1. **Achillea millefolium L.** (common yarrow, common milfoil)

A. millefolium var. lanulosa (Nutt.) Piper ex Piper & Beattie

A. millefolium ssp. lanulosa (Nutt.) Piper

Pl. 224 a, b; Map 937

Plants with usually short rhizomes. Stems 20–80 cm long, without short branches in the leaf axils, sparsely to densely pubescent with white, woolly hairs. Leaves sessile or short-petiolate. Leaf blades 1–12 cm long (those of the basal leaves sometimes to 30 cm), narrowly oblong to lanceolate or oblanceolate, deeply 2(3) times pinnately lobed, pinnately veined, glabrous or sparsely to densely pubescent with woolly hairs, the ultimate segments 1–3(5) mm long, linear to threadlike, sharply pointed at the tip, 1-veined. Inflorescences flat-topped to dome-shaped. Involucre 4–5 mm long, narrowly cup-shaped to nearly cylindrical. Receptacle convex to hemispheric. Ray florets (3–)5(–8), the corolla 2–4 mm long, often with minute, yellow, club-shaped glands, white, rarely pink. Disc florets perfect, 10–20, the corolla 1.8–3.5 mm long, usually with sparse, minute, yellow, club-shaped glands, white to grayish white. $2n=18, 27, 36, 48, 54$ (all or mostly $2n=36$ in Missouri). May–November.

Scattered nearly throughout the state, some populations possibly introduced (North America, Europe, Asia). Upland prairies, glades, openings of mesic to dry upland forest; also pastures, old fields, railroads, roadsides, and open, disturbed areas.

Yarrow is a common garden perennial and is also a component of some wildflower seed mixes. However, it often becomes an aggressive plant that is difficult to control. Steyermark (1963) also mentioned that the species has been used in herbal teas and as a tonic. He noted that one common name, nosebleed, might be attributed to the supposed property of the plants to cause nosebleeds, but after testing this by stuffing foliage up his nostrils, he was able to report that *A. millefolium* caused no irritating or burning sensation and thus was not an effective means of instigating a bloody nose. An alternative explanation comes from other European names for the species such as bloodwort, staunchweed, and soldier’s woundwort, which apparently relate to the application in mediaval times of fresh leaves to wounds to stop bleeding (Antonio and Masi, 2001).

Among themutants dignified with names, the form with light pink to rose-pink corollas occurs sporadically in Missouri and has been called f. *roseum* E.L. Rand & Redfield. Many authors (Steyermark, 1963; Gleason and Cronquist, 1991) have attempted to separate *A. millefolium* into two or more varieties, subspecies, or species and to segregate native populations from those introduced from the Old World. Mulligan and Bassett (1959) investigated the situation cytologically and concluded that native North American populations are tetraploids ($2n=36$), whereas plants introduced from the Old World are hexaploid ($2n=48$). However, further published chromosome counts by various workers (for example, Gervais, 1977) and studies by Tyrl (1975) have shown that the situation is not that clear-cut. Whatever the original situation may have been prior to the settlement of North America by Europeans, anthropogenic spread and subsequent hybridization (particularly in the northern United States) between plants with different chromosome numbers have created a confusing circumboreal complex that includes diploid, triploid, tetraploid, pentaploid, hexaploid, and octoploid plants. In Missouri and in the eastern Great Plains, Pireh and Tyrl (1980) showed that most or all of the populations are tetraploid, in spite of various combinations of morphological features. In this region and probably elsewhere, the morphological characters that have been used to attempt to
identify native vs. introduced populations are confusing and seem to vary independently of one another and of ploidy. These characters have included density and persistence of the woolly pubescence, color and texture of the margins of the involucral bracts, inflorescence shape (flat-topped vs. rounded), subtle differences in shape of the lobes of the leaves, and whether the divisions of the leaf are positioned in a relatively flat vs. three-dimensional (like a bottle brush) pattern. During the present research, determination of the Missouri specimens using different characters from this array produced strikingly different results and it has not been possible to develop consistent morphological criteria to separate putatively native populations from naturalized ones. The situation warrants further research. Thus no attempt has been made here to formally recognize these variants taxonomically.