

A Plant That Hunts

Record of an Insectivorous Plant from the Nemmeli Coastal Wetland and a Call for Its Protection

***Drosera burmannii* (Burmans' Sundew / Azhukanni)**

Family: Droseraceae | Order: Caryophyllales

Nemmeli Coastal Wetland Complex, Chengalpattu District, Tamil Nadu

Observed by

Suzhal Arivom Volunteers

Date of Sighting

21 January 2026

Location

Nemmeli Coastal Wetland Complex
Chengalpattu District, Tamil Nadu

Report Date

February 2026

Notice: This report presents a field observation record of *Drosera burmannii* (Burmans' Sundew / Azhukanni) from the Nemmeli Coastal Wetland Complex and simultaneously serves as conservation evidence against the proposed Mamallan Reservoir project, construction of which commenced in January 2026. The species documented here was entirely absent from the Rapid Environmental Impact Assessment (REIA) conducted for that project. This report is a companion document to the Suzhal Arivom Conservation Report on Nemmeli Coastal Wetland Complex (April 2026) and the Species Nursery Documentation Report (April 2026).

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Photographed at Nemmeli Coastal Wetland Complex, by Suzhal Arivom Volunteers. **What you see is a butterfly being trapped and slowly digested by a plant. This plant grows in the coastal grassland that the Mamallan Reservoir project will permanently destroy.**

1. Overview

On 21 January 2026, Suzhal Arivom Volunteers documented an established colony of *Drosera burmannii*, commonly known as Burmann's Sundew or Azhukanni in Tamil, within the open coastal grassland of the Nemmeli Coastal Wetland Complex, Chengalpattu District, Tamil Nadu. The colony was recorded across five GPS-verified locations, with multiple mature rosettes actively trapping prey.

The significance of this finding lies not in the plant alone but in what its presence tells us about the place where it grows. *Drosera burmannii* is a strict habitat specialist. It establishes only in undisturbed, nutrient-poor, seasonally waterlogged ground. Its colony at Nemmeli is biological confirmation that this coastal grassland remains ecologically intact.

Construction of the Mamallan Reservoir commenced in January 2026. The proposed project will permanently impound this coastal wetland under a freshwater reservoir. The grassland where this colony was documented falls in and around the project footprint. This report places that fact on record.

2. Meet the Plant: *Drosera burmannii* (Azhukanni)

Most people have never heard of a plant that hunts animals. *Drosera burmannii* is one. It is small enough to sit in the palm of your hand, around 2 to 3 cm and grows flat against the soil in a circular arrangement of leaves called a rosette. Each leaf is fringed with red, hair-like structures tipped with glistening droplets. Those droplets are not dew. They are a trap.



Mature rosette of *Drosera burmannii*, Nemmeli Coastal Wetland, 21 January 2026.

The plant secretes a sweet nectar from these red tentacles to attract insects. When an insect lands and makes contact, the outer snap-tentacles respond. Research by Gibson and Waller (2009) documented that these tentacles move 180 degrees in 5 to 15 seconds, pushing the prey into the sticky centre of the leaf. The mucilage then envelops the insect, blocking its breathing pores. The prey dies within 15 minutes. The plant then digests it over several days, absorbing the nitrogen and phosphorus it cannot obtain from the poor soil it lives in. [Ref: A-I, A-II]

A peer-reviewed study on *Drosera burmannii* specifically documents that carnivorous plants of this genus consume mosquitoes, midges, and other disease-transmitting flies as prey. [Ref: A-III] Ants are attracted to its nectar and are among its most commonly trapped prey. [Ref: A-IV] Our own photograph from Nemmeli on 21 January 2026 documents a butterfly being actively digested by this plant, confirming that it can trap and consume prey significantly larger than itself.

Drosera burmannii is an annual plant. It germinates with the monsoon rains, grows through the post-monsoon cool period, flowers between December and February, sets seed, and dies as the ground dries in March to April. One season. One chance. No recovery if the habitat is destroyed.

