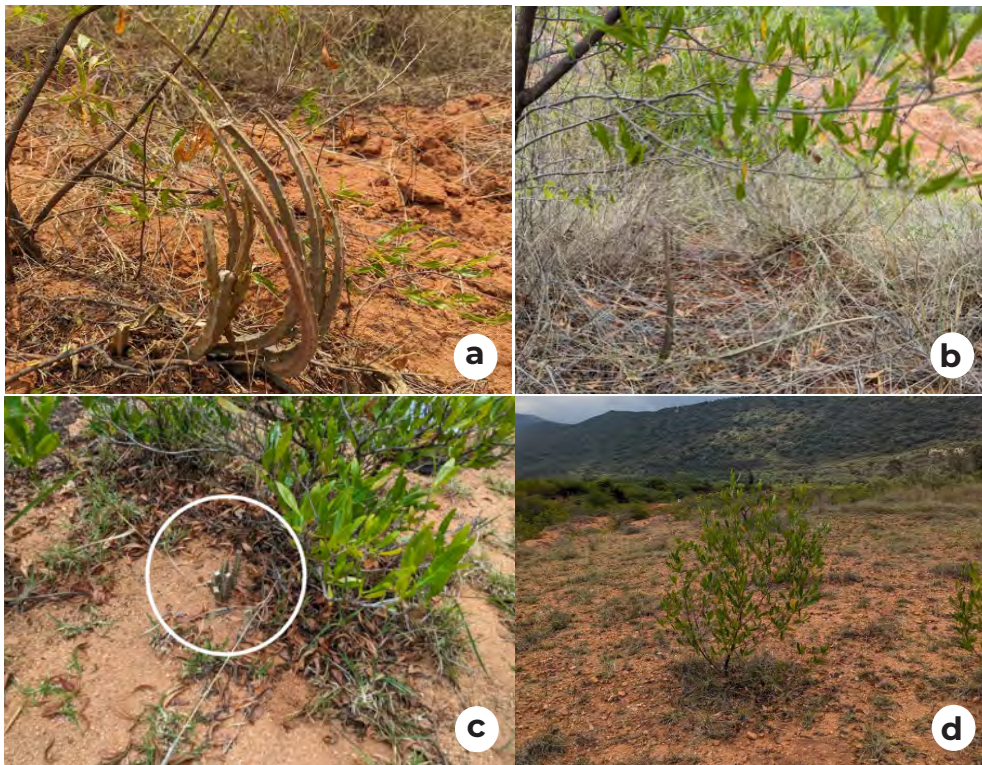
be in solitary and not in groups. A few cuttings were transferred to Zooreach nursery and the plants are growing well.

Threats: Tractors were seen excavating the red soil, although the purpose is unknown, there were a few plants very close to the activity. There were also signs of land being burnt. Eucalyptus plantation (planted many years ago) is a historic threat to the habitat as it changes shrubland grassland nature of the region to monoculture plantations and dries out the watertable.

What next: The entire area needs to be surveyed for population assessment of the



Extent of possibility of occurrence of *Caralluma adscendens* var. *bicolor* in Bharathiyar campus, along the foothills of Maruthamalai hills, based on scrubland texture of the land mapped from Google Earth (0.71 km²). The blue patch in the image is the swimming pool.



a—*Caralluma adscendens* var. *bicolor* | a, b, & c— Individuals seen with *Dodonaea viscosa* | d— Shot of *Dodonaea viscosa* with habitat.
© Usha Ravindra.



Habitat of *Caralluma adscendens* var. *bicolor*, Bharathiar Campus, Coimbatore, 02 October 2024.
© Usha Ravindra.



Habitat threats. a—Burning of land (purpose unknown) & *Eucalyptus* plantations (historic threat) | b—Soil excavation | c—Land change | d—pollution.
© Usha Ravindra.

species. The species association with *D. viscosa* should be studied. The habitat threats need to be documented and their extent should be assessed. Presence of the species in other areas of Coimbatore need to be identified.

2. *Crotalaria wilddenowiana* DC

Distribution: It is found in southern India and Andaman Islands (POWO 2025).

In Tamil nadu: Gandhi Memorial Library, Coimbatore dist, Madras state, 467 m (BSI 2024)

Habitat: Grows in scrublands.

