82. Iva L. (marsh elder)

About 9 species, North America.

Until recently, Ivawas considered by most botanists to be a nearly cosmopolitan genus of about 15species (Jackson, 1960). Bolick (1983) performed a cladistic analysis ofHeliantheae subtribe Ambrosiinae Less. based on morphological,palynological, and phytochemical characters and suggested that some of thetraditional generic circumscriptions did not describe natural phylogeneticlineages. In particular, she noted that some species of Iva apparentlywere more closely related to species of Ambrosia than to the remainderof Iva. Karis (1995) expanded on this study by sampling additionalspecies and characters, and also concluded that the traditional circumscriptionof Iva included members of more than one evolutionary lineage. Molecularphylogenetic research by Miao et al. (1995a, b) provided further evidence that Ivain the broad sense is not a natural group. Strother (2000) reviewed the datafrom these earlier studies and concluded that a number of generic segregationswere necessary in order to reflect the phylogeny of the group, resulting in therecognition of six total genera for the North American species formerlyincluded in Iva. For Missouri, the practical consequence has been that I. xanthiifolia is now treated as the monotypic segregate, Cyclachaena.Cyclachaena differs from Iva in a number of gross morphologicalfeatures, including its more strongly paniculate inflorescences with small,bractless clusters of heads at the nodes and its pistillate florets lacking acorolla, as well as differences in secondary compounds and pollenultrastructure. Species of Ivashed abundant wind-borne pollen and are important causes of hay fever in areaswhere plants are abundant. Some species also can cause contact dermatitis insusceptible individuals.