



Alabama's *TREASURED* Forests
513 Madison Avenue
P.O. Box 302550
Montgomery, Alabama 36130-2550
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Resurrection Fern

Pleopeltis michauxiana (*Polypodium polypodioides*)

By Fred Nation, Environmental Services, Baldwin County

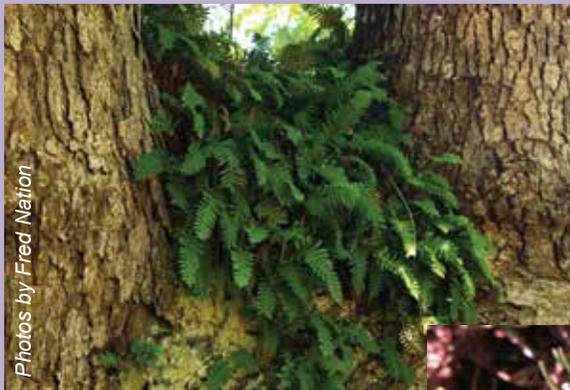
One of the most frequent and widespread ferns in the eastern United States, resurrection fern is aptly named. During times of drought, the fronds (leaves) turn brown, wither, curl-up, and appear to be dry and quite dead. When rain finally arrives, the fronds magically unfurl, straighten, and in a matter of hours they regain their flexible, leathery texture and bright color. They certainly do seem to have been “resurrected.” Unlike most southeastern ferns, with ample water the fronds are actually evergreen!

The huge natural range of the resurrection fern is from Missouri and southern Illinois to Delaware, south to Florida, and west to Oklahoma and Texas. It also occurs in southern Africa and through much of South America. We are fortunate that this interesting fern, with several remarkable properties, is also native to the entire state of Alabama.

Another noteworthy characteristic of resurrection ferns is *where* they choose to grow. They are “epiphytes,” a term from two Greek words which mean “upon a plant.” They are occasionally found growing on rocks, and can persist for a time on the ground, but most often they are seen, sometimes in sizeable “mats,” growing on the large forks and leaning limbs of hardwood trees. On the Gulf Coast they have a particular fondness for live oak, *Quercus virginiana*. They are often found high up in those big trees in the company of other epiphytic plants, including green fly orchid, *Epidendrum magnoliae* and Spanish moss, *Tillandsia usneoides*. It is important to note that epiphytes are not parasites. They have no biological connection to the trees

which they use only for support. Their water and nutrients are collected directly from the air.

Even the anatomy of resurrection fern has surprises to reveal to those who take the time to look closely. The bright green fronds (when hydrated) are rather small, up to about eight inches long, and they appear at first glance to be compound. Actually they are deeply-cleft simple leaves, with about two dozen long, straight lobes which extend nearly to the midvein. The undersides are densely covered with small, teardrop-shaped scales which can easily be seen with a hand lens. Instead of producing flowers, fruits, and seeds, ferns employ spores, which are part of a very different reproductive strategy. Circular groups of spore-cases, called “sori” can easily be seen on the backs of the fronds, in two rows along the edges of the lobes.



Photos by Fred Nation



Ferns in the genus *Pleopeltis* (formerly *Polypodium*) have been widely used by North and South American Indians to treat an amazing array of afflictions. The Aztecs used them as a diuretic, to treat liver infections, cystitis, and kidney

stones. The Houmas of Louisiana made a tea to treat dizziness, headaches, fever, and bleeding gums. It should be noted that apparently these pharmacological applications have not been verified.

Maybe someday resurrection fern will become yet another gift from the plant kingdom to treat our aches, pains, and diseases. Until then, as we pass by, we can admire our interesting fellow Alabamian, the little fern that grows on big trees.☘