

VNPS Piedmont Chapter WILDFLOWER of the WEEK

WILDFLOWER #46 answer:

COMMON ROCKCAP FERN (*Polypodium virginianum*)

Common rockcap fern is at home on rocks and very thin soil where few plants thrive, forming clumps by the spread of shallow rhizomes. We can thank it for helping to break down rock to soil.

One secret to its survival in dry places is that it can lose up to 60 percent of its weight when water-stressed, then gain it back within 24 hours of rain. Another adaptation is a wax coat on the leaves, retaining moisture in winter. That tough coat also means animals rarely nibble this fern, apart from aphids and a sawfly.

The leathery evergreen fronds last until new leaves arise in summer. The frond is pinnatifid; its alternating pinnae, not cut all the way to the stalk, suggest the name polypody, or "many limbs". Look for the spore-bearing sori—round, orange-brown, on the back of a green frond. As winter cold deepens, a frond curls to expose the sori even more. Unlike many ferns, the sori have no covering. Between them are glandular filaments called *paraphyses*, a different form of protection. With a hand lens you can see the paraphyses have brown hairs, a feature unique to this fern.

Ferns have complex genealogies. It is likely that common rockcap fern is a hybrid. It can have paired chromosomes (diploid), an extra set (triploid) or two entire sets (tetraploid). Perhaps this variability accounts for the fern's wide range. It might be a subspecies of *P. vulgare*, which occurs at northern latitudes around the world.

WILDFLOWER #47

Clues: Long golden catkins dangle at the water's edge.



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