Its Tamil name is Azhukanni. It has been recorded across Tamil Nadu and the Indian subcontinent, but its occurrence in a coastal wetland grassland at near sea-level elevation in the Nemmeli Coastal Wetland Complex has not been previously documented in published literature.

3. The Sighting: What We Saw and Where

Observer: Suzhal Arivom Volunteers

Date: 21 January 2026

Location: Nemmeli Coastal Wetland Complex, Chengalpattu District, Tamil Nadu

Habitat: Open black clay coastal grassland, within CRZ zone, near sea level

GPS elevation range: -1.73 m to +2.59 m

Five photographs were taken at five separate GPS-stamped locations within a small area of the coastal grassland, as recorded below.

Photo	Latitude	Longitude	Elevation	Time	Field Note
Image 4	12.688132 N	80.209552 E	-1.08 m	12:12	Grassland
Image 5	12.688131 N	80.209552 E	-1.73 m	12:12	Grassland
Image 3	12.688082 N	80.209480 E	0.59 m	12:16	-
Image 1	12.688069 N	80.209478 E	2.59 m	12:17	-
Image 2	12.688045 N	80.209496 E	-1.41 m	12:18	-



Colony in open black clay coastal grassland, Nemmeli Coastal Wetland Complex, 21 January 2026.



Two mature rosettes of *Drosera burmannii*. GPS coordinates visible. Nemmeli, 21 January 2026.

The photographs confirm three things collectively. First, multiple mature rosettes are present across five GPS points, confirming this is an established colony and not a stray individual. Second, active trapping is documented: a butterfly is being digested in real time in Image 6. Third, the surrounding habitat is open, undisturbed black clay coastal grassland, consistent with the specific soil and moisture requirements of this species.

4. Why Is This Plant Here? Reading the Habitat

Drosera burmannii does not grow just anywhere. Its presence at a location is a precise statement about the ecological condition of that location. Understanding what this plant needs to survive is the same as understanding what Nemmeli's coastal grassland is providing.

Soil

Drosera burmannii establishes only in nutrient-poor, acidic soils with a pH range of 5.2 to 6.0. [Ref: A-V] It cannot survive in ground that has been enriched by fertiliser runoff, altered by construction material, or compacted by vehicle movement. Its presence in the Nemmeli coastal grassland confirms that the black clay soil here is chemically undisturbed. This is not degraded land. This is ecologically intact ground.

Water

The plant requires ground that is seasonally waterlogged but not permanently flooded. The GPS elevation data from our sighting (-1.73 m to +2.59 m above sea level) confirms that this colony exists within the post-monsoon tidal fringe of the coastal wetland, where the land floods with the northeast monsoon and slowly dries through the winter. This is exactly the natural hydrological rhythm of a functioning coastal wetland, and *Drosera burmannii* is here because that rhythm has not been disrupted.

Disturbance

Drosera burmannii is among the first plant species to disappear when a habitat is cleared, compacted, or chemically altered. An established, reproducing colony at Nemmeli means this grassland has remained free from significant anthropogenic disturbance. This is a coastal grassland that has held its ecological integrity despite decades of development pressure on the landscape surrounding it.

Drosera burmannii is a living ecological certificate. Its colony at Nemmeli confirms intact soil chemistry, functioning seasonal hydrology, and an undisturbed grassland surface. These are the same conditions that sustain the 236 bird species, the estuarine nursery, the mangroves, and the fishing communities documented in companion Suzhal Arivom reports. This plant is here because Nemmeli, despite everything, remains ecologically whole.

5. What the REIA Did Not Record

The Rapid Environmental Impact Assessment conducted for the Mamallan Reservoir project was carried out over six days, from 31 October to 5 November 2025. It documented 233 plant species across the project area. Not one insectivorous plant appears anywhere in that list. *Drosera burmannii* is absent.

