

Megathyrus maximus (Jacq.) B. K. Simon & S. W. L. Jacobs (Poaceae)

SPIKELET

One sterile floret and one fertile floret, disarticulation below the glumes, falling as a unit from the plant

General shape: narrowly elliptic or obovate, dorsal-ventrally compressed

Normal size: 2.7 – 3.6 mm long x 0.9 – 1.1 mm wide

Color: pale green to straw-colored, +/- with purple tinge

Texture: glumes and sterile floret membranous to papery, glabrous in var. *maxima*, hairy in var. *trichoglumis*. Fertile lemma hardened, transversely wrinkled

Distinguishing features: lower glume ¼ - ½ the length of the spikelet, broadly triangular, apex blunt to slightly pointed, the outer corners wrapping around the base of the upper glume; upper glume narrowly elliptic to obovate, ca. equal to length of spikelet, apex tapered to a point; sterile floret equal to length of spikelet, unawned; palea +/- equal in length to sterile lemma, hyaline, keels with short fine hairs

FERTILE FLORET

General shape: narrowly elliptic to obovate, dorsal-ventrally compressed

Normal size: 2.1 – 3.5 mm long x 0.9 – 1.0 mm wide

Color: straw-colored

Texture: lemma hardened, transversely wrinkled; palea ca. same length as fertile lemma

Distinguishing features: lemma margins in-rolled over margin of palea, apex tapering to a slight point

CARYOPSIS

General shape: elliptic to obovate

Normal size : 1.5 – 1.7 mm long x +/-1.0 mm wide

Color : pale straw-colored

Texture: smooth, glabrous

Embryo: ca. ⅔ the length of caryopsis

Endosperm: solid

Hilum: elliptic

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Megathyrus maximus spikelets, fertile florets and caryopsis. A spikelet consists of a triangular lower glume (1) that wraps around the base of the papery upper glume (2), a sterile lemma (3) that is nearly equal in length to the upper glume, and a hardened fertile lemma (4) and palea (5.)



Caryopsis in dorsal view showing embryo (6) and ventral view showing hilum (7).

Images by Jim Effenberger