ERICACEAE (Heath or Blueberry Family)

Contributed byDavid J. Bogler

Plants shrubs orsmall trees, sometimes evergreen, less commonly mycotrophic (receivingnutrients and water from associations with soilborne fungi) herbs lackingchlorophyll. Leaves alternate, simple, often somewhat thickened and leathery,sometimes reduced to scales, sessile or short-petiolate. Leaf blades simple,the margins entire or finely toothed. Stipules absent. Inflorescences terminalor axillary, mostly racemes, the flowers sometimes solitary, subtended by smallbracts. Flowers actinomorphic to slightly zygomorphic, perfect, hypogynous orepigynous. Calyces deeply 5-lobed or of 4 or 5 free sepals (sometimes absent inMonotropa), usually persistent at fruiting. Corollas usually 5-lobed orof 3–6(–8) free petals, trumpet-shaped or tubular tourn-shaped. Stamens mostly 5 or 10, the filaments free or attached to thecorolla base, the anthers attached more or less medially, becoming invertedduring development such that the base becomes the apparent tip, sometimes withscalelike spurs near the filament-anther junction and/or awnlike extensions atthe apparent anther tip, dehiscing mostly by pores near the apparent tip, thesesometimes elongated and appearing slitlike. Pollen usually released in tetrads(groups of four) (except in Monotropa) and with viscin strands (sticky,cobwebby strands connecting the tetrads so the pollen tends to be shed inclumps). Pistils of usually 5 fused carpels. Ovary superior or inferior, with1–10 locules, hollow and fluted, with axile or deeply intrudingparietal placentation. Style 1 per flower, the stigma capitate to disk-shaped,sometimes (4)5-lobed. Ovules 1 to numerous. Fruits capsules or berries. Seeds 1to numerous, usually small, sometimes winged. About 100 genera, about 3,000species, nearly worldwide, often on acidic soils.

In the broadsense, the Ericaceae are a large and morphologically diverse family thatincludes trees, shrubs, epiphytes, and herbs. The group is so diverse that somebotanists have broken it up into smaller families or subfamilies (Steyermark,1963; Cronquist, 1981, 1991). Vaccinium and Gaylussacia sometimeshave been segregated by a few workers as Vacciniaceae, along with othernon-Missouri genera having an inferior ovary. Monotropa and relatedgenera lacking chlorophyll have been placed in the Monotropaceae or have beenincluded along with Pyrola (wintergreen) and other mycorrhizal butgreen, non-Missouri genera in the Pyrolaceae. The consensus of recentmorphological and molecular studies is that these genera are indeed related andare best included in a single family (Stevens, 1971; Wallace, 1975; Judd andKron, 1993; Kron, 1996), and the present treatment therefore deviates from thegeneral practice in this manual of following Cronquist's (1981, 1991) familialclassification system.

The Ericaceaeare an economically important family. The genus Vaccinium is the sourceof blueberries and cranberries. A number of genera are cultivated asornamentals, including Arctostaphylos (bearberry), Epigaea(trailing arbutus), Erica (heath), Kalmia (mountain laurel), Pieris(pieris, fetterbush), Rhododendron (azalea, rhododendron), and Vaccinium(there are also several additional genera not hardy in Missouri). All of thecultivated taxa require acidic soils, which makes them difficult to grow atmany locations, given the widespread calcareous substrates in the state.