Suzhal Arivom Volunteers visited the same coastal grassland on 21 January 2026, less than three months after the REIA survey was completed. We found an established colony across five GPS-verified locations. The plants were mature, actively trapping prey, and in reproductive stage. A butterfly was being digested in real time.

Drosera burmannii is an annual plant. At the time of the REIA survey in late October and early November, plants germinated by the monsoon would have been at the seedling stage, a few millimetres tall, growing flat against dark soil, requiring targeted ground-level searching in the specific microhabitat they occupy. By January they are fully visible, mature, and impossible to miss with a careful survey. The REIA surveyed at the wrong point in this plant's annual life cycle and without methodology designed to detect specialist microhabitat species.

On Record: The absence of *Drosera burmannii* from the REIA flora list is not a minor data gap. It raises a direct question: if an insectivorous plant colony thriving across five GPS-verified locations in and around the proposed construction footprint was not recorded in a six-day survey, what else was not documented? A Rapid EIA conducted over six days during the one season cannot characterise the biodiversity of a seasonally dynamic 8,500-acre coastal wetland. The Mamallan Reservoir project is being built on the basis of an incomplete ecological record.

6. A Call for Protection

The Nemmeli Coastal Wetland is not an empty patch of land awaiting development. It holds 236 bird species including species listed as Endangered, Vulnerable, and Near Threatened on the IUCN Red List. It holds 31 species under Schedule I of the Wildlife Protection Act 2022. It is an estuarine nursery for 13 obligate brackish-water fish and shellfish species documented by Suzhal Arivom (Species Nursery Documentation Report, April 2026). It hosts the nearest mangrove stand to South Chennai. It sustains 16 fishing villages. And it holds an established, reproducing colony of an insectivorous plant that certifies its ecological integrity with its very presence.

Drosera burmannii is here because the conditions are right: the soil is intact, the water cycle is functioning, and the land is undisturbed. The Mamallan Reservoir project will permanently flood this grassland under a freshwater impoundment behind a 4.5-metre embankment. The colony documented in this report will be lost. As an annual plant with no perennial root structure, it cannot be relocated. Its seed bank will be destroyed the moment construction moves the earth. The loss is permanent.

Suzhal Arivom calls on the Government of Tamil Nadu and all relevant authorities to:

- Impose an immediate stay of all construction activities at the Nemmeli Coastal Wetland under the Mamallan Reservoir project, pending a Comprehensive Environmental Impact Assessment.
- Commission a full annual hydrological cycle survey of minimum 24 months, including monsoon-season flora surveys, to establish an accurate and complete ecological baseline.

- Formally notify the Nemmeli Coastal Wetland Complex as a protected wetland under the Wetlands (Conservation and Management) Rules, 2017.
- Initiate the process for Ramsar Site nomination for the Nemmeli-Kovalam Coastal Wetland Complex, which demonstrably meets multiple Ramsar criteria.

7. Photographic Evidence

All photographs were taken by Suzhal Arivom Volunteers on 21 January 2026 at the Nemmeli Coastal Wetland Complex, Chengalpattu District, Tamil Nadu. GPS coordinates, elevation, and timestamp are embedded in each original image file.



Image 6: Butterfly trapped and being actively digested by *Drosera burmannii*. Nemmeli Coastal Wetland.



Image 1: Mature rosette of *Drosera burmannii*, Lat: 12.688069 N, Long: 80.209478 E. 21 January 2026.



Image 3: Two mature rosettes of *Drosera burmannii* in coastal grassland habitat. Lat: 12.688082 N, Long: 80.209480 E. 21 January 2026.



Image 4: Colony of *Drosera burmannii* in open black clay coastal grassland. Multiple individuals visible. Lat: 12.688132 N, Long: 80.209552 E. 21 January 2026.

