

EIGHT NEW PLANT DISTRIBUTIONAL RECORDS TO ALLEGHANY COUNTY, NORTH CAROLINA

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Abstract: Eight vascular plants new to Alleghany County, North Carolina are described. The exotic hybrid *Populus ×canescens* is reported for the first time in NC. Three other taxa, *Cardamine impatiens*, *Cymbalaria muralis* ssp. *muralis*, and *Lapsana communis* are reported for only the second time. All three of these taxa are currently introduced and non-invasive, while another exotic, *Fatoua villosa*, has not been previously documented in any montane region of the state. The remaining records, *Populus grandidentata*, *Maclura pomifera*, and *Phoradendron serotinum* ssp. *serotinum*, consist of species native to the United States, but highly uncommon in the mountains of North Carolina.

Key Words: Alleghany County; *Cymbalaria muralis*; Distributional Records; North Carolina; *Populus ×canescens*.

INTRODUCTION

Eight taxa representing county records were collected from the eastern half of Alleghany County on an incidental basis from 2003–2006. One of these plants, Gray Poplar (*Populus ×canescens* (Ait.) Sm.), represents the first discussion in the literature of the occurrence of this taxon in North Carolina, although other legitimate voucher specimens exist (which had been misidentified as *P. alba* L.). Three other taxa, Narrowleaf Bittercress (*Cardamine impatiens* L.), Kenilworth-ivy (*Cymbalaria muralis* P.G. Gaertn., B. Mey., & Scherb. ssp. *muralis*), and Nipplewort (*Lapsana communis* L.), have only been documented once in this state. Alleghany County is located in the northwestern mountains of North Carolina, bordering the state of Virginia. This county lies along the eastern edge of the Blue Ridge Escarpment and belongs to the Southern Section of the Blue Ridge Physiographic Province (Fenneman 1938). Its aesthetic properties have made Alleghany County a prime location for golf resorts and development. Likewise, Alleghany County is one of the top producers of Christmas trees in the southeast (USDA, NASS 2002). Floristically, this area is highly diverse and supports a wide range of rare species as a function of this montane environment, many of which are on the periphery of their more northern distributions (Weakley 2006). However, the county's eastern edge grades-off into the foothills region of the state and thus also provides habitat conducive to species typically not associated with the mountain region. Following is a brief summation of the author's collections. Each taxon is discussed in a separate paragraph and followed by respective collection data. A complete set of voucher specimens has been deposited in the Appalachian State University (BOON)

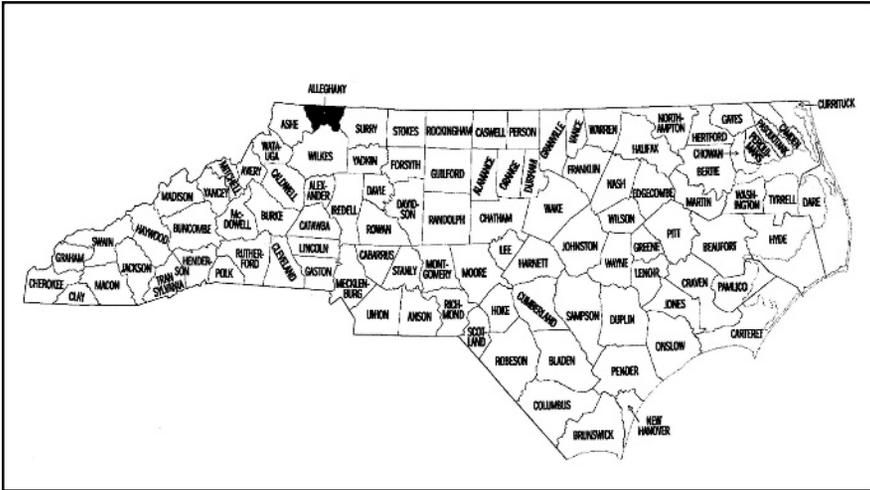


FIG. 1. Location of Alleghany County, North Carolina.

herbarium, with some remaining duplicates at UNC-Chapel Hill (NCU) and Berea College (BEREA), Berea, KY.

Cardamine impatiens L., Narrowleaf Bittercress (Brassicaceae). This member of the mustard family is of European origin and considered rare in North Carolina. Weakley (2006) lists this taxon for the Piedmont region and riparian habitats of the New River drainage. Phytogeographically, *C. impatiens* is primarily restricted to the northeastern portion of the continental United States (USDA, NRCS 2005).

