3. **Polygala senega** L. (Seneca snakeroot)

*P. senega* var. *latifolia* Torr. & A.Gray

Pl. 495 h, i; Map 2264

Plants perennial herbs several-stemmed from a thick, somewhat fleshy or woody rootstock. Stems 10–50 cm long, ascending, unbranched, moderately to densely pubescent within inconspicuous, minute, curved, sometimes slightly club-shaped hairs, not glaucous, yellowish green to whitish green. Leaves moderately spaced, alternate, the lowermost reduced and scalelike, grading into the main leaves, these 15–70 mm long, narrowly lanceolate to narrowly elliptic or narrowly obovate, 4–35 mm wide, the margins with closely spaced, minute teeth, not shed early, the plants appearing leafy at flowering and fruiting. Inflorescences dense spikelike racemes, 1.5–5.0 cm long. Wings 3.0–3.7 mm long, broadly elliptic to nearly circular, white to greenish white. Corollas 2.2–3.0 mm long, white to greenish white or pale cream-colored, the fused portion 1.5–2.2 mm long. Fruits 2.5–4.2 mm long, obovoid-ellipsoid, somewhat flattened, shallowly notched at the tip. Seeds 2.5–3.5 mm long, the aril 2.5–3.8 mm long, membranous, with 2 linear lobes (these usually positioned in parallel fashion and thus sometimes difficult to distinguish). May–July.

Scattered in the Ozark and Ozark Border Divisions, also in a few counties in the north-central portion of the state (eastern U.S. west to North Dakota, Wyoming, and Oklahoma; Canada). Mesic to dry upland forests, bottomland forests, tops, ledges, and bases of bluffs, banks of streams, rivers, and spring branches, upland prairies, and glades; also railroads.

The infraspecific taxonomy of this species remains controversial. Steyermark (1963) and some earlier authors segregated var. *latifolia*, based on its broader leaves and wing sepals, slightly larger fruits, absence from northern Missouri, and occurrence mainly in woodlands. However, in his work on the Indiana flora Deam (1940) found that he could not reliably distinguish plants in that state and noted that plants growing in more open areas tended to have broader leaves. Trauth-Nare and Naczi (1997, 1998) performed a morphometric analysis on the complex and were able to consistently distinguish two taxa based on a small set of quantitative and qualitative characters, as well as slight differences in blooming dates; they went so far as to suggest that there might be two morphologically cryptic species involved. In his study of Ohio *Polygala*, J. F. Burns (1986) reviewed the literature to that time and concluded that it was most prudent to treat *P. senega* as a single, morphologically variable species until more conclusive evidence was presented to support the segregation of a second taxon. That conclusion appears still to be valid.

Native Americans used the roots of this species medicinally for a wide variety of treatments (Moerman, 1998), including as a respiratory aid, abortifacient, antirheumatic, diuretic, anticonvulsive, blood and kidney aid, and cold remedy, among others.