

Var. Chapmani Engelm. Leaves about 30, floating, 18' long; sporangia orbicular; macrospores 0.44—0.55 mm. thick, almost smooth on the upper side; microspores slightly papillose, 0.027—0.030 mm. long. Near Mariana, Florida (*Chapman*).

§ 3. *Terrestrial; leaves nearly triangular, with abundant stomata and peripheral bast-bundles, thick dissepiments and small air-cavities.*

* *Trunk bilobed.*

† *Velum partial or almost wanting.*

13. *I. melanopoda* J. Gay. Polygamous; trunk sub-globose, deeply bilobed; leaves 15—60, slender, stiff, erect, bright-green, usually black at base, 5'—10' or more long; sporangia mostly oblong, 2"—5" long, spotted, with a narrow velum; ligula triangular awl-shaped; macrospores 0.25—0.40 mm. thick, with depressed tubercles often confluent into worm-like wrinkles, or almost smooth; microspores spinulose, 0.023—0.028 mm. long. *Var. pallida* Engelm. is larger, with pale leaf-bases and broader velum. Ringwood and Athens, Illinois (*Hall*); Clinton, Iowa (*Vasey*); Limestone Gap, Indian Territory (*Butler*). The variety at Houston, Texas (*Hall*).

14. *I. maritima* Und. Monœcious; trunk small, only slightly bilobed; leaves 8—15, rigid, green, 1'—2' long, $\frac{1}{2}$ "— $\frac{2}{3}$ " wide; sporangia oval, 2" long, $1\frac{1}{4}$ " wide, brownish white, one-third to one-half covered by the velum; ligule small; macrospores 0.42—0.48 mm. thick, densely spinulose, the spines blunt, rarely confluent; microspores smooth, white, 0.32—0.35 mm. thick. In salt marsh, Alberni, Vancouver Island (*Macoun*).

15. *I. Butleri* Engelm. Dioecious; trunk sub-globose; leaves 8—12, rigid, bright-green, 3'—7' long; sporangia usually oblong, spotted, with a very narrow velum or none; ligula awl-shaped from a triangular base; macrospores 0.50—0.63 mm. thick, marked with knobs or warts, distinct or sometimes confluent; microspores papillose, dark-brown, 0.028—0.038 mm. long. *Var. immaculata* Engelm. is larger, with unspotted sporangia, and spinulose microspores, the macrospores 0.40—0.56 mm. In saline flats, near Limestone Gap, Indian Territory

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