Alleghany Co.: Two specimens were collected from a New River embankment approximately 3 km from the Nile Rd./Vox Rd. jct., rare; associates: *Ranunculus repens*, *Cardamine hirsuta*; 15 May 2006, *Poindexter 06-62*.

Cymbalaria muralis P.G. Gaertn., B. Mey., & Scherb. ssp. *muralis*, Kenilworth Ivy (Plantaginaceae). This decumbent herb rarely escapes cultivation, but is known to naturalize rock outcrops and walls near plantings in neighboring Virginia (Weakley 2006). Kenilworth Ivy is considered to be the most common plant associated with old towns and castles in central and southern Europe, where it is most commonly found with *Hedera helix* L. (Brandes 1995).

The first report of this plant in North Carolina was from Henderson County (Pittillo and Brown 1988). This Eurasian exotic has a sporadic distribution across the rest of the United States and extends to the Pacific Coast (USDA, NRCS 2005). *Cymbalaria* can be anticipated to occur in currently unlisted areas/states as a function of horticulture, although sparingly so since it appears to be rather non-aggressive. Weakley (2006) acknowledges two other subspecies of *C. muralis*, both of which have prominent pubescence and are thus distinct from the essentially glabrous ssp. *muralis*. Neither of these taxa are known from North America at this time.

Alleghany Co.: Four specimens were collected from the A.T. Davison residence at 9,900 US Hwy 21 South, Glade Valley, where the plant was found naturalizing shaded portions of the yard by a large boulder, infrequent; associates: *Poa annua*, *Cerastium glomeratum*, *Stellaria media*; 5 Aug 2003, *Poindexter 03-15*.

Fatoua villosa (Thunb.) Nakai, Mulberry Weed (Moraceae). Previous reports of this plant in North Carolina have been restricted to the Piedmont region of the state,

where this taxon was likely introduced via the horticultural trade (Weakley 2006). *Fatoua* is an invasive herbaceous weed of Asian origin and is currently considered rare in North Carolina (Weakley 2006). Mulberry weed was first discovered in North America by the late John Thieret (1964) from a collection in Louisiana. *Fatoua* has been documented from 28 states to date, including the District of Columbia (Vincent 2004), and is known from seven counties in North Carolina. This plant was not discovered in NC until 1973. Reported counties of occurrence include: Brunswick, Cherokee, Dare, Durham, Iredell, Mecklenburg, and Moore (Massey 1975; Neal 1998; and Vincent 2004).

Alleghany Co.: One plant found in a disturbed garden site at the James Bethune residence on 1712 Rich Hill Road in Glade Valley, rare; associates: *Chamaesyce maculata*, *Mollugo verticillata*, *Taraxacum officinale*, *Galinsoga quadriradiata*; 8 Aug 2005, *Poindexter 05-1628*.

***Lapsana communis* L.**, Nipplewort (Asteraceae). This European exotic is considered rare in North Carolina (Radford et al. 1968; Weakley 2006), and reported only from Haywood County. Despite a traditional paucity of this plant in North Carolina, *Lapsana* now appears to be more common and has also been collected by the author in adjacent Ashe County (*Poindexter 05-1148*). The generally slow rate of naturalization of this plant in our area may partially be attributed to its mechanism of dispersal. Unlike many members of the Asteraceae, Nipplewort produces achenes that lack a pappus. This structural difference eliminates the possibility of wind-based vectors, which is frequently associated with other highly abundant and heavily naturalized European weeds in the Asteraceae, e.g., Common Dandelion (*Taraxacum officinale* G.H. Weber ex Wiggers) and Spiny-leaved Sow-thistle (*Sonchus asper* (L.) Hill).

Alleghany Co.: Disturbed secondary succession site located on the Russell Shaw property, 34 Toms Lane in Glade Valley, population consisting of two plants, rare; associates: *Schedonorus arundinaceus*, *Poa pratensis*, *Robinia pseudoacacia*, *Solanum dulcamara*, *Commelina communis*; 16 June 2005, *Poindexter 05-765*.

***Maclura pomifera* (Raf.) C.K. Schneid.**, Osage-orange (Moraceae). Radford et al. (1968) listed *Maclura* at scattered localities throughout the state. According to Weakley (2006), this tree is native to TX, OK, AR, and LA and has become established in the south and central states as a result of heavy cultivation during the 18th and 19th centuries. *Maclura* was used as a “natural fence” bordering farmlands, as its large true thorns provided some degree of deterrence to cattle and other livestock. Likewise, its highly durable wood was traditionally utilized by Native Americans for the production of bows.

