

## *Tridax Procumbens* L. : A Weed With Tremendous Medicinal Value

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### SUMMARY

*Tridax procumbens* L. is a spreading annual herb found throughout India. Traditionally, it has been in use in India for wound healing, as anticoagulant, antifungal and insect repellent. It is used in diarrhoea and dysentery. Its leaf extracts were known to treat infectious skin diseases in folk medicines. It is a well-known ayurvedic medicine for liver disorders or hepato-protective nature besides gastritis and heart burn. It is also used as biocarbon absorbent for removal of excess fluoride. Hence, the present article aims to open new avenues for the improvement of medicinal use of *T. procumbens* L. for various ailments.

### INTRODUCTION

In India, there is a rich diversity of plants due to which Ayurveda is still widely practiced in India. Weeds are not really “unwanted,” especially in terms of traditional herbal medicines. These “naturally growing plants” are generally known as a group of very aggressive, noxious, competitive, and troublesome plants (Jain, 2012) Among them one such weed is *Tridax procumbens* L., commonly known as coat buttons or tridax daisy, is a species of flowering plant in the Asteraceae family. It is best known as a widespread weed and pest plant. It is native to the tropical Americas but it has been introduced to tropical, subtropical, and mild temperate regions worldwide. Coat buttons are found on roadsides, waste grounds, railroads, dykes, riverbanks, meadows, and dunes. Its widespread distribution and importance as a weed are because of its spreading stems and plentiful seed production. Traditionally, *Tridax procumbens* L. has been in use in India for wound healing, as anticoagulant, antifungal and insect repellent. It is used in diarrhoea and dysentery. Its leaf extracts were known to treat infectious skin diseases in folk medicines. It is a well-known ayurvedic medicine for liver disorders or hepato-protective nature besides gastritis and heart burn.

### Classification of *Tridax procumbens* L.

<b>Kingdom</b>	: Plantae
<b>Sub kingdom</b>	: Tracheobionta
<b>Division</b>	: Spermatophyta
<b>Subdivision</b>	: Magnoliophyta
<b>Class</b>	: Magnoliopsida
<b>Subclass</b>	: Asteridae
<b>Order</b>	: Asterales
<b>Family</b>	: Asteraceae
<b>Genus</b>	: <i>Tridax</i>
<b>Species</b>	: <i>Procumbens</i>

### Vernacular names of *Tridax procumbens* L.

**English-** Coat buttons and Tridax daisy

**Hindi-** Ghamra

**Sanskrit-** Jayanti veda

**Kannada-** Jayanti gida

**Marathi-** Dagadi pala

**Telugu-** Gaddi chemanthi

**Tamil-** Thata poodu

**Malayalam-** Chiravanak

### Botanical description

*Tridax procumbens* L. is a perennial herb that has a creeping stem which can reach from to 8-30 inches (20-75 cm) long.

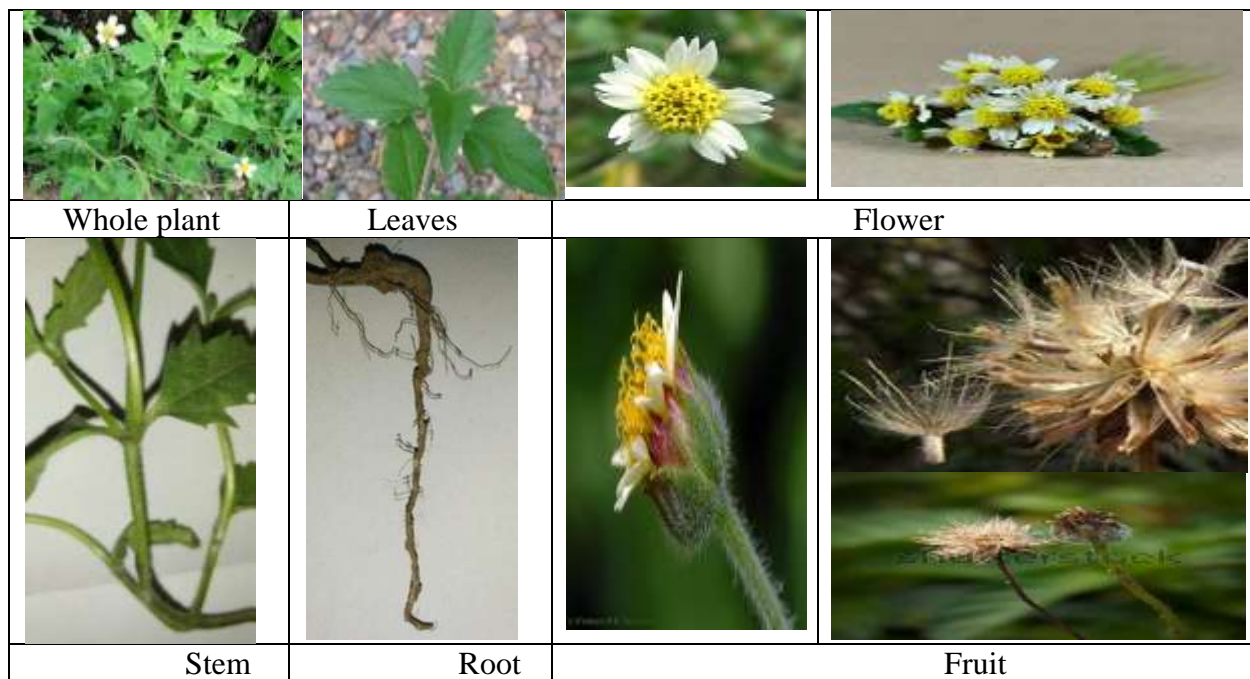
**Leaves**-Leaves are irregularly toothed and generally arrow head shaped. They are simple, ovate, opposite, exstipulate, and lanceolate and they are 3-7 cm. Wedge shaped base leaf, shortly petioled, hairy on both surfaces.

