Intriguing World of Weeds

Biennial Wormwood (Artemisia biennis Willd.)

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“One Queen Artemisia, as old stories tell,
When deprived of her husband she loved so well,
In respect for the love and affection he show’d her,
She reduc’d him to dust and she drank up the powder.”

Another on the said Occasion (lines 1 to 4), Robert Burns (1759 to 1796).

INTRODUCTION AND ETYMOLOGY

Biennial wormwood (Artemisia biennis Willd.) is an aggressive and prolific seed-producing plant of the Asteraceae. The genus Artemisia belongs to the Anthemidaceae, or mayweed, tribe and includes various annual, biennial, and perennial herbs and shrubs that are often aromatic and bitter (Hall and Clements 1923; McArthur and Welch 1986). There is little consensus about the exact number of species within the genus Artemisia (Stebbins 1974); estimates include “over 100” (Munz and Keck 1968), “nearly 300” (Kelsey and Shafizadeh 1979), “346” sensu stricto (Ling 1994), “about 400” (Greger 1982), and “more than 400” (Polyakov 1995) species.

The genus name honors Artemisia, a botanist and Queen of Caria, ca. 350 BC (McArthur 1979). Queen Artemisia is known for ordering construction of the Mausoleum, one of the seven wonders of the ancient world, as a tomb for her departed husband and brother Mausolus. She also is said to have honored Mausolus by consuming his ashes in a drink, thus inspiring the above poem by Robert Burns. The name Artemisia itself derives from Artemis, Greek goddess of the hunt, chastity, childbirth, and various things of nature, including vegetation (McArthur 1979).

The common name of biennial wormwood and the species name, biennis, designate the weed as biennial, although annual forms are quite common, as discussed below. “Wormwood” is derived from an alteration by folk etymology of the Middle English and Anglo-Saxon “wermod(e)” (Barnhart 1988; Lewis 1999; Toller 1964). This alteration is probably related to the use of absinth wormwood (Artemisia absinthium L.) as a treatment for parasitic worms. Other variations of the word can be found in early European languages, and the ultimate etymology of wormwood is unclear. Biennial wormwood also is known as false tansy and bitterweed (Muenscher 1987).

Classification within the genus Artemisia ultimately derives from Besser’s (1829, cited in Hall and Clements 1923) recognition of four sections based on floral morphology: Abrotanum Bess., Absinthium DC., Dracunculus Bess., and Seriphidium Bess. Biennial wormwood is classified within the section Abrotanum, typified by fertile central flowers giving rise to normally developed achenes and a lack of receptacle hairs. Rydberg (1916) later elevated Besser’s sections to the subgenus level and created secondary sections. Rydberg’s section Annuae within the subgenus Abrotanum (Bess.) Rydb. includes both annual wormwood (Artemisia annua L.) and biennial wormwood. Abrotanum differs from Absinthium solely in the absence or presence of hairs on the receptacle. This minimal difference supports Polyakov’s (1995) grouping of Arbrotanum and Absinthium into a single subgenus, Artemisia L. Biennial wormwood will be considered as a member of the subgenus Artemisia in this article.

DESCRIPTION

Biennial wormwood stems arise from a taproot, grow erect, usually branch at the base, lack pubescence, and are often tinged red (Figure) (Fernald 1950). The leaves