Survey date: 01 October 2024

Observations: The Gandhi Memorial Library location turned out to be the current Central Prison in Grey Town, near ATT colony. The prison has undergone complete land use changes with ongoing developments inside. Surrounding areas of the prison are made of roads, buildings, and parks. The nearby parks were surveyed to find pruned gardens and exotic or naturalized plants with no sighting of the species. If this was indeed the location the specimen was collected in 1961, the species is locally extirpated due to complete urbanization of the area.

Threats: The population is likely extirpated due to rapid urbanization.

What next: The species occurrence in other locations needs to be identified from literature/expert consultation and surveys should be conducted for confirmation of its occurrence in Coimbatore and Tamil Nadu.

3. *Cordia diffusa* K.C. Jacob

Distribution: The species is endemic to Tamil Nadu, India (POWO 2025).

In Tamil nadu: As per BSI (2024) records, the specimens were collected in the Railway line, Coimbatore in Tamil Nadu by K.C. Jacob on 02 May 1938. It's recorded in Vaalankulam in Coimbatore along the railway line in 1959; Ramanathapuram in TN in 1965; Forest College Compound in RS Puram in Coimbatore in 1968; RS Puram, Botanical Garden IFGTB campus in 1987 (the population here is extirpated as per Arumugam et al. 2019); near Nanjundapuram along railway line (Podanur Jn) in 2018; in Karaichalli island in Thoothukudi in Gulf of Mannar Biosphere Reserve in 2001; in Nallathanni island in Rameswaram and in Chettipalayam, Coimbatore TN (Dr. Arumugam pers. comm. 25 December 2024). Its occurrence in Chengalpattu District (Ramamurthy 1987; Nayar 1996; Singh et al. 2015), and from Deccan (Ahmedullah & Nayar 1987) is doubtful as per Arumugam et al. (2019) due to no available specimens from these regions.

Habitat: Grows in scrublands.

Survey date: 30 September 2024 & 15 December 2024.

Observations: Our search for the species in Podanur railway line of nearly 1.5 km (near Nanjundapuram) in September 2024 was futile as we could not find even a single individual although it was last seen by Dr. Arumugam in 2018 (Figure 1). Another record of the plant in Chettipalayam was surveyed and only two individuals were seen on 15 December 2024,

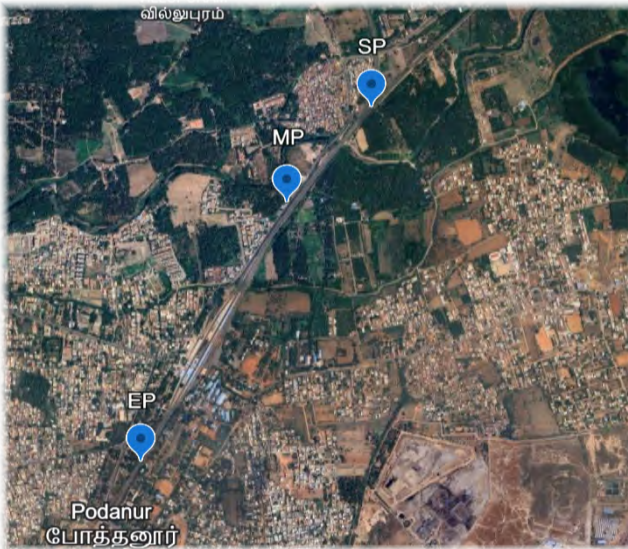
however, in 2017–2018, there were 40–60 individuals recorded in the same place (pers. comm. Dr. Arumugam Dec 2024).

The plant was at least 2 m high. One individual was found amidst the dense *Acacia* sp. and other invasives and another individual was found growing next to the fence. A few cuttings of the plant were transferred to Zooreach nursery but they dried up within 3–4 days and didn't survive.

