18. Erigeron L. (fleabane)

Plants annual orperennial herbs, lacking taproots, sometimes with rhizomes or stolons,variously hairy. Stems 1 or few to several, erect or ascending, unbranched ormore commonly branched, finely to coarsely angled or longitudinally lined.Basal leaves absent or more commonly present at flowering. Stem leavesprogressively reduced toward the tip, sessile or short-petiolate, the bladelinear to lanceolate, oblanceolate, or oblong-lanceolate, the base sometimessomewhat clasping the stem, the margins entire or relatively few-toothed abovethe midpoint. Inflorescences panicles or sometimes (in E. pulchellus) asmall cluster or solitary head at the stem or branch tips, the headslong-stalked to nearly sessile, the inflorescence branches with few to severalsmall, leaflike bracts. Heads radiate (rarely discoid in E. strigosus),not sticky or resinous. Involucre cup-shaped to broadly cup-shaped or slightlybell-shaped. Involucral bracts in 2 or 3(4) equal or subequal, overlappingseries, narrowly oblanceolate to narrowly lanceolate or linear, the tipascending (sometimes loosely so in E. pulchellus), with a relativelybroad (slender elsewhere), uniform, green central stripe (often with a slender,yellow or orange midvein) and with relatively narrow, thin, pale margins,sometimes purplish-tinged toward the tip. Receptacle flat or shallowly convex,relatively smooth (the veins leading to the florets often appearing as raisedpoints after the fruits have been shed). Ray florets usually numerous(50–400) in 1–4 series, pistillate, the corolla usuallyconspicuous (occasionally a few of the innermost ray florets with reduced orabsent corollas), relatively slender, white or often tinged with pink,lavender, or blue, especially with age or on the undersurface, shed beforefruiting. Disc florets numerous (more than 100), perfect, yellow, shed beforefruiting. Pappus of the ray and disc florets similar or of 2 types, ofrelatively few to numerous (8–30) capillary bristles and usually alsoan outer series of fewer short bristles or narrow scales, usually white, thepappus of the ray florets sometimes with only the outer, shorter seriespresent. Style branches with the sterile tip (beyond the stigmatic lines)0.1–0.3 mm long, lanceolate to broadly triangular. Fruits narrowlyoblong-obovate (slightly tapered toward the base) in outline, flattened, theangles usually with thickened nerves or ribs, rarely with an additional nerveon each face, the surface sparsely hairy or glabrous, pale tan to lightyellowish brown. About 390 species, nearly worldwide, most diverse in temperatemontane regions.

Thus far, mostbotanists have resisted the temptation to subdivide Erigeron intosmaller genera. In fact, the segregates Conyza and Aphanostephus,which Cronquist (1943, 1947c) and Shinners (1946b) retained as genera separatefrom Erigeron, should perhaps be reintegrated into the genus, based onmolecular data (Noyes, 2000a). In temperate North America, where more than 170species occur, the greatest diversity is in the western mountains, wherenumerous narrowly endemic taxa grow. The molecular studies of Noyes (2000a),which involved samples from nearly 70 species spread across the taxonomic andgeographic diversity of Erigeron, provided support for the natural(monophyletic) circumscription of the genus and suggested a North Americanorigin for it.

That said, themorphological characters separating Erigeron from some other genera ofthe tribe Astereae are rendered less effective by variation within some speciesin each of the groups. In the eastern half of the United States, the generalrule of thumb has been that a plant flowering before July with relativelynumerous ray florets and subequal involucral bracts having uniform, greencentral stripes is likely an Erigeron, whereas a plant flowering afterJuly with somewhat fewer ray florets and unequal involucral bracts in which thegreen stripe is expanded toward the tip is probably an aster (Doellingeria,Eurybia, Symphyotrichum). However, in

individual species one or more ofthese characters are difficult to interpret or break down, and the two groupshave overlapping flowering periods from about August to October. In the western United States, the differences between the two groups are further blurred bythe presence of other related genera, such as Machaeranthera Nees andits segregates. In Missouri, care also must be taken to avoid confusion between Erigeron and Boltonia, which differ primarily in their pappustypes and in the generally later flowering period in the latter.