

Botanical Briefs: Poisonwood (*Metopium toxiferum*)

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Poisonwood (*Metopium toxiferum*) is a large evergreen shrub or small tree of the sumac family (Anacardiaceae) found widely distributed in southern Florida, the Florida Keys, the Bahamas, and the West Indies. It primarily grows in coastal hammocks and pinelands, typically near salt water or shorelines.^{1,2} Other names include hog gum, Florida poison tree, coral sumac, or doctor's gum.¹⁻³ Poisonwood, which grows to a height of 30 ft or more, typically has a short trunk covered in red-brown to gray bark with arching limbs and drooping branches. The leaves are pinnately compound, typically with 5 oval leaflets each 3- to 4-in long (Figure).¹⁻³ The glossy leaflets are dark green with yellow midrib and margins, and many are damaged with irregular black blotches of sap. Black spots also are found on the trunk or on damaged limbs.¹⁻³

Hypersensitivity Reaction

Contact with the oleoresin from any part of *M toxiferum*, including the fruit, can cause a delayed-type hypersensitivity response.^{2,4} Symptoms include severely pruritic crops of red papulovesicles at the sites of contact with onset typically occurring within several days after contact with the sap and lasting up to several weeks. Weeping and crusting may occur.⁵ The branches have been used in wreaths and bouquets, which may expose an entire household. Garments hanging on a clothesline that brush against the plant can cause dermatitis. The smoke of burning *M toxiferum* wood also is highly irritating.⁴ Even rainwater that drips from the leaves may cause a rash.³

Jackson⁵ reported numerous breakouts of dermatitis secondary to poisonwood exposure among

military personnel stationed in the Bahamas, occurring seasonally after incautious collection of Christmas trees. Allergenicity of bark and berry sap was demonstrated by placing a single drop on the forearms of 20 volunteers; 13 had a papulovesicular reaction including one generalized case.⁵

There are at least 2 other species of *Metopium* known to cause irritation in humans. *Metopium brownei* is known as black poisonwood and is found along the Gulf of Mexico in southeastern Mexico from Veracruz to Quintana Roo.⁶ The sap can be irritating and can cause painful inflammation of the skin.^{4,6} *Metopium venosum* is found in eastern Cuba and also may be irritating.⁴

The sap of *M toxiferum* contains urushiols that cause a delayed-type hypersensitivity response. *Metopium toxiferum* urushiol contains pentadecylcatechols in a very similar composition to poison ivy (*Toxicodendron radicans*).⁷ Pentadecylcatechols also are the sensitizing agents in *M brownei*.⁶ In addition to poison ivy, urushiols also are found in the ginkgo tree (*Ginkgo biloba*) (family Ginkgoaceae) and in other members of the Anacardiaceae family, including Brazilian peppertree (*Schinus terebinthifolius*), cashew (*Anacardium occidentale*), Indian marking nut (*Semecarpus anacardium*), Japanese lacquer tree (*Rhus vernicifera*), mango (*Mangifera indica*), and the Rengas tree (*Anacardium melanorrhoea*).⁸

Management and Treatment

Identification and avoidance of poisonwood is the best prophylaxis. Gloves and protective clothing may be helpful; however, rubber gloves may not be protective against exposure because the catechols in urushiol are soluble in rubber. If contact with *M toxiferum* cannot be avoided, heavy-duty vinyl gloves are recommended.⁸ Immediate washing of exposed skin or clothing with soap and water may prevent dermatitis. Bentoquatam lotion, which contains quaternium-18-bentonite, has proven helpful

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Metopium toxiferum. Glossy green pinnate leaves (A). Small tree on Big Pine Key, Florida (B). Close-up of a leaflet demonstrating characteristic black dots (C).

in prevention of poison ivy dermatitis when applied prior to contact with the plant.⁹

Once a reaction has occurred, there is no way of altering the natural history of the reaction and therapy must be directed at symptoms. Typically, topical steroids such as triamcinolone acetonide cream or ointment 0.1% are effective, though more potent formulations such as clobetasol propionate cream 0.05% may be necessary for short durations. In widespread or severe reactions, oral corticosteroids may be used. Prednisone in initial dosages of 40 to 60 mg daily tapered over 3 weeks is rapidly effective; in patients with clinically significant comorbid disease, shorter courses over 7 to 10 days may be effective, though rebound dermatitis may occur when prednisone is discontinued.

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