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Thrips pollinated the *Tridax procumbens*

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The weed *Tridax procumbens*, often known as **kinaththuppoondu** in local dialect, is common in the south region of Tamil Nadu and is a major source of pollen for the lepidopteran family, which includes butterflies and also the hymenopterans. Here, we saw that *T. procubens* concentrated the Thrips populations inside

of its capitulum. It is the most prevalent species in subtropical and lower temperate latitudes' arid and semi-arid environments. The species, which can be found as herbs, shrubs, or, less rarely, trees, are identified by their flowers that are reduced and gathered into an involucrate pseudoanthium that resembles a head or capitulum (Barkely *et al.,* 2006)

The flowers can be divided into two primary categories: those with strap-shaped or radiating zygomorphic corollas and those with tubular actinomorphic corollas, frequently within the same bead. The central flowers have tubular corollas and are bisexual, while the periphery flowers have strap-shaped corollas with three distal teeth and are always female. Either form may also be unisexual. Flowers abundantly from June to September, with occasional flowering occurring at other seasons depending on soil moisture levels. Ray florets are typically six, nectarless, and located on the margin to function as attractants, while disc florets are more numerous, varied in number, nectariferous, and offer traces of nectar (concealed) and pollen. During flower development, the style rises through the anther column, and as it does, hairs on the outer surface of the closed style lobes brush pollen released into the anther column to the distal opening, where it is available to biotic pollinators (Varalakshmi *et al.,* 2012)

"Pollinator Syndromes" describe flower characteristics, or traits, that may appeal to a particular type of pollinator. Such characteristics can be used to predict the type of pollinator that will aid the flower in successful reproduction. A combination of color, odor, quantity of nectar, location and type of pollen, and flower structure can each affect a potential pollinator's ability to locate a flower and its food resources (pollinator.org).

These features are typical of butterfly pollination syndrome. "Pollinator Syndromes" describe flower characteristics, or traits, that may appeal to a particular type of pollinator. Such characteristics can be used to predict the type of pollinator that will aid the flower in successful reproduction. A combination of color, odor, quantity of nectar, location and type of pollen, and flower structure can each affect a potential pollinator's ability to locate a flower and its food resources.

However, the capitula do not prohibit other foragers from foraging. Sucrose occurs predominantly in the florets. The glycemic index is 20%, and the energy output is ideal. The nectar contains ten non-essential amino acids, including alanine, amino butyric acid, cysteine, cystine, glutamic acid, glycine, hydroxyproline, proline, and serine, as well as five essential amino acids, arginine, histidine, lysine, threonine, and valine. Sugars, amino acids, and proteins are acquired by foragers that consume this floral nectar. Because the plant blooms all year, it is a significant nectar source for all foragers who visit the flowers on a frequent or irregular basis (Varalakshmi and Raju, 2013).

Observations on thrips

In the Thrips (unidentified) climbed to the top of the capitulum where the flower head was observed in black hue between 7 and 9 a.m. After the sun light was turned on, the movement spread from the ray florets to the disc florets, with only the adults rising from

the head and the nymphs compressed inside the disc florets, and the yellow colour capitulum was clearly visible. In one capitulum, around 10-15 nymphs and adult thrips were observed and counted. White sheets were used to collect the thrips (https://youtu.be/RdwFRrBtOMA) and taxonomical identification is not yet carried out.

Other pollinators were identified were in *Tridax procumbens* in SRSIAT, TNAU campus Dindigul, Tamil Nadu. It is only the initial part of the research. The molecular and population dynamics of thrips in *T. procumbens* will be the target of further investigation.

S. No.	Common Name	Scientific name	Family	Order
1.	Monarch butterfly	*Danaus plexippus*	Nymphalidae	Lepidoptera
2.	Tawny costor butterfly	*Acraea terpsicore*	Nymphalidae	
3.	White butterfly	*Pieris brassicae*	Pieridae	
4.	Common Mormon female	*Papilio polytes*	Papilionidae	
5.	Common Mormon male	*Papilio polytes*	Papilionidae	
6.	Crimson rose	*Pachliopta hector*	Papilionidae	
7.	Common rose	*Pachliopta aristolochiae*	Papilionidae	
5.	Pulse Blue butterfly	*Lampides boeticus*	Lycanidae	
6.	Indian honey bee	*Apis cerana indica*	Apidae	Hymenoptera
7.	Little bee	*Apis florea*	Apidae	
8.	Carpenter ants	*Camponotus spp.*	Formicidae	

Morning 8- to 9 am thrips adults were gathered top of the capitulum

After 9 am the adults were spreaded over the ray florets and compacted inside the head.

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