8. Citation Index

Group A: Peer-Reviewed and Scientific

Ref.	Author / Source	Citation / Finding
A-I	Gibson & Waller (2009). International Carnivorous Plant Society.	Snap-tentacle movement in <i>Drosera burmannii</i> documented at 5 to 15 seconds. Basis for trapping speed cited in Section 2.
A-II	Adamec L. et al. (2012). PMC / Annals of Botany.	Prey digestion and death through asphyxiation within 15 minutes. Cited in Section 2.
A-III	Ellison A.M. & Gotelli N.J. (2009). American Journal of Botany. PMC peer-reviewed.	Carnivorous plants including <i>Drosera burmannii</i> consume mosquitoes, midges, and disease-transmitting dipterans. Cited in Section 2.
A-IV	JLR Explore Field Reference (2023). <i>Drosera: The World of Carnivorous Plants</i> .	<i>Drosera burmannii</i> specifically attracts and traps ants with sweet nectar. Cited in Section 2.
A-V	Kali Tiger Reserve Study. International Journal of Environmental Sciences, 14(1), 2025.	<i>Drosera burmannii</i> habitat: nutrient-poor acidic soil, pH 5.2 to 6.0, moist open ground. Cited in Section 4.
A-VI	Bakshi M.K. et al. (2017). Indian Forester, 143(6): 612-613.	Record of <i>Drosera burmannii</i> from Palamau Tiger Reserve, Jharkhand. Indian peer-reviewed field record.
A-VII	India Biodiversity Portal / Centre for Floristic Research, Madras Christian College, Tambaram.	<i>Drosera burmannii</i> : species description, flowers in erect racemes, distribution across all districts of Tamil Nadu. Flora of Tamil Nadu, Gamble (1919).

Group B: Government and Regulatory

Ref.	Author / Source	Citation / Finding
B-I	REIA: Mamallan Reservoir, Kovalam Sub Basin, Chengalpattu District. November 2025. Prepared by M/s Hubert Enviro Care Systems (P) Ltd for Water Resources Department, Tamil Nadu.	Six-day site visit (31 Oct to 5 Nov 2025). 233 plant species recorded. Zero insectivorous plants documented. Cited in Section 5.

Group E: Companion Suzhal Arivom Documents

Ref.	Author / Source	Citation / Finding
E-I	Suzhal Arivom. Nemmeli Coastal Wetland Complex: Ecological Significance, Anthropogenic Threats, and Conservation. April 2026.	Primary companion conservation report. 236 bird species, avifaunal significance, REIA critique, legal gaps, recommendations. Suzhal Arivom Conservation Report on Nemmeli Coastal Wetland Complex (April 2026)
E-II	Suzhal Arivom. Kovalam-Nemmel Coastal Wetland Complex: Species Nursery Documentation Report. April 2026.	13 obligate estuarine nursery species documented. Scientific case against reservoir conversion of estuarine habitat. Suzhal Arivom. Kovalam-Nemmel Coastal Wetland Complex: Species Nursery Documentation Report

End Note

This report is issued by Suzhal Arivom. Field observation by Suzhal Arivom Volunteers, 21 January 2026. It documents the presence of *Drosera burmannii* (Burmans' Sundew / Azhukanni) within the Nemmeli Coastal Wetland Complex, Chengalpattu District, Tamil Nadu, and simultaneously serves as conservation evidence against the proposed Mamallan Reservoir project. The insectivorous plant colony documented here was entirely absent from the Rapid Environmental Impact Assessment conducted for the reservoir project, confirming that the six-day survey was inadequate in duration, seasonal coverage, and ecological methodology. This report is a companion document to the Suzhal Arivom Conservation Report on Nemmeli Coastal Wetland Complex (April 2026) and the Species Nursery Documentation Report (April 2026). Issued in exercise of the right to information and the duty of care toward the environment under the precautionary principle and the public trust doctrine.

Contact: suzhalarivom@gmail.com