

# MEDICINAL USES OF SOME INVASIVE ALIEN PLANTS

## Abstract

Although the alien species has a tendency of invasion and has negative impact on existing biodiversity, but these exotic species also has a medicinal uses too. In this chapter, focus is given on the various traditional medicinal uses of some of the selected alien species. Total 10 plants are selected for this study which are widely used to cure different health problems.

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## Author

**Dr. Geeta Patil**  
Associate Professor  
Department of Botany  
Arts Commerce and Science College Bodwad,  
Tal Bodwad, Jalgaon.  
geetadarange@gmail.com

An alien species is a species that is not native to a specific area or location and comes from different locality and has tendency to spread in new area or region and established in such a way that it affects and occupy indigenous flora. Some alien species has tendency to spread in such degree that it causes damage to the existing environment, economy and human health. Invasive alien species has major impact on the biodiversity and habitats of native plants. It also become a threat to endangered and threatened plant species. (Pimentel et al., 2005). the species which has ability to colonize faster are more likely to have negative impacts on biodiversity (Callaway and Ridenour, 2004). The frequency of introduction of alien plant species increased in the areas where human interference is more such as forest fragmentation (Higgins et al., 1996). In India *Ageratum conyzoides* L., *Parthenium hysterophorus* L., *Lantana camara* L., *Ageratina adenophora*, etc. are major invaders and causing huge loss to indigenous species. (Dogra et al., 2009).

The International Union for Conservation of nature and Natural Resource (IUCN) define alien invasive species “as an alien species which becomes established in natural and semi natural ecosystems or habitat as agent of change & threatens native biological diversity. It is biological pollution that sometimes leads to extension of native species which also threatens the existing biodiversity. There are many ways or mechanisms by which exotic species from different locality have been able to introduce from their native places to the other area. From the thousands of miles apart this alien species are introduced through anthropological activities, wind currents, faeces of birds, animals etc. There are many geographical sources of the alien flora of India. According to study it is estimated that South America contributes about 35 % alien flora of India. Similarly Europe was the major source of alien flora in Kashmir Himalaya (Khuroo et.al (2007).

The knowledge of pathways and sources helps us to prevent and manage the further introduction of such invasive alien flora. The Introduction of alien species can either be intentional or accidental. Accidental introduction are due to travel across countries and continents and import of various items such as timber, food grains, fodder etc. (Shimono et al 2008). Some alien species are established in new environment in such way that it occupies most of the land area and sometimes replaces native flora of that region. It leads to the destruction of native biodiversity and threatens to the indigenous flora. This alien species becomes invasive as they compete with the native species and changes the ecosystem and also cause extinction of indigenous species. Invasive species are thus a serious threat to the biodiversity. Invasion of exotic plants has been recognized as the second worst threat after habitat destruction (Hobbs R.J. et.al 1995). It not only cause biodiversity destruction, extinction of native species but also cause changes in the soil structure, nutrient content of the soil, moisture content or water holding capacity etc. It also affected natural resources provided by the ecosystem & thus causes problems in conservation & sustainable use of biodiversity.

Although all this is true, these alien species also has a wide range of medicinal uses. If we use the various chemicals found in them as medicine, we can certainly get benefit from it. Despite the negative impact on the ecosystem, some Invasive Alien species are used to control various kinds of diseases including cuts, wounds, itching, headache, diabetes, chest complaint, blood purification, asthma, hypertension and infertility etc. There are 10 invasive plant species belonging to 10 families used by the local people to cure health problems. The traditional uses of these plants are enlisted in this chapter.

**1. *Apluda mutica* L.**

Local Name: Tambat

Family: Poaceae

Medicinal uses: used in wounds with bleeding, blood coagulant, anti-emetic, intestinal parasites, indigestion, profuse menstruation, colds and bruises.

**2. *Alysicarpus tetragonolobus* Edgew.**

Local Name: Lal shevara

Family: Fabaceae

Medicinal uses: used to treat various ailments such as asthma, bronchitis, cough, rheumatism, fever, skin diseases, stomach-ache,

**3. *Evolvulus alsinoides* L.**

Local Name: Vishnukrant

Family: Convolvulaceae

Medicinal uses: used as a brain tonic in the treatment of neurodegenerative diseases, asthma and amnesia

**4. *Tridax procumbens* L.**

Local Name: Kambarmodi

Family: Asteraceae

Medicinal uses: used as a drink to treat bronchial catarrh, diarrhea, dysentery and liver diseases, wound healing and as an anticoagulant, antifungal, and insect repellent..

**5. *Amaranthus cristatus* L.**

Local Name: Cockscomb

Family: Amaranthaceae

Medicinal uses: used for the treatment of diarrhea, ulcers, and in cases of pharyngitis.

**6. *Phyllanthus maderaspatensis* L.**

Local Name: Bhiawali

Family: Euphorbiaceae

Medicinal uses: used to treat headache, bronchitis, earache and ophthalmia. Powder from dried plant material is used to treat jaundice

**7. *Biophytum sensitivum* (L.)DC.**

Local Name: Lajalu

Family: Oxalidaceae

Medicinal uses: used for the treatment of stomach ache, asthma, treating insomnia, convulsions, cramps, chest complaints, inflammations, tumors, and remedying chronic skin diseases

**8. *Triumfetta pentandra* A.Rich.ex Guill and Perr.**

Local Name: Nichardi

Family: Tiliaceae

Medicinal uses: fresh root scrapings are applied on sores and small wounds. The crushed leaf is applied in dressings for treatment of goitre and deformities.

**9. *Boerhavia diffusa* L.**

Local Name: Punarnava

Family: Nyctaginaceae

Medicinal uses: used for inflammation, jaundice, asthma, rheumatism, nephrological disorders, ascites, anemia, and gynecological disorders.

**10. *Cassia uniflora* Miller.**

Local Name: Ran tarota

Family: Caesalpinaceae

Medicinal uses: Leaf used as laxative, for the treatment of leprosy and various skin disorders. It is used in treating various health issues, such as improving eyesight, easing bowels, moisturizing the intestine, and aiding weight loss. Seed is also utilized in herbal remedies, laxatives, expectorants, and anthelmintics.