

escape from cultivation that is well established and appears to be spreading in the area.—W.C. HOLMES, DEPARTMENT OF BIOLOGICAL SCIENCES, NORTHWESTERN STATE UNIVERSITY, NATCHITOCHE, LOUISIANA 71457.

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STREPTOPUS AMPLEXIFOLIUS (L.) DC, New to Tennessee—In June 1978 Edward Schell discovered small, scattered populations of *Streptopus amplexifolius* (L.) DC on Roan Mountain in both Mitchell Co., North Carolina, and Carter Co., Tennessee. His collections with John Warden on June 26 are thought to be the first documented record of this taxon in Tennessee. Specimens of Tennessee plants are deposited at TENN and ETSU. A specimen from North Carolina is deposited at NCU. The plant occurs on dripping ledges and in rocky streambeds in spruce-fir forest and in northern hardwood forest above 4,500 ft. The total number of individuals in all known populations combined was estimated to be about 100.

In 1979 and 1980 Peter White, while collecting the north face of Clingman's Dome, Mount Love, and Mount Buckley in Great Smoky Mountains National Park, discovered several populations on those mountains at 6,000 ft. in Sevier Co., Tennessee. These were in steep, moist, and rather open spruce-fir woods. Other scarce Tennessee plants in the same habitat include *Thelypteris phegopteris*, *Rubus idaeus* var. *canadensis*, and *Lonicera canadensis*. Specimens from White collections (2649, 2650, and 2666) are deposited at TENN and the herbarium of Great Smoky Mountains National Park.

Although McGilliard (1955) reported *Streptopus amplexifolius* in Tennessee, noting "one in Dr. Shaver's collection from Davidson County," a search by Schell failed to locate a specimen. (This is also the only record cited by Sharp et al 1956). It is believed unlikely that Davidson Co. would provide suitable habitat for the species.—E. SCHELL, 2514 BROWN'S MILL ROAD, JOHNSON CITY, TENNESSEE 37601; JOHN C. WARDEN, BIOLOGICAL SCIENCES, EAST TENNESSEE STATE UNIVERSITY, JOHNSON CITY, TENNESSEE 37614; AND PETER S. WHITE, UPLANDS FIELD RESEARCH LABORATORY, NATIONAL PARK SERVICE, GREAT SMOKY MOUNTAINS NATIONAL PARK, GATLINBURG, TENNESSEE 37738.

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THREE MARYLAND STATIONS FOR THE NORTHERN WHITE CEDAR, *Thuja occidentalis*—Three large, self-maintaining, presumably natural populations of *Thuja occidentalis*, the northern white cedar or arborvitae, were found on shaded,

north-facing Conococheague limestone cliffs along the Potomac River in Washington Co., Maryland.

While field-checking reported sites for limestone cliff ferns for the Maryland Natural Heritage Program in November, 1980, Michael Heller, Jim Saulmon, and I visited a shaded, north-facing limestone cliff on the Maryland side of an entrenched meander of the Potomac River near Sharpsburg, just upstream from the Route 34 bridge to Shepherdstown. We noted some conifers there that didn't quite look like the red cedar (*Juniperus virginiana*) which is so common in the limestone valleys of that region. Inspection of fallen branchlets showed them to be the flat-leaved *Thuja occidentalis* instead; eventually we found a tree within reach on the hundred-foot cliff and obtained a more adequate specimen. A few weeks later, I returned to the area and checked a geologically similar cliff further upstream, at Snyders Landing Road. This also had abundant *Thuja* on the cool, damp, north-facing Conococheague limestone formation.

A third Maryland stand of *Thuja* was discovered by Daniel Boone. I visited this site in 1982; upstream of Dam 4 on the Potomac River, it is also a northerly-facing Conococheague limestone cliff with hundreds of *Thuja*, both young and old.

The three sites are all in Washington Co., Maryland. Locality data have been recorded by the Maryland Natural Heritage Program, and specimens (Morse 8925, 8931, and 9205) have been deposited in the University of Maryland Herbarium, with duplicates distributed. At each site, young and old trees are frequent for a half mile or more along the near-vertical cliffs, the larger trees having trunks several inches in diameter. Large, heavily weathered dead trunks are also common, and seedlings are abundant. These observations indicate that these *Thuja* populations are large, stable, and self-maintaining. I have no doubts that these stands of *Thuja* are native, persisting from late-glacial times in the cool, moist habitat of these steep, northerly-facing cliffs. The species is known from similar microclimatically maintained refugia elsewhere, for example at Clifton Gorge in Ohio.

Brown and Brown (1972) mention the northern white cedar or arborvitae (*Thuja occidentalis* L.) in their *Woody Plants of Maryland*, but state "no natural stands known in Maryland." Little (1971) maps a number of disjunct stands for this species in the Southern Appalachians, but none of these are in Maryland. Neither Shreve et al (1910), Hitchcock and Standley (1919), nor Hermann (1946) mention *Thuja* in their floras, nor do Norton and Brown (1946) in their Maryland checklist. Broome et al (1979) do not include this species in their list of rare plants of Maryland.

These Washington County areas are well known for their rich limestone flora (see Riefner and Hill, in press, for further discussion), and the *Thuja* at these sites is so obvious that I wondered if there were any previous Maryland reports for the species. At the Smithsonian Institution there is an old *Thuja* specimen, labeled simply "Chesapeake and Ohio Canal Bank, Feb. 17, '96", a description that could fit any of these places. Wherry (1934) mentions *Thuja occidentalis* as an interesting associate of the *Asplenium resiliens* he found on the Sharpsburg cliffs. The *Thuja* at Snyders Landing was noted by George

Robbins in 1977 in an unpublished report for the Maryland Upland Natural Areas Study, brought to my attention by Wayne Klockner.

A fourth Maryland *Thuja* site, at Round Top, is reported by Riefner and Hill (1982) on the basis of a field sighting by Arnold Norden. However, Norden informs me that there are only a few small trees there, near the canal bed rather than high on the cliff, without evidence of reproduction or maintenance. He doubts they are native.—LARRY E. MORSE, THE NATURE CONSERVANCY, 1800 N. KENT ST., ARLINGTON, VIRGINIA 22209.

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CORRECTION—In "*Aira caryophyllea* in the Missouri Ozarks" from Notes & News, December 1982 (*Castanea* 47(4):409), the fourth paragraph of the text read: "*Aira elegans* L., . . .", it should read "*Aira elegans* Willd. . . ."—The Author

CORRECTION—The title of Gerald F. Levy's paper on the front cover of *Castanea*, Vol. 48, March 1983 should read: "A Study of Vegetational Dynamics on Parramore Island, Virginia."—Editor.

CORRECTION—The second sentence of the abstract of Barden, L.S. 1983. Size, age, and growth rate of trees in canopy gaps of a cove hardwood forest in the Southern Appalachians. *Castanea* 48:19-23 should read: The time spent in the understory by each species of replacement tree averaged 0 years (*Liriodendron tulipifera*) to 114 years (*Acer saccharum*).—the Author