**Stem and root**- Stems are cylindrical, hispid, covered with multi-cellular hairs. Root: Root is a strong taproot, cylindrical, hispid, covered with multi-cellular hairs of 1 mm.

**Flowers** -The plant flowers are looking like daisy. The flower is tubular, yellow centred white or yellow flowers with three-toothed ray florets. Inflorescence is capitulum. It has two types of flowers: ray florets and disc florets with basal placentation.

**Fruits**-Fruits are achenes that are dark brown to black in colour, oblong, and 0.08 inches (2 mm) long.

**Seeds**-*Tridax procumbens* L. seed germinate at higher temperature (35/25 and 30/20) in the presence of 58 to 78 % light. This is very sensitive to salt concentration and water stress (Ghosh *et al.*, 2019).



**Chemical constituents**

- The phytochemical screening revealed the presence of alkaloids, carotenoids, flavonoids (catechins and flavones) and tannins. It is richly endowed with carotenoids and saponins.
- The proximate profile shows that the plant is rich in sodium, potassium and calcium.
- Leaf of *Tridax* mainly contains crude proteins 26%, crude fiber 17% soluble carbohydrates 39%, calcium oxide 5%. Luteolin, glucoluteolin, quercetin and isoquercetin have been reported from its flowers, whereas fumaric acid, fl-sitosterol and tannin have also been reported in the plant.
- Oleanolic acid was obtained in good amounts from *Tridax* and found to be a potential anti-diabetic agent when tested against a glucosidase (Ikewuchi *et al.*, 2009).

**Medicinal importance**

- The whole arial part is useful medicinally, leaves possess wound healing, insecticidal, antisecretory and hypotensive action while seeds are used to control bleeding.
- Also has various pharmacological properties including immunomodulatory, anti-oxidant, anti-hepatotoxic, analgesic, antidiabetic, anti-inflammatory, antifungal, and antimicrobial activities.
- Since ancient times, this species has been used in Ayurveda in India. Different substances such as oils, teas and skin poultices, among others, have been manufactured using this species.
- The utility of the species is most likely due to the plant defence mechanism, secondary metabolites such as flavonoid, alkaloids, tannins, carotenoids, and saponins which have been scientifically screened which is well-known medicine for liver disorders .
- The plant also shows various pharmacological activities such as immunomodulatory, anti-diabetic, anti-hepatotoxic and anti-oxidant, anti-inflammatory, analgesic, and marked depressant action on respiration.
- It is widely used in wound healing to stop haemorrhage from cuts, bruise and wounds.

- The plant is also used to reduce high blood pressure and blood glucose level as well as in dysentery and severe diarrhoea
- It can be used to prevent falling of hair and it promotes the growth of hair.
- The plant is also used in respiratory treatment. It has potent immuno-modulating and insect repellent activity.
- In West Africa and the tropical zone of the world, rural medical practitioners and the tribal peoples use the leaves of the plant as a remedy against conjunctivitis.
- This medicinal herb was also used in the ethnic system against jaundice and in liver disorders. Ethanol decoctions of *Tridax procumbens* L. were also used for curing kidney stone diseases (Ghosh *et al.*, 2019).

## CONCLUSION

*Tridax procumbens* L. has enormous potential for botanical, phytochemical, nutritional and pharmacological properties. It is observed that the plant has been extensively used in the ancient system of medicine for various biological disorders and it possess various prominent phytopharmacological activities. Hence, there is vast scope for research in the direction of more pharmacological activities. This medicinal plant can be a vital source of herbal drugs for the pharmaceutical industry in the future as well.

## REFERENCES

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