

Star of Bethlehem, *Hippobroma longiflora* (Linnaeus) G. Don (Campanulaceae)- a noxious weed

Dr Mark Ero

Introduction

Star of Bethlehem (*Hippobroma longiflora*) is native to the West Indies but has spread and established across most tropical regions including Oceania. The plant produces a poisonous milky sap which can cause burns and irritation when in contact with the skin. The sap is concentrated in the stems and major veins of the leaves, but all parts of the plant can cause skin rash. A small amount of sap into the eye can cause blindness. Hence, one should avoid touching any parts of the weed with bare hands. Most information provide below is derived from Scott and Thomas, 2000.

Biology

Star of Bethlehem is a perennial weed measuring about 50cm in height. The leaves are narrow, coarsely pinnate and pubescent with serrated edges. The flowers are long (10cm), tubular and white on a 2cm pubescent pedicel in a shape of a star. They are obvious when in bloom. The fruit is pubescent capsule divided into two cells with large number of minute brown seeds (more than 100). The mature fruits hang in drooping position on the stem so that the stream of seeds can flow out easily. The plant propagates from seeds as well as cuttings.

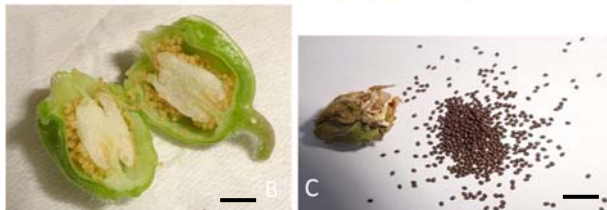


Figure 1: Star of Bethlehem with distinct white flowers (A), immature fruit with seeds (B), and brown mature seeds (C). Photographs B and C from Natureloveyou website (Singapore). Scale bar 5mm.

The poison

The poison comprises of lobeline and nicotine which come from a pyridine alkaloid contained in the milky sap exudated by the plant. The alkaloid is a central nervous system stimulant and is

normally irritating. It is primarily concentrated in the stem and the major veins of the leaf, but all parts can cause skin rash and irritation. Traditional healers in some societies use it as a medicinal plant but sometimes with fatal results. Ingestion of large amounts of sap induce profuse salivation, vomiting, slow heart beat, high or low blood pressure, muscle paralysis and trembling. This can sometimes lead to fatality. Contact with the eyes can result in blindness.

Recommended First Aid

- Rinse eyes with sap in water thoroughly for about 15 minutes.
- Scrub skins exposed to Star of Bethlehem immediately and wash thoroughly with soap and water.
- If pain and swelling continues, go to an emergency room at the clinic.
- If having breathing difficulties or paralysis, rush the person to a clinic or hospital to see a doctor. Ensure to take plant samples (leaves, flowers and seeds) to show doctor.

Weed status

The weed has established in much of the tropics, and grows aggressively in areas with moderate rainfall. It thrives well in damp moisten areas, sheltered banks, along road sites, on flower beds and in backyard lawn. The weed can spread rapidly because of the large quantities of seeds that a single seed capsule is capable of producing.

Control of the weed

Avoid weeding with bare hands from residential areas and food gardens. Always use gloves or spade to remove. No specific information on herbicide control exists, but any standard herbicide should effectively kill them. If detected in plantations or smallholder blocks, they should be treated before they start flowering to prevent the establishment of seed banks.

Reference

Scott, S. and Thomas, C. (2000). Poisonous plants of paradise: First Aid and Medical Treatment of Injuries from Hawaii's plants. Pp. 152-154. University of Hawaii Press, Hawaii.

For further information contact:

HEAD OF ENTOMOLOGY
Papua New Guinea Oil Palm Research Association Inc.
Dami Research Station
West New Britain
Papua New Guinea.
Tel: +675 985 4015/4009
Fax: +675 985 4040
e-mail: entomology@pngopra.org.pg