COMMON MADIA

Madia elegans D.Don ex Lindl.

Plant Symbol = MAEL

Contributed by: USDA NRCS National Plant Data Center & Rancho Santa Ana Botanic Garden

Uses

Ethnobotanic: There are several *Madia* species and several subspecies of *Madia elegans*. They are each called "tarweed," because of the intense stickiness of the plant. The tarweeds produce abundant seed, are agreeably aromatic and oily, and form an important part of the small seeds used in pinole. Tarweed and other seeds in pinole formed a staple food in the diet of the Indians of the Pacific Coast. In particular, the seeds of gumweed (*Madia elegans* ssp. *densifolia* (E. Greene) Keck) were among the most valued by the Miwok people for pinole. The Hupa, Cahuilla, Digueño, Chumash, Costanoan, Kawaiisu, and Maidu tribes in California made pinole from *Madia* species.

Common madia seeds were harvested by women in late summer during a period of a fortnight. A seed beater and a basket were used to gather the seeds. Then, the seeds were winnowed and ground very fine in a bedrock mortar with a stone pestle. Both winnowing and sifting were done in a flat circular basket plaque. The sifting was done by jiggling the plaque so that the big fragments separated from the fine meal. The large fragments were pulverized into meal and eaten dry. The seeds were kept in storage in every household, and eaten all year. Common madia roots were also eaten.

When the seeds had matured but the plants were still green, the Hupa burned the areas where common madia grew. Seeds gathered from the scorched plants needed no further parching before being crushed into flour. The Yokuts added common madia seeds to manzanita cider for flavoring.

Wildlife: The dark seeds (achenes) of tarweeds are used as food by many birds and small mammals, including mourning doves, quail, blackbirds, finches, Oregon juncos, California horned larks, western meadowlarks, American pipits, sparrows, towhees, chipmunks, ground squirrels, and mice. Cottontail rabbits, ground squirrels, and chipmunks eat the plants.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

Description

General: Sunflower Family (Asteraceae). *Madia elegans* is an annual herb, 1-2.5 dm tall, and strongly scented. The stems are simple to branched, often very leafy, softly hairy below, and with sparsely to densely stalked glandular sticky hairs above. Leaves are 2-10 cm long, linear, entire to serrate, soft-hairy to bristly, sometimes with glands. The floral heads are in open, flat-topped cymes with 5-21 yellow ray flowers and 25-30 yellow or maroon disk flowers with yellow or black anthers. The 2.5-5 mm fruits are black or dark brown achenes, sometimes mottled, and compressed or 3-angled.

Distribution

For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site. *Madia elegans* occurs in grasslands and open forest below 3350 m in elevation. It flowers in summer and early autumn, and grows from northern Oregon through the California Floristic Province and Great Basin Province south to Baja California.

Establishment
Adaptation: *Madia elegans* ssp. *densifolia* grows on grassy slopes and valleys at elevations below 1000 m. This subspecies occurs in the California Floristic Province and Great Basin Province and in Oregon. This plant flowers in summer and early autumn.

General: *Madia* species seeds ripen in late summer, usually in August in California. After gathering, seeds can be stored in a cool, dry place for at least a year and still maintain viability. *Madia* species require well-drained, fairly dry soils with full sun. These annual species produce prolific seeds, and can be planted directly in the soil or in seed flats. Plant seeds at the soil surface or plant 1/8" to ¼" in a well-drained soil. Water seedlings as the soil dry to stimulate growth. It is best to plant seeds in the fall. Fertilization stimulates growth and seed production.

Management
Traditional Resource Management: Resource management of common madia includes the following:

- Seeds were distributed during the process of gathering seeds through seed beating.
- Burning occurred during September-October after seeds ripened and were harvested. Grassland species were burned for plant improvement by the tribes throughout California.
- Seeds were planted from wild plants. A Diegueño woman reported her people always cleared a small spot near their dwelling to plant seeds of plants with greens, seeds, and roots.
- Ownership of seed-gathering grounds promoted long term care and sustainable harvest practices.

Cultivars, Improved and Selected Materials (and area of origin)
This species is available from selected native plant nurseries within its range. Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under ”United States Government.” The Natural Resources Conservation Service will be listed under the subheading “Department of Agriculture.”

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site<http://plants.usda.gov> or the Plant Materials Program Web site <http://Plant-Materials.nrcs.usda.gov>