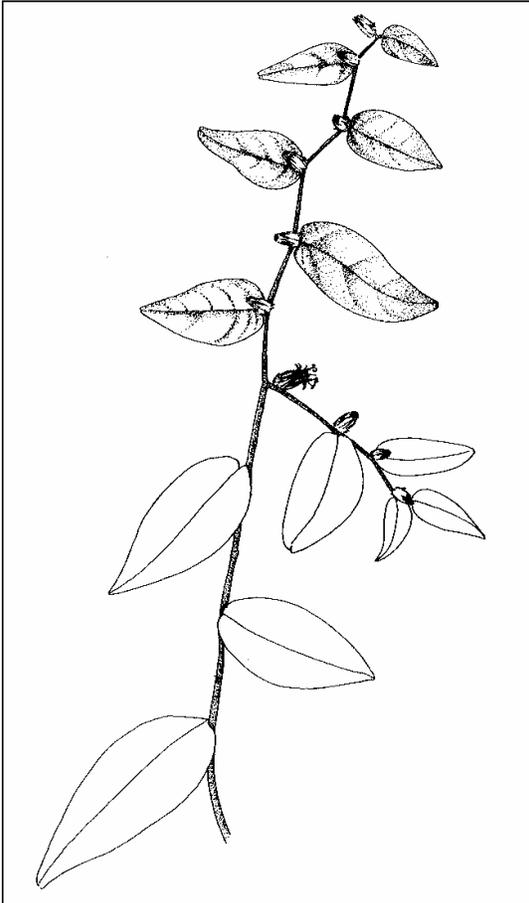


Vernonia borinquensis Urban
ASTERACEAE

Puerto Rican ironweed

Synonyms: *Vernonia borinquensis* var. *resinosa* Gleason
Vernonia borinquensis var. *hirsuta* Gleason



General Description.—No local name is known for this species in Puerto Rico. The Natural Resources and Conservation Service (2002) has assigned it the name Puerto Rico ironweed. The plant is a vine-like scrambling shrub reaching 5 to 10 m of lateral extension and sometimes as much as 3 m into the crowns of trees and shrubs. Younger plants often have a single stem, but older plants may form clumps and mats. The root system consists mainly of slender lateral roots and abundant, fleshy, fine roots. The principal branches are cylindrical, about 0.5 cm thick, and covered with gray bark. Fine branches are densely hairy, striated, and have a zig-zag form. Leaves, concentrated near the branch ends, are somewhat stiff, have a short petiole, and blades in an ovate to

lanceolate form. They have a rounded base and a pointed tip. Leaves remain on the twigs 1 year and twigs remain green for an additional year. Inflorescences are leafy cymes of sessile campanulate heads, 5.5 to 8 mm long, of 13 to 22 florets. The corolla is white or pale lavender. At maturity, the fruits (achenes) are 1 to 2 mm long, ribbed, and have a brown pappus 5 to 6.5 mm long (Acevedo-Rodríguez 1985, Liogier 1997).

Range.—Puerto Rico ironweed is endemic to Puerto Rico and mainly found in the Cordillera Central (Acevedo-Rodríguez 1985). The species is not known to have been planted or naturalized elsewhere.

Ecology.—Puerto Rico ironweed grows on well-drained soils with a wide range of textures derived from most parent materials. Fertility is usually moderate to good, and pH's range from about 5 to 7. Exposed subsoils are not colonized. Mean annual precipitation ranges from about 900 to 2400 mm and at elevations from a few to about 800 m above sea level. Puerto Rico ironweed has an intermediate tolerance to shade. It grows in openings but is often found under low to medium basal-area forest canopies. It is resistant to grazing and/or avoided by cattle enough to survive in light- to moderately-grazed semiforested range and brushy pastures. The species may be found in both remnant and secondary forests.

Reproduction.—Puerto Rico ironweed flowers from November to July and fruits from February to September (Acevedo-Rodríguez 1985). Presumably, flowers are insect pollinated. In a sample of seeds collected near Calley, Puerto Rico, about 3 percent of the seeds were filled. Sorted by examination under a microscope, apparently filled seeds weighed an average of 0.00098 g/seed or about 1 million seeds/kg. After being placed on moist filter paper, 76 percent germinated within 24 days. The seeds are wind-dispersed. Although seed production can be heavy, established seedlings are relatively uncommon. Disturbance is probably necessary for seedling establishment. The plants layer (root) whenever

stems come in contact with the soil.

Growth and Management.—Puerto Rico ironweed grows at a moderate rate. Established plants extend stems about 0.5 m/year. Although individual stems probably do not live more than 2 to 4 years, plants may live much longer by sprouting and layering. No management experience has been published; thinning the forest overstory with accompanied soil disturbance is recommended to encourage regeneration.

Benefits.—Puerto Rico ironweed helps protect the soil and furnishes cover for wildlife. It adds a pretty aspect to trailsides and forest edges but gives the understory a “closed” appearance and makes it somewhat more difficult to walk through.

References

Acevedo-Rodríguez, P. 1985. Los bejuocos de Puerto Rico. Vol. 1. General Technical Report SO-58. U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station, New Orleans, LA. 331 p.

Liogier, H.A. 1997. Descriptive flora of Puerto Rico and adjacent islands. Vol. 5. Editorial de la Universidad de Puerto Rico, Río Piedras, PR. 436 p.

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