it has largely ceased to flower by the time most of the others get going.

_X. baldwiniana_ most closely resembles _X. elliottii_ and _X. isoetifolia_.

It may be distinguished readily from either on the basis of its lack of a staminodial beard, and by its much larger and longer seed.

6. **XYRIS isoetifolia** Kral, sp. nov. Figs. p. 252.

Dense caespitosa filifolia, foliis basin versus brunnescentibus nitidis.

Semina parva (paulum minus quam 0.5 mm. longa).

In large tufts, the leaf bases usually brownish, lustrous, perennating by overwintering lateral buds. Leaves filiform to linear-filiform, somewhat flattened in the cross-section, 4.0-15.0 cm. long, smooth, ascending, straight or slightly twisted, green above the equitant portion, pale or brownish below at the very expanded base. Sheath of the scape from \( \frac{1}{2} \) as long to nearly as long as the principal leaves, tightly investing the scape save for the loose orifice and short (2.0-4.0 mm.) blade. Scape 15.0-30.0 cm. long, very slightly twisted, occasionally flexuous, linear-filiform, ridgeless, oval or even terete in the cross section above. Spikes at seed-bearing time ellipsoidial to obovoid, 5.0-7.0 mm. long, of few, rather loosely imbricated, bracts. Fertile bracts broadly oblong to obovate, the longer about 4.5 mm., not keeled, the apex rounded, the exposed margin subentire or erose with age, the matrix scarious and pale brown, the dorsal area narrowly to broadly elliptic, pale green. Lateral sepals included, ca. 4.0 mm. long, linear-curvate, reddish brown, the keel ciliate. Petal blades obovate, ca. 4 mm. long, opening in the morning. Seeds ellipsoidial, slightly less than 0.5 mm. long, transluscent, the 12-14 longitudinal lines distinct and straight, the horizontal lines much fainter.

Moist sands or sandy-peat of savanna bogs, flatwoods pond margins and lakeshores, northwest Florida (Bay & Gulf Counties).


**Habitat and Identification.** _X. isoetifolia_ is locally abundant on moist sands or sandy peats but has not been found on wet situations. On the type locality it was in association with the extremely rare _X. scabrifolia_ Harper, together with _X. ambigua_.

_X. isoetifolia_ most closely resembles _X. baldwiniana_; in fact I recorded it as such in my field notebook. However, _X. isoetifolia_ has bearded staminodia, a loosely imbricated spike, small seed, and ciliate lateral sepals in contrast to the beardless staminodia, tightly imbricated spike, lacerate lateral sepals, and seed nearly 1 mm. long of _X. baldwiniana_.

Seedlings of this and of _X. baldwiniana_ are green, with very slender, straight, fleshy leaves, but I have been unable as yet to bring material of either to maturity in the greenhouse.
sepals included, about the length of the bracts, the wings very broad, thin and pale brown, the keel slightly thicker and darker, its margin jagged from about the middle to the apex. Blades of the petals cuneate, ca. 4 mm. long or less, yellow, unfolding in the morning. Seeds broadly ellipsoidal, ca. 0.5 mm. long, transluscent, with 24-28 very fine, straight, longitudinal lines of small papillae, the vertical lines straight, but very indistinct.

Wet sands or sandy peats of flatwoods pond margins, ditches and lakeshores, but more often on alluvial situations (often in fairly heavy shade), primarily in the Coastal Plain from eastern Texas to its northern limits in New England and southeastern Canada, but inland into the Canadian Shield (by way of the St. Lawrence River?) and Great Lakes system.

Type. U.S.A. FLORIDA. FRANKLIN CO.: “marshes, Apalachicola”; collected by Dr. Chapman. Holotype at NY, as designated by Dr. Blomquist.

Remarks. A partial solution to the complex nomenclature engendered by many conflicting senses of X. caroliniana Walter could only come through considering X. difformis to be the same as the more weedy X. jupicai, whose range extends at the least over a large part of the warmer Americas. However, X. difformis does differ from X. jupicai in several, consistently demonstrable, ways. It is my belief (see discussion under X. jupicai) that two constellations of forms exist within the United States. One, here treated as X. difformis, is comprised of maroon-pigmented, sometimes roughened-or-papillose, spreading-leaved, natives. The other is composed of green and ascending-leaved, smoothish, weeds which may not be native to the country or are at least violently expanding their range in the nature of adventives. The two complexes overlap in range in the southern United States, but only the former extends out of the Coastal Plain into other physiographic provinces. If my viewpoint is used, then the earliest name applying to a Xyris in this complex is X. jupicai Rich (1792) and that for the maroon pigmented entities is X. difformis.

Convinced at last (1960) of the distinctness of X. difformis, I became involved with locating mixed populations of X. difformis and X. jupicai, for the purpose of seeing what effect these two similar entities might have on each other. In August of 1960 I did find such a situation in Nansemond County, Virginia, (Kral 13797, 13798). On muck, under heavy shade of bottomland hardwoods, was a large stand of X. difformis with its spreading, broad, deep-green but maroon-based leaves, broad scapes and ovoid spikes. Countless hundreds of individuals were present, but none of any other species of Xyris. However, less than ½ mile distant, the road I was travelling cut through the acid sands of loblolly pine flatwoods. In the ditches on both sides of the road was a super-

(Opposite) 1. X. serotina. 2. X. isoetifolia.