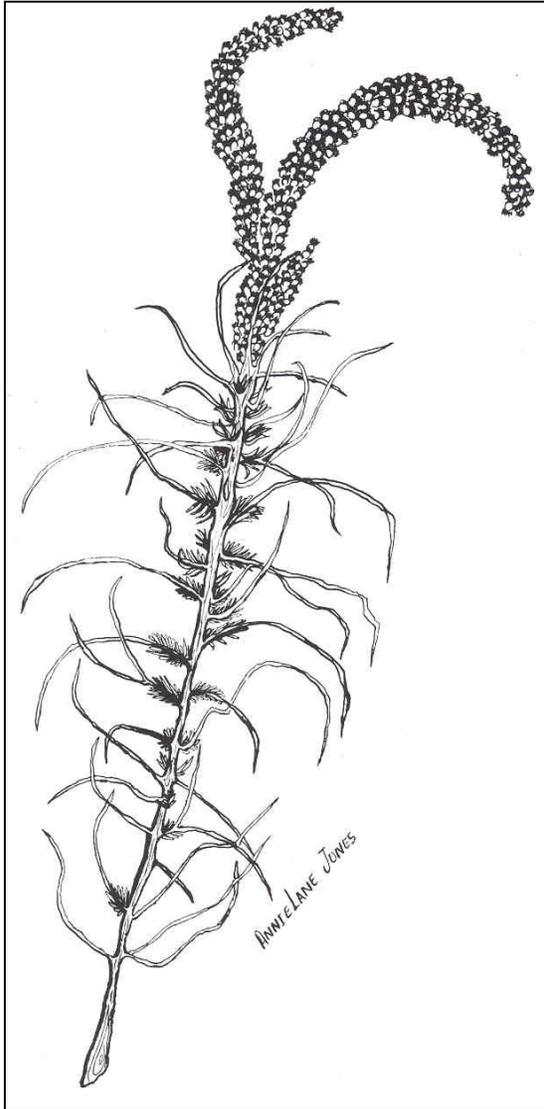


***Artemisia filifolia* Torr.**
ASTERACEAE

sandsage

Synonyms: *Oligosporus filifolius* (Torr.) W.A. Weber



General Description.—Sandsage, also known as sand sagebrush and oldman sage or oldman sagebrush, is a freely branched, rounded shrub that grows up to 1.5 m tall. Young branches are covered with a canescent pubescence while the older stems are covered by a dark gray-green or blackish bark. Leaves are filiform, and covered with a canescent pubescence. Leaf length can range from 3 to 8 cm, and leaf width is less than 0.5 cm. Leaves are entire or alternately divided into filiform divisions and are often fascicled.

Flower heads are arranged into leafy narrow panicles. Each head usually contains two or three fertile, pistillate, ray flowers and one to six perfect, sterile, disc flowers. Five to nine canescent involucre bracts subtend each head. The receptacles and achenes are both glabrous.

Taxonomy.—Sandsage does not have subspecific divisions. It has traditionally been assigned to the subgenus *Drancunlus* based on floral characteristics (McArthur 1979). Beetle (1979) suggested that it might have an affinity with true sagebrushes (subgenus *Tridentatae*). It does have some cytological, chloroplast DNA, and chemical similarities with *Tridentatae* (Kelsey and Shafizadeh 1979, Korkven and others 1998, 1999, McArthur and Pope 1979) although it differs from *Tridentatae* in floral characteristics, wood anatomy, and nuclear ribosomal DNA sequences (Korkven and others 1998, Moss 1940). The chromosome number for *A. filifolia* is $2n = 18$; its karyotype is similar to that of the true sagebrushes (subgenus *Tridentatae*) (McArthur and Pope 1979).

Range.—Sandsage is common on sandy substrates from the southern Black Hills in South Dakota south to Texas and Chihuahua and west to Arizona and Nevada (Hall and Clements 1923, McArthur and others 1979, Rasmussen and Brotherson 1986). It is particularly important in the central and southern Great Plains in bands along the sandy mantles that parallel stream drainages (Berg 1994)

Ecology.—Sandsage grows almost exclusively on sand. It is probably the most widespread shrub on dunes and sandhills. In a study in southwestern Utah, Rasmussen and Brotherson (1986) found that sandsage communities were less diverse than adjacent communities, but plant densities were higher. They also reported that sandsage nutrient quality was not affected by the relative poor soil nutrient profile characteristic of some sandsage communities. Its accumulation of mineral nutrients above that of the soil is apparently an adaptation to sand habitats with inherently low soil fertility. It grows in areas with an annual precipitation range of 220 to 600 mm.

Reproduction.—Blooming occurs during August and September, and seed ripens between October and December (McArthur and others 1979). Seeds are smaller than those of most sagebrushes, but seedlings grow well once established. There are approximately 3.2 million cleaned seeds per kg (Meyer 2003). Seedlings emerge in the spring and grow and mature quickly. Survival is reduced, however, if it is planted in habitats that extend beyond its natural range (Nelson and Krebill 1981). Sandsage has been seeded alone in most plantings but can be seeded with herbs adapted to arid sandy soils. It is easy to grow as bareroot stock and survives well when field planted. Wildings can be transplanted in the spring or fall, and plants can be easily reared from seed.

Management.—The value of sandsage as a source of browse varies with community type. It is seldom eaten in grasslands where other forage is adequate but is consumed by cattle, domestic sheep, and big game in arid desert regions. It can be particularly important during dry years (Hall and Clements 1923, McArthur and others 1979). It is important in the vegetation cover of harsh sandy sites, although limited water often reduces natural seed production. It is particularly useful in blackbrush and pinyon-juniper communities where sandy outcrops occur.

Sandsage resprouts vigorously after fire; fire may be useful in reducing canopy height and volume, thus allowing associated herbaceous species to express more vigor (Vermeire and others 2001).

Benefits.—Sandsage can be an important, locally abundant, native shrub that provides habitat and forage for wildlife, including some small nongame birds. This species helps reduce wind erosion by stabilizing light sandy soils. People in Mexico have used a decoction of leaves to reduce the effects of intestinal worms and other stomach problems (Stubbendieck and others 1997).

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