

Leucothoe fontanesiana (Steud.) Sleumer

drooping leucothoe

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Synonyms. *Andromeda fontanesiana* Steud.; *Leucothoe catesbaci* (Walter) A. Gray, *Leucothoe editorum* Fern. & Schub.

Other common names. highland doghobble, doghobble, switch ivy, fetterbush.

Growth habit, occurrence, and uses. Drooping leucothoe (*Leucothoe fontanesiana* (Steud.) Sleum.) as its common name implies, has a graceful, arched habit (Bridwell 1994). The plant is a broad-leaved, evergreen shrub, 1 m tall, with a spread of 1.2 to 1.8 m (Halfacre and Shawcroft 1975). Drooping leucothoe spreads by underground stems and can produce impenetrable thickets (Halfacre and Shawcroft 1975). These dense thickets have often hindered hunting from horseback, ensnaring both dogs and horses, hence the common names doghobble and fetterbush. This species occurs naturally in moist wooded areas along the Appalachian Mountains of the United States, from Virginia to Georgia and Tennessee (Ingram 1961). In its native habitat, drooping leucothoe occurs as an undergrowth accompaniment to taller shrubs such as rhododendron (*Rhododendron* L. spp.) or mountain-laurel (*Kalmia latifolia* L.) (Melvin 1981). Drooping leucothoe is a robust, hardy shrub that can be cultivated in USDA Hardiness Zones 5 to 8. However, a cool, shady, well-drained site must be selected for the southern landscape (Dirr 1990).

The species is best suited for landscape use in lightly shaded sites with moist soil that is high in organic matter (Ingram 1961). Typically, the plant is utilized as an understory shrub to complement other understory plants that have a leggy habit (Dirr 1990). Drooping leucothoe can best be used as a cover on shady banks and is especially effective in mass plantings (Dirr 1990). An additional quality that increases the value of this plant in the landscape is its rich, lustrous, dark green foliage, which becomes reddish bronze in autumn and eventually turns bronze-purple in winter, thus providing seasonal interest (Halfacre and Shawcroft 1975; Odenwald and Turner 1987). No geographic races or hybrids have been described currently in the literature.

Flowering and fruiting. White, waxy, urn-shaped flowers are borne on small, pendant, axillary racemes in May and scent the air with a pungent fragrance (Dirr 1990; Odenwald and Turner 1987). Although individual flowers are small (0.6 cm long), they are clustered along 5.0- to 7.5-cm-long racemes and provide a striking contrast to the dark green foliage (Dirr 1990).

Collection of fruits; seed extraction, cleaning, and storage. Capsules and seeds ripen in mid- to late autumn and can be collected at that time (Wyman 1953). Capsules are removed from the plant and lightly beaten, then rubbed to open them completely (Dirr and Heuser 1987); then, seeds are shaken from the capsules. Viability can be poor if seeds are not graded rigorously. Seeds are quite small (figures 1 and 2). When dried to a moisture content of 3% and cleaned, pure seeds averaged 22,900/g (650,000/oz) (Blazich and others 1991). Seeds will remain viable if stored dry at room temperature and used within 2 years (Wyman 1953). Glenn and others (1998) reported that seeds will remain viable for several years if stored in a sealed container at -18 or 4 °C. This suggests that the seeds are orthodox in storage behavior.

Germination tests. There are no prescribed methods for official tests of this species, but the seeds germinate readily without pretreatment (Dirr and Heuser 1987; Fordham 1960). Seeds of drooping leucothoe require light for germination (Blazich and others 1991). Blazich and others (1991) conducted a 30-day germination study utilizing seeds from a native population of plants growing in Henderson County, North Carolina. Seeds were germinated at 25 °C or an 8/16 hour thermoperiod of 25/15 °C with daily photoperiods of 0, 2, 2 twice daily, 1, 2, 4, 8, 12 or 24 hours. The cool-white fluorescent lamps utilized as the light source provided a photosynthetic photon flux (400 to 700 nm) of 35 $\mu\text{mol}/\text{m}^2/\text{sec}$ (2.8 klux). For both temperatures, no germination occurred during the 30-day test period for seeds not subjected to light. At 25 °C, increasing photoperiod increased percentage germination values of 60 and 68% occurring by day 24 for the 12- and 24-hour photoperiods, respectively. The alternating temperature of 25/15 °C enhanced germination when light was limiting. At this temperature, germination $\geq 85\%$ was reached by day 27 for photoperiods ≥ 2 hours. Germination is epigeal.

Nursery practice. Typically, the germination medium is kept at 24 °C via bottom heat (Bir 1987). Seeds are sown on the surface of a steam-pasteurized medium, such as pinebark sifted through a 6-mm-mesh (0.25-in-mesh) screen. They are irrigated slightly and the surface of the germinating medium is thereafter never allowed to dry completely (Bir 1987). One recommended practice is to fertilize seedlings at the first true leaf stage with a half-strength solution of a 15-45-5 (N:P₂O:K₂O) fertilizer (Bir 1987). After 2 weeks, the seedlings are then fertilized with a full-strength solution applied weekly until they are transplanted into liner flats or pots (Bir 1987). Drooping leucothoe can also be propagated vegetatively by rooting stem cuttings (Dirr and Heuser 1987). The species roots readily from cuttings taken during the months of June through December without a need for exogenous auxin application (Dirr and Heuser 1987).

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Figure 1C *Leucothoe fontanesiana*, drooping leucothoe: seeds, × ??.

Figure 2C *Leucothoe fontanesiana*, drooping leucothoe: longitudinal section of a seed, × ??.