

Invasive South American weed – *Tradescantia fluminensis* Vell. (Commelinaceae): a threat to native flora of India

Some of the non-native invasive species of plants invade various habitats, thereby posing considerable threats to sustenance of native flora. These may be deliberately introduced for cultivation, but they become widespread and naturalized in due course of time. Once established, such weeds are not easy to control. During a recent floristic survey in Srinagar Garhwal, Uttarakhand, India (altitude 595 m amsl, 30°13'11.64"N, 78°47'36.52"E), the present authors came across a herb with shining white flowers. It was found in a shady place, adjacent to the road, forming dense patches in few localities nearby. Photographs were recorded in the field, specimens were collected and after consulting various resources, the plant was identified as *Tradescantia fluminensis* Vell., belonging to the family Commelinaceae¹.

It was further found on perusal of the literature that this species is yet not reported in any of the published flora of Garhwal² District and flowering plants checklist of Uttarakhand³, therefore, it also forms a new addition to the state's flora.

Morphology: Perennial, herbaceous, decumbent herb forming dense patches, rooting at nodes, leaves alternate, sessile, base sheathing. Flowers in terminal or axillary, few-flowered cymes, petals three, ovate, stamens six, filament white, bearded at base, anthers yellow (Figure 1).

Flowering and fruiting: April–June.

Distributional status: Few localities at present, forming dense patches; possibly

it can spread to nearby localities. Eventually it may form a dense ground cover, hampering the germination and growth of seedlings of native plants.

Invasiveness: This procumbent clonal herbaceous weed of the spiderwort family is a common house plant in many countries around the world, including Ireland, Germany, UK and USA^{4,5}. *T. fluminensis* is recorded as a weed from New Zealand, Southeast Asia, South Africa and USA⁶. The species has also become naturalized in Argentina, Bermuda, Italy, Japan, Kenya, Portugal, Puerto Rico, Russian Federation, Saint Lucia and Swaziland⁷.

Besides being a threat to native flora, this species is a serious environmental weed^{7,8} due to its high adaptabilities. It is reported as a threat to several endangered ecological communities in New South Wales, Australia (Illawarra subtropical rainforest, littoral rainforest, river flat eucalypt forest on coastal floodplains, subtropical coastal floodplain forest and swamp-oak floodplain forest)⁹. It is also a common skin allergen and a cause of dermatitis in dogs^{10,11}.

At present it is localized, but due to rooting nodes, this species can spread fast. However, if efforts are made, the spreading can be appropriately contained.

This species has already been reported from West Bengal¹² and now from Uttarakhand (the present study). It was also seen growing in Sikkim, by one of us. Being a cultivated plant, with attractive foliage and flowers, it may have been brought for cultivation, and it got the chance to escape, consequently it is fast establishing itself. It may eventually alter or replace the native species, especially herbaceous flora. Hence there is an urgent need for its biological eradication from undesired localities to protect native species.



Figure 1. *Tradescantia fluminensis* Vell. **a**, Habit. **b–d**, Leaves, inflorescence and flowers.

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