***Cordia polycephala* (Lam.) I.M. Johnston** black sage
BORAGINACEAE

Synonyms: *Varronia polycephala* Lam.
Varronia paniculata Wakström
Cordia wickstroemii Steudel
Cordia sulfurata Krause
Cordia ulmifolia Juss. ex Dumont
Lantana corymbosa L.

General Description.—Black sage, also known as basora, palo de perico, saraguero, saragüero, Santa María (Spanish), petit mahot, and mahot fin (French), is a scrambling shrub or woody vine (Acevedo-Rodríguez 1985, Howard 1989, Liogier 1995). The single or multiple stems are gray, cylindrical, and strong with relatively few, slender branches. There may or may not be a weak taproot; the plants rely on shallow lateral root systems with abundant fine roots. Alternate scabrous leaves are ovate to lanciolate and 8 to 15 cm long. The leaves have a serrate margin and are dark green above and yellow green below. Whitish-green flowers are grouped in tightly packed cymes arising near the branch ends. The fruits (drupes) are red, globose, 2.5 to 5 cm in diameter, and have little flavor. The seed has an irregular surface (Acevedo-Rodríguez 1985, Howard 1989, Liogier 1995).

Range.—Black sage is native to Hispaniola, Puerto Rico, Vieques Island (Puerto Rico), the Virgin Islands, St. Barts, St. Kitts, Guadeloupe, Dominica, Martinique, St. Lucia, St. Vincent, Granada, and South America as far south as Bahia, Brazil (Centro Nordestino de Informações Sobre Plantas 2002, Howard 1989). It is not known to have been planted or naturalized elsewhere.

Ecology.—Black sage most frequently grows in abandoned fields and pastures, along roads, in early secondary forest, in open forest on difficult terrain, and in disturbed openings in old-growth forest. It occurs in areas receiving from 1000 to 2500 mm of annual precipitation, in soils of all textures and parent materials at elevations from near sea level to at least 600 m. The species does not occur in very poorly drained soils. Black sage is not among the early pioneers to colonize disturbed sites but enters with brush that follows the weed and grass stage. It competes well by scrambling across low vegetation and climbing into the crowns of other shrubs and low trees. It is moderately intolerant to shade and is able to grow under the canopy of low basal-area forest.

Reproduction.—As a population, black sage blooms and fruits all year, particularly during the summer (Acevedo-Rodríguez 1985). However, individual plants usually flower at one time and then rest for several months before flowering again. The fresh fruits in one Puerto Rican collection averaged 0.12 g/fruit. The fruits are consumed by birds that disperse the seeds. Seedlings are common but rarely abundant.

Growth and Management.—Black sage achieves 1 m or more of stem extension per year. Stems may grow to 1.5 cm of diameter and reach 5 m in height or extension from the point of rooting (Acevedo-Rodríguez 1985). One 1.5-cm stem was observed to have five growth rings. Black sage can live at least 5 years and perhaps much longer by sprouting, which it readily does when injured. No planting, management, or control experience has been published. In the absence of other control information, grubbing out individual plants or spot treating with broad-leaf herbicides is recommended.

Benefits.—Black sage helps protect the soil and furnishes food and cover for wildlife. The fruits are edible. It is a minor weed in pastures (Vélez and van Overbeek 1950).

References

Acevedo-Rodríguez, P. 1985. Los bejucos 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.

Centro Nordestino de Informações Sobre Plantas. 2002. Base de dados CNIP, Checklist das plantas do Nordeste-Nomes provisórios-Versão 12: *Cordia polycephala* (Lam.) Johnst. Universidade Federal de Pernambuco. http:150.161.125.13/pnechk/taxa/1057.shtml. 2 p.

Howard, R.A. 1989. Flora of the Lesser Antilles. Vol. 6. Arnold Arboretum, Harvard University, Jamaica Plain, MA. 658 p.

Liogier, H.A. 1995. Descriptive flora of Puerto Rico and adjacent islands. Vol. 4. Editorial de la Universidad de Puerto Rico, San Juan, PR. 617 p.

Vélez, I. and J. van Overbeek. 1950. Plantas indeseables en los cultivos tropicales. Editorial Universitaria, Río Piedras, PR. 497 p.

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