

Woodwardia Smith CHAIN FERN

Woodwardia fimbriata Smith, GIANT CHAIN FERN. Perennial herb, evergreen, rhizomatous, fibrous-rooted, rosetted, bearing large, coarse leaves ascending as a funnel-shaped canopy, in range typically < 200 cm tall; shoots appearing glabrescent; young fiddleheads ca. 25 mm diameter, densely covered by scales, the scales lanceolate and long-tapered, < 40 × 5–6 mm, translucent-orange aging satiny brown, entire, very thin and easily dislodged from petiole, with scattered, easily shed, shaggy hairs along leaf axis; rhizomes ± prostrate, often > 100 mm long on old specimens, stout, with woodlike axis 35 × 25 mm in ×-section, black, forming a stout caudex covered by persistent, hard leaf bases. **Leaves (fronds):** helically alternate, odd-1-pinnately compound with ± 20 (8–24) ± subopposite (alternate) primary leaflets on each side of rachis, basal pairs widely spaced along rachis (60–110 mm), leaf (400–)800–1900 mm long (including petiole); petiole (stipe) = 1/3 leaf length, < 15 mm diameter, straw-colored, thickened and sometimes reddish at base, densely orange-scaly at base (blackened on lower side); blade oblong to elliptic-lanceolate in outline, (120–)250–1000 mm long; leaf axis stiff, tan-green; primary leaflets pinnately lobed, sessile with short-decurrent bases, deltate to lanceolate in outline, 100–280(–240) × 45–70 mm, with (13–)16–19(–23) lobes per side, lobes the longest at midblade and slightly shorter toward the base and progressively shorter approaching the tip, lobed tip < 60 mm long; sinuses of primary leaflets 1.8–3 mm from axis, principal lobes lanceolate to acuminate, typically 25–55 × 7–9 mm, dull light green with tannish midrib, finely serrate on margins with colorless tooth at tip, net-veined with vein ends free and each terminating at an ascending tooth, surfaces initially scaly-glandular soon becoming glabrescent, lower surface with scattered, amber-colored glandular deposits along veins. **Sori:** < 13(–15) per lobe, on lower surface alternate to opposite in 2 rows, parallel with and in 1 row on each side of lobe midrib, oblong straight or curved away from midrib approaching tip, (1.5–)2.5–4.2 × 0.6–1 mm, sunken into blade tissue; indusium = shape of sorus, opening on the inner edge toward lobe midrib, golden brown, stiff and persistent. **Spores:** elliptic-ovoid with linear scar, ca. 120 µm long. January–December (fertile sporangia always present).

Native. *Woodwardia fimbriata* is the largest fern in the flora, occurring in isolated canyons of SMM at certain interior waterfalls and permanently wet seeps. *Woodwardia fimbriata* is the only fern in range that has a well-developed, trunklike aerial stem, and its elongate sori are arranged along the midrib of the lobe, which is unlike all other local ferns.

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