

A New Station for Smooth Cliffbrake, *Pellaea glabella*, (Pteridaceae) on Masonry Walls

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During June 1995, I was shown a luxuriant population of cliffbrakes (*Pellaea*) growing in mortar on the walls of Owens Hall on the campus of Virginia Polytechnic Institute and State University in Montgomery County, Virginia. Numerous plants of both *Pellaea atropurpurea* and *glabella* grow together here in an area previously deeply shaded and hidden from view by shrubbery. Although both *Pellaea* species occur predominantly on natural outcroppings of limestone or dolomite, *P. atropurpurea* occurs on a wider variety of rock types and has been recorded a number of times on old stone or brick walls (Massey, 1944). *Pellaea glabella*, on the other hand, is much more restricted both geographically and in habitat preference.

Although at the southeastern edge of its range and once thought to be quite uncommon in Virginia, *P. glabella* is characteristic of limestone or dolomite palisades that occur along major rivers and large creeks. It is now known from many counties in the Great Valley in Virginia. There are few occurrences of this fern on man-made structures. A search through past issues of the American Fern Journal yielded only two accounts of masonry structures as habitat for *P. glabella*. Interestingly, one such report provides a photograph of another site in Montgomery County where this fern occurs on "wing-walls of a railroad culvert" over Plum Creek (Knight, 1939; Massey, 1944). This station is only a few hundred meters from a natural outcrop where the species also occurs. By contrast, the VPI & SU station is at the very least 8.8 kilometers distant. This, of course, poses no problem as the tiny spores are easily airborne and transported long distances. Knight's note in the American Fern Journal is followed 4 years later by a note by Edgar T. Wherry (1943) reporting stations in Berks, Bucks, and Philadelphia counties, Pennsylvania, on masonry along railroads.

The usual habitat of *Pellaea glabella* is described by Shaver (1954) as "mainly the sheer, vertical limestone bluffs near waterfalls or north-facing, vertical

limestone cliffs by rivers, and especially such bluffs as are near the water." The limestone masonry, otherwise known as "Hokie stone", which faces most of the buildings on the Virginia Tech campus would seem to bear about as close a similarity to this habitat as any man-made structure might, save the proximity to water. The plants grow from mortar cracks which are well weathered. A search for other occurrences on the older buildings surrounding the Drill Field revealed only a few plants on Eggleston Hall which is adjacent to Owens. Although descriptors such as "north-facing" and "near water" often describe the habitat of this fern, in my experience, its often exposed setting appears to be a hot and dry microsite. The site on Owens is on a northerly exposure and was also deeply shaded by shrubbery immediately adjacent to the building. This protected setting may have ameliorated an otherwise harsh environment. With the shrubbery now cleared away, it will be interesting to see what changes if any will occur as a result of changes in the microclimate of the site.

Literature Cited

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