1. Zea mays L. ssp. mays. (corn, maize, Indian corn)
Pl. 125a–c; Map 510

Plants annual, monoecious, forming large tufts. Flowering stems 40–120 cm long, stout, erect, unbranched, circular in crosssection, glabrous or hairy. Leaf sheaths rounded on the back, usually hairy, the ligulea short membrane with an uneven margin. Leaf blades 20–80 cm long, 10–65 mm wide, glabrous or hairy, flat, rounded at the base, the midvein noticeably thickened. Staminate inflorescences dense, palmate or shortpinnate clusters of 4 to numerous spikelike racemes at the tip of the main stem (tassel). Pistillate inflorescences 1–3 highly modified spikes enclosed by numerous overlapping, leaflike bracts (ear with husks), axillary along the stem, the spikes 10–30 cm long, with a thickened, corky central axis (cob) and 8–30 rows of numerous, sessile spikelets. Staminate spikelets paired along the axis, 1 very shortstalked, the other with a stalk 3–6 mm long, similar in size and appearance, the glumes 6–12 mm long, ovate, pointed at the tip, mostly 7–11 nerved, hairy, with 2 staminate florets. Anthers 4–7 mm long. Pistillate spikelets paired in rows along the thickened axis, with 2 florets, the lowermost usually sterile and reduced, the uppermost fertile, not disarticulating. Glumes 2–4 mm long, reduced and hidden by the fruits at maturity, depressed semicircular in outline, sometimes with irregular margins, thin. Pistillate lemmas, 3–4 mm long, broadly ovate, membranous, awnless. Ovaries with the styles (silk) elongate for several cm, threadlike, ascending and protruding from the tip of the husks. Fruits 3–6 mm long, broadly oblong in outline, somewhat flattened, rounded at the tip, closely packed along the cob, yellow or less commonly dark purple. 2n = 20. June–August.

Introduced, uncommon and widely scattered in the state (cultivated nearly worldwide, escaping sporadically in the U.S.). Disturbed openings of mesic upland forests; also roadsides, railroads, and fallow fields.

The description above applies to plants collected as escapees. Cultivated plants usually are much more robust, with stems up to 400 cm long and longer and more numerous ears. Maize is one of the most important crop plants in the world, with numerous hybrid lines bred for a variety of products and uses, including fodder for livestock, corn oil, corn starch, distillation of alcohol, and kernels and ears for human consumption, popcorn, as a sweetener, and grain for baking and flour. Additionally, the cobs are used as stuffing in pet bedding, as grist for industrial polishing processes, as an substitute for toilet paper, and for corn cob pipes (the corn cob pipe “capital of the world” is Washington, Missouri) (Fussell, 1992). Presently, ssp. mays, the cultivated plant, is thought to have been derived through prehistoric human selection from Z. mays ssp. mexicana (Schrad.) Iltis, a wild teosinte native to Mexico (Doebley and Iltis, 1980; Iltis and Doebley, 1980). This has been treated as a separate species by many earlier authors. Wild members of the genus lack the elaborate “cob” type of pistillate inflorescence and differ in the arrangement of the inflorescences on the plants. The cob, a complex structure that has been selected for and bred to maximize both yield and ease of harvest, renders the plants incapable of completing their lifecycle in the wild. Thus, maize plants found growing outside of cultivation do not persist in the wild.