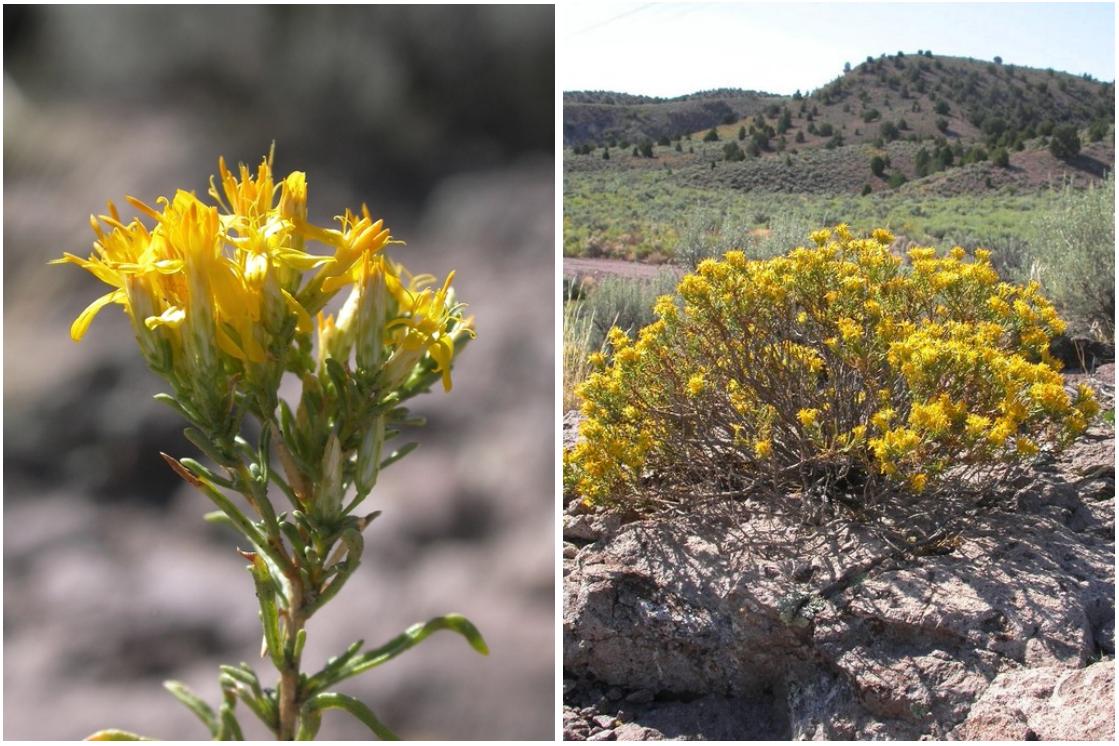
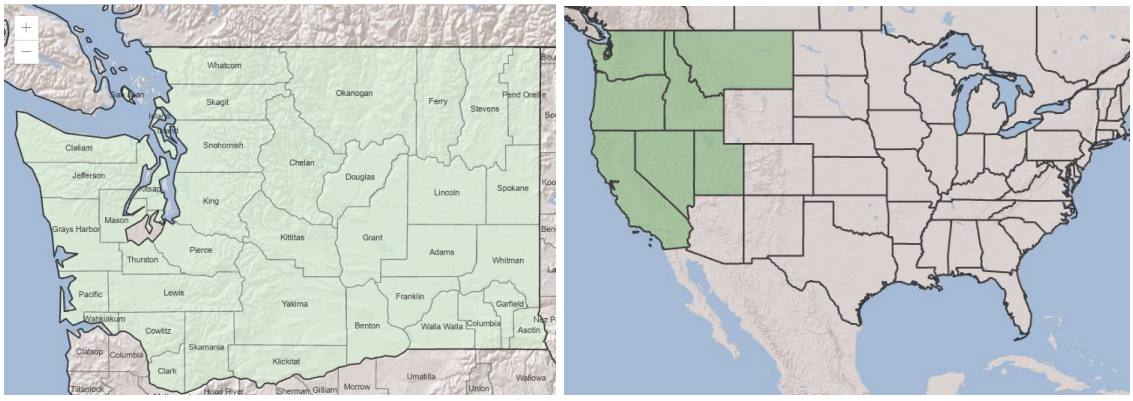
Plant Propagation Protocol for *Ericameria nana*
ESRM 412 – Native Plant Production
URL: https://courses.washington.edu/esrm412/protocols/*2023*/*ERNA7.pdf*



(James M. Andre)



(USDA PLANTS database)

TAXONOMY	
Plant Family	
Scientific Name	*Asteraceae*
Common Name	Aster family
Species Scientific Name	
Scientific Name	*Ericameria nana* Nutt.
Varieties	No information.

Sub-species	No information.
Cultivar	
Common Synonym(s)	*Haplopappus nanus* (Nutt.) D. C. Eaton
Common Name(s)	Dwarf goldenbush, low goldenbush
Species Code (as per USDA Plants database)	ERNA7
GENERAL INFORMATION	
Geographical range*	Located in the lower 48 states (NW): California, Idaho, Oregon, Washington, Montana, Utah (1) * See distribution map above
Ecological distribution	Dry, rocky ridges and cliffs in desert mountains (2)
Climate and elevation range	2100-2800 m (2)
Local habitat and abundance	Dry rocky soils, cliffs and talus slopes (1,2). Pinyon and juniper woodland (4).
Plant strategy type / successional stage	Tolerant to dry conditions and in well drained, gravelly, rocky soils (4).
Plant characteristics	ERNA7 is a low shrub with rigid, intricately branched stems. Narrow alternate leaves and varnished appearing foliage (1). Flowers have 3-10 yellow rays and 4-10 disk flowers (1). Flowering occurs July - Nov (4).
PROPAGATION DETAILS - Seed (3) **This information is for a species with similar characteristics and within its geographical range (*Ericameria cooperi*). No propagation methods found for ERNA7.**	
Ecotype	Joshua Tree National Park, California
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Conetainer (plug)
Stock Type	1 gallon VC Pipe container
Time to Grow	12 months
Target Specifications	Firm root plug in container.
Propagule Collection Instructions	Seeds are hand collected in June
Propagule Processing/Propagule Characteristics	Seeds allowed to dry 4-6 weeks in paper bags in a warm, dry room. After seeds are cleaned, they are stored under refrigeration in air tight containers at 7C
Pre-Planting Propagule Treatments	Seeds are soaked in water for 6 hr to remove any inhibitors and to allow full imbibition of seeds prior to sowing.
Growing Area Preparation / Annual Practices for Perennial Crops	Seeds sown in open flats using a growing medium of 2 parts sand 1 part mulch and 1 parts perlite.

Establishment Phase Details	Seeds germinated in flats in a germination chamber or under mist approximately 2-3 weeks until established. Then they are transplanted into newspaper containers (29cm tall and 7.5 cm in diameter) filled with growing medium 2:1:1 sand:mulch:perlite.
Length of Establishment Phase	4 weeks
Active Growth Phase	Seedlings transplanted into larger containers at 8-12 weeks. Entire newspaper pots transplanted into PVC containers using the same medium as before. Osmocote time release month release rate incorporated into the medium. Following transplanting, seedlings moved to open growing compound covered with 55% shade-cloth during summer months. Containers irrigated by an automated drip system.
Length of Active Growth Phase	9 months
Hardening Phase	Irrigation frequency and duration gradually reduced 4-8 weeks prior to out-planting. Shadecloth removed from the open growing compound in October when daytime temperatures begin to cool.
Length of Hardening Phase	2 months
Harvesting, Storage and Shipping	Containerized seedlings over winter stored directly in the open growing compound.
Length of Storage	Variable; depends on planting date
Guidelines for Outplanting / Performance on Typical Sites	No information.
Other Comments	No information.
INFORMATION SOURCES	
References	(1) Dwarf Goldenweed — Ericameria nana. Montana Field Guide. Montana Natural Heritage Program. https://FieldGuide.mt.gov/speciesDetail.aspx?elcode=PDAST3L0B0 (2) Lowell E. Urbatsch 2012, Ericameria nana, in Jepson Flora Project (eds.) Jepson eFlora, https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=2599 (3) Graham, Jean. 2004. Propagation protocol for production of Container (plug) Ericameria cooperi (Gray) Hall plants 2 Gallon VC Pipe container; USDI NPS - Joshua Tree National Park Native Plant Nursery Twentynine Palms,

	California. In: Native Plant Network. US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources. https://npn.rngr.net/renderNPNProtocolDetails?selectedProtocolIds=asteraceae-ericameria-2573 (4) California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). https://rareplants.cnps.org/Plants/Details/1904
Other Sources Consulted	(5) CalPhotos. n.d. Ericameria nana. CalPhotos: A database of photos of plants, animals, habitats and other natural history subjects. BSCIT, University of California, Berkeley. https://calphotos.berkeley.edu/cgi/img_query?enlarge=0000+0000+1009+2230 https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=502366#null (6) Index Nominum Algarum, University Herbarium, University of California, Berkeley. Compiled by Paul Silva. https://ucjeps.berkeley.edu/cgi-bin/get_cpn?Ericameria+nana&expand=1 (7) FNA. Ericameria nauseosa var. Nana. n.d. Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico [Online]. 22+ vols. New York and Oxford. http://floranorthamerica.org/Ericameria_nauseosa_var._nana (8) Ericameria nana. n.d. Ericameria nana. Wildflower identification. https://wildflowersearch.org/search?&PlantName=Ericameria+nana (9) Flessner, Theresa R; Trindle, Joan D.C.. 2003. Propagation protocol for production of Container (plug) Ericameria bloomeri (Gray) J.F. Macbr. plants 1-gallon containers; USDA

	NRCS - Corvallis Plant Materials Center Corvallis, Oregon. In: Native Plant Network. US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources. (10) Ericameria nana Nutt. 2023. Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals. Berkeley, California: The Calflora Database. https://www.calflora.org/app/taxon?crn=3086
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