

Solanum americanum

Solanum americanum, commonly known as American black nightshade,[3] small-flowered nightshade[4] or glossy nightshade, is a herbaceous flowering plant of wide though uncertain native range. The certain native range encompasses the tropics and subtropics of the Americas, Melanesia, New Guinea, and Australia.[5]

The plant is widely naturalised around the tropical Pacific and Indian Oceans, including Hawai[■]i, Indochina, Madagascar and Africa, possibly via anthropogenic introduction in these locales.

Solanum americanum is one of the most widespread and morphologically variable species belonging to the section *Solanum*. [6] It can be confused with other black nightshade species in the *Solanum nigrum* complex. [7]

Solanum americanum grows up to 1–1.5 metres (39–59 in) tall and is an annual or short-lived perennial. The leaves are alternate on the branch, and vary greatly in size, up to 10 centimetres (3.9 in) long and 7 centimetres (2.8 in) broad, with a 4-centimetre (1.6 in) petiole and a coarsely wavy or toothed margin. The flowers are about 1 cm diameter, white or occasionally light purple, with yellow stamens. The fruit is a shiny black berry 5–10 millimetres (0.20–0.39 in) diameter, containing numerous small seeds.

Solanum americanum is a variable taxon. It is considered by some botanists to be more than one species, and others recognise subspecies. [5] Some botanists have suggested that *Solanum americanum* may be conspecific with the European nightshade, *S. nigrum*. [2]

Research indicates the presence of toxic glycoalkaloids and there are warnings to be careful on the use of *S. americanum* as herbal medicine and food. [7] The green fruit is particularly poisonous and eating unripe berries has caused the death of children. [8] Ripe berries and foliage may also cause poisoning, [8] though the toxicity seems to diminish somewhat with ripening. [9] This is via high levels of the glycoalkaloids, solanine and solamargine. [10] Other toxins present in the plant include chaconine, solasonine, solanigrine, gitogenin and traces of saponins, [11] as well as the tropane alkaloids scopolamine (hyoscine), atropine and hyoscyamine. [12]

Significant amounts of solasodine (0.65%) have been found in the green berries. [13] The ripe fruit also contains 0.3–0.45% solasonine, [13] and acetylcholine, and has a cholinesterase-inhibiting effect on human plasma. [11] In Transkei, rural people have a high incidence of esophageal cancer thought to be a result of using *S. americanum* as a food. [11] Livestock can also be poisoned by high nitrate levels in the leaves. [11]

Toxicity varies widely depending on the genetic strain and the location conditions, like soil and rainfall. [8] [11] Poisonous plant experts advise: "...unless you are certain that the berries are from an edible strain, leave them alone." [14]