Alleghany Co.: An old homestead within the perimeter of Roaring Gap Country Club across from the “No Deer” tract, Roaring Gap, NC. This homestead is currently forested, but house remnants are apparent. Both trees appeared to be female and produced abundant fruit, rare; associates: *Pinus strobus*, *Berberis thunbergii*, *Diphasiastrum digitatum*, *Robinia pseudoacacia*; 15 Oct 2005, *Poindexter 05-2267*.

Phoradendron serotinum* (Raf.) M.C. Johnston ssp. *serotinum (*Phoradendron leucarpum* (Raf.) Reveal & M.C. Johnst.), American Mistletoe (Viscaceae). This hemiparasitic shrub has been spotted by the author on three separate host trees in Alleghany County including *Quercus coccinea* Muenchh. and *Q. rubra* L. American Mistletoe is abundant in the adjacent foothill counties of Surry and Wilkes, and it

heavily infests a wide range of deciduous hardwood species, particularly oaks. Higher elevations coupled with a colder climate are believed to impede mistletoe establishment. This environmental constraint ultimately restricts most mistletoe infestations to hosts in areas of lower altitude. Likewise, this trend is mimicked farther north by latitude, where the northern limit of mistletoe is southeastern Pennsylvania (Kuijt 2003). Host specificity is somewhat puzzling and the absence of such studies in North Carolina exacerbates our lack of understanding of mistletoe occurrence in this state. In contrast to mistletoe in North Carolina, more northern populations, such as those in central Kentucky primarily colonize *Juglans nigra* L., *Prunus serotina* Ehrh., and *Ulmus americana* L. (Thompson and Noe 2003; Thompson and Poindexter 2005), and oak infestations are an uncommon occurrence. Interestingly, *Phoradendron serotinum* ssp. *serotinum* in Tennessee (Brown and Hemmerly 1979; Hemmerly 1981; McKinney and Hemmerly 1984; Sadler and Hemmerly 1984) demonstrates a combined trend in host specificity, with host preference similar to that of Kentucky, yet it also exhibits a more frequent occurrence on oaks than its northern counterpart.

Alleghany Co.: Approximately 1.6 km. past William's Grocery on Shawtown Road, in a small wooded ravine surrounded by pasture, one clump in *Quercus coccinea*, rare; associates: *Liriodendron tulipifera*, *Acer rubrum*, *Juniperus virginiana*; 4 Feb 2005, *Poindexter 06-01*.

***Populus* × *canescens* (Ait.) Sm. (pro sp.)**, Gray Poplar (Salicaceae). *Populus* × *canescens* is a hybrid exotic that spreads from cultivation. This taxon is the offspring of two Eurasian species, *P. alba* L. and *P. tremula* L. (Weakley 2006). Morphologically, *P.* × *canescens* faintly resembles *P. alba* but becomes glabrate at maturity and lacks the conspicuous lobes of this parent. The PLANTS Database (USDA, NRCS 2005) attributes *P.* × *canescens* to nearly every state in the eastern half of the United States. However, neither Radford et al. (1968) nor Weakley (2006) list this taxon as occurring in North Carolina. It should be made clear that this is not the first collection of Gray Poplar in North Carolina, but rather this is the first documentation in literature of the occurrence of this taxon in North Carolina. Much confusion has revolved around misidentifications of this hybrid and its very similar parent *P. alba*. Many of the county records in Radford et al. (1968) that are attributed to *P. alba* are actually specimens of *P.* × *canescens* (A.S. Weakley, pers. comm.).

Alleghany Co.: Located in a cutover ditch across from Francis Motors at the Hwy 18/Fender Rd. jct. This clonal stand of trees consists of approximately 50 individuals that are encroaching on the roadside, occasional; associates: *Rubus argutus*, *Schedonorus arundinaceus*, *Galium aparine*; 5 Aug 2003, *Poindexter 03-11*; 15 April 2006, *Poindexter 06-08*; 15 May 2006, *Poindexter 06-61*.

***Populus grandidentata* Michx.**, Bigtooth Aspen (Salicaceae). *Populus grandidentata* reaches its southern extent in the mountains of North Carolina, where scattered natural populations are known from Ashe County (Mount Jefferson State Natural Area) and Haywood County. At Mount Jefferson, *P. grandidentata* is found on the fringes of rock outcrops where the combination of high elevation and northern aspect appear to provide minimal yