

Plant Propagation Protocol for *Nemophila menziesii*

<http://courses.washington.edu/esrm412/protocols/NEME.pdf>



Photograph by Mark W. Skinner of *N. menziesii* flowers, hosted by the USDA-NRCS Plants Database.



Up close photograph of the leaves of *N. menziesii*, taken by Steve Matson.²

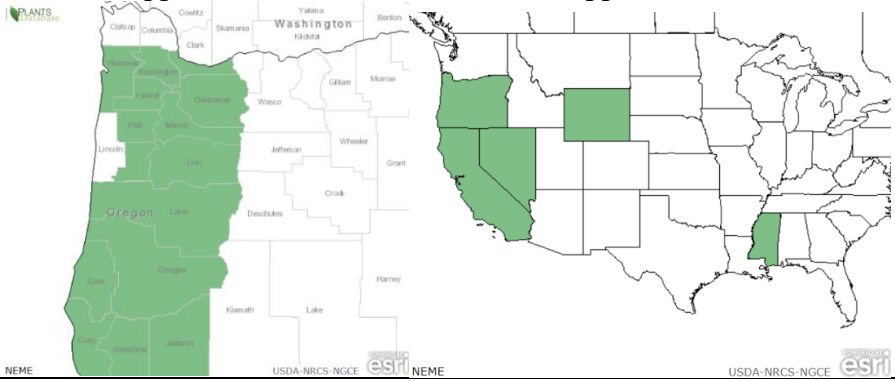


BORAGINACEAE
[formerly HYDROPHYLLACEAE]

Nemophila
menziesii
(BABY BLUE EYES)

Photograph of seeds by John Macdonald.^{1a}

| TAXONOMY | |
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| Family Names | |
| Family Scientific Name: | Hydrophyllaceae ¹ (subfamily of Boraginaceae ^{4,7}) |
| Family Common Name: | Waterleaf ^{1,7} (subfamily of Borage) |
| Scientific Names | |
| Genus: | <i>Nemophila</i> ¹ |
| Species/Epithet: | <i>menziesii</i> ¹ |
| Species Authority: | Hook. & Arn. ¹ |
| Varieties | N/A |
| Sub-species | <i>N. menziesii</i> var. <i>atomaria</i> ¹ <i>N. menziesii</i> var. <i>integrifolia</i> ¹ <i>N. menziesii</i> var. <i>menziesii</i> ¹ |
| Cultivar | N/A |
| Common Synonym(s) | N/A |
| Common Name(s) | Baby Blue Eyes ¹ |
| Species Code: | NEME ¹ |

| GENERAL INFORMATION | |
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| Geographical range | <p>Found along the Oregon coast, as well as most of California, the southern tip of Nevada, in Wyoming, and an isolated case in one county of Mississippi.¹ The identification in Mississippi could be incorrect.</p>  |
| Ecological distribution | Occurs primarily on cool, partially shaded slopes (northern side), moist woods, and mountainous meadows, but also found along roadsides. ^{3,5,9} |
| Climate and elevation range | Prefers cool, moist climates, protected from hot sun. ^{3,4} Frequently found around 2000 ft, but can range from 0-5000 ft. ^{8,11} |
| Local habitat and abundance | Doesn't usually associate with any specific plants, but commonly occurs in grassy areas. |
| Plant strategy type / successional stage | Annual plant, colonizing areas or growing quickly after disturbances. ^{3,4} |
| Plant characteristics | <p>An annual forb found in many types of habitat, as it is easily propagated. Five petaled flowers are bright blue with a white center, occurring in clusters at tips of branches. Annual, dying yearly.^{1,2,3} The seeds are black or brown and are wrinkled and have an appendage.⁶ Grows to 10-25cm tall.¹⁰</p> |
| PROPAGATION DETAILS | |
| Ecotype | N/A |
| Propagation Goal | Plant ⁴ |
| Propagation Method | Seed ² |
| Product Type | Container (plug) |
| Stock Type | 4" pot ¹² |
| Time to Grow | 6-8 weeks. ¹² |
| Target Specifications | N/A |
| Propagule Collection Instructions | Collect seed before capsule opens, between March and June. ¹⁰ |
| Propagule Processing/Propagule Characteristics | Each flower produces 10-20 seeds. ¹⁰ |
| Pre-Planting Propagule Treatments | Seeds require cold stratification, allow cold stratification from fall to spring, or direct sow when frost is still possible. ^{12,2} Seeds come in capsules, use mesh to separate seed from capsules. |

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| Growing Area Preparation / Annual Practices for Perennial Crops | Grow in peat or coir pots with a well-draining, moisture holding media. ¹² |
| Establishment Phase Details | In spring, seeds will germinate between 59-70°F, cover with a very thin layer of soil. ^{12,2} Spread seed across seeding tray and allow to germinate. ³ |
| Length of Establishment Phase | 7-21 days ¹² |
| Active Growth Phase | Keep protected from excessive heat after germination, transplant germinants into 4" pots. ¹² |
| Length of Active Growth Phase | 3-5 weeks ¹² |
| Hardening Phase | N/A |
| Length of Hardening Phase | N/A |
| Harvesting, Storage and Shipping (of seedlings) | Seedlings are ready to be shipped 3-5 weeks after transplanting (mid-March to late-April). |
| Length of Storage | Plants can be kept in nursery through May, but planting on site after then could be fatal, due to higher temperatures. |
| Guidelines for Outplanting / Performance on Typical Sites | Typically blooms from March through June. ^{3,4,5} |
| Other Comments | N/A |
| INFORMATION SOURCES | |
| References | <ol style="list-style-type: none"> 1. "Plants Profile for <i>Nemophila Menziesii</i> (Baby Blue Eyes)." <i>USDA-NRCS Plants Database</i>, US Department of Agriculture, plants.usda.gov/core/profile?symbol=NEME. 2. "Baby Blue Eyes, <i>Nemophila Menziesii</i>." <i>California Native Plant Society</i>, calscape.org/Nemophila-menziesii-(Baby-Blue-Eyes). 3. "<i>Nemophila Menziesii</i>." <i>Lady Bird Johnson Wildflower Center</i>, The University of Texas at Austin, July 2017, www.wildflower.org/plants/result.php?id_plant=NEME. |

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| | <p>4. “Nemophila Menziesii.” <i>Missouri Botanical Garden</i>, www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=281061&isprofile=0&.</p> <p>5. “Nemophila Menziesii Hook. & Arn.” <i>Calflora</i>, www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=5836.</p> <p>6. Robert Patterson & Richard R. Halse 2012, <i>Nemophila menziesii</i>, in Jepson Flora Project (eds.) <i>Jepson eFlora</i>, http://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=34542, accessed on May 28, 2019.</p> <p>7. Feuillet, Chrisitan. “ITIS Standard Report Page: Nemophila Menziesii.” <i>ITIS Report</i>, www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=31427#null.</p> <p>8. “Nemophila Menziesii.” <i>Wildflower Identification</i>, wildflowersearch.org/search?&PlantName=Nemophila menziesii.</p> <p>9. Giblin, David, et al. “Nemophila Menziesii.” <i>Burke Herbarium Image Collection</i>, biology.burke.washington.edu/herbarium/imagecollection/taxon.php?Taxon=Nemophila menziesii.</p> <p>10. Prigge, B. A., and A. C. Gibson. “Nemophila_menziesii_menziesii_UCLA_SantaMonicas.” Santa Monica Mountains Recreation Area,</p> |
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| | <p>http://www.smmflowers.org/bloom/PDF-species/Nemophila_menziesii_menziesii_UCLA_SantaMonicas.pdf</p> <p>11. “Nemophila Menziesii Hook. & Arn. Var. Menziesii.” <i>Calflora</i>, www.calflora.net/bloomingplants/babyblueeyesA.html.</p> <p>12. Macdonald, Mark. “How to Grow Nemophila.” <i>West Coast Seeds</i>, 9 Sept. 2014, www.westcoastseeds.com/blogs/how-to-grow/grow-nemophila.</p> |
| Other Sources Consulted | 1a. Macdonald, John. “Nemophila Menziesii.” <i>Rancho Santa Ana Botanic Garden</i> , www.hazmac.biz/090608/090608NemophilaMenziesii.html . |
| Protocol Author | Caitlin Savo |
| Date Protocol Created or Updated | 05/28/19 |