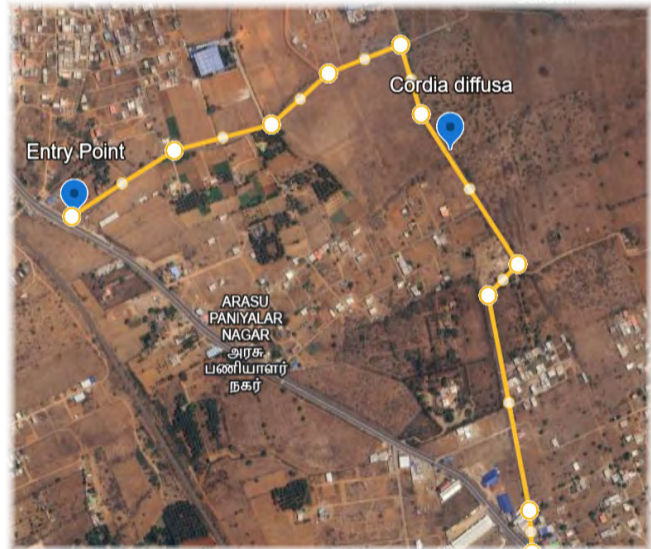
Threats: The habitat in Chettipalayam is surrounded by farmlands, land plots (some for sale), and roads. Invasive plants like *Abutilon indicum* and *Senegalia mellifera* have invaded the habitat (Image 4). People are also fencing their lands by clearing plants. Some constructions were also recorded in the vicinity. The local extirpation of the populations in its type locality, Podanur railway line was suspected by the author as the railway lines are cleared for weeds and constructions, regularly. The species' medicinal properties are being researched which could lead to wild extractions or in situ breeding –

Cordia diffusa in Chettipalayam, Coimbatore District, found in December 2024. © Usha Ravindra.





Survey length in Podanur railway line on 30 September 2024. Starting Point (SP): 10.971° N, 76.993° E, a distance of 2 km was surveyed. No individuals were found.



Survey length of 1.9 km deviating from Chettipalayam main road, to insides was surveyed as per map. Two *Cordia diffusa* individuals were seen within 200 m distance.



Habitat threats to *Cordia diffusa*, clearing plants for fencing, farming, and constructions. © Usha Ravindra.



Habitat threats to *Cordia diffusa*. Invasive plants dominating the habitat. a—*Abutilon indicum* | b—*Senegalia mellifera*. © Usha Ravindra.

propagating plants by cuttings. Some have been introduced in Singanallur tank bund road.

What next: Drastic decline in population of the species in Chettipalayam, Coimbatore, TN requires regular monitoring and the factors impacting decline needs to be understood. Its presence in other areas needs confirmation with further assessments on threats.

References

Anilkumar, K.A., K.M. Kumar & P.S. Udayan (2013).

Caralluma bicolor Ramach. et al., (Apocynaceae: Asclepiadoideae)-a rare and little known endemic plant as a new record from Palakkad District, Kerala State, India. *Journal of Threatened Taxa* 5(15): 5007–5009

Arumugam, S., K.S. Kumar, B. Karthik & V. Ravichandran (2019).

Cordia diffusa K.C. Jacob, the Kovai Manjack (Boraginaceae): a highly threatened steno-endemic species from Coimbatore City, Tamil Nadu, India. *Journal of Threatened Taxa* 11(14): 14870–14875.

Botanical Survey of India (BSI) (2024). Indian Virtual Herbarium. <https://ivh.bsi.gov.in/phanerograms> Accessed on 30.ix.2024.

POWO (2025). Plants of the World Online. <https://powo.science.kew.org/>. Accessed v.2025..

Ramachandran, V.S., S. Joseph, H.A. John & C. Sofiya (2011). *Caralluma bicolor* sp. nov.(Apocynaceae, Asclepiadoideae) from India. *Nordic Journal of Botany* 29(4): 447–450.

Acknowledgements

We thank BOSCH for funding the project on locating endemic plant species in Coimbatore, India. We are grateful to Dr. S. Arumugam for assisting us on-field for locating *Cordia diffusa* in Chettipalayam and sharing his knowledge on the species.



Usha Ravindra¹, Shanmugam Mani² & Sanjay Molur³

^{1&3}Zoo Outreach Organisation, Coimbatore, Tamil Nadu, India. usha@zooreach.org, sanjay@zooreach.org

²Pitchandikulam Forest Consultants, Auroville, India manitrees@gmail.com

Citation: Ravindra, U., S. Mani & S. Molur (2026). Observations on presence & threats of the following plant species, *Caralluma adscendens* var. *bicolor*, *Cordia diffusa*, *Crotalaria willdenowiana* in Coimbatore, Tamil Nadu. *Plantasia* #132, In: *Zoo's Print* 41(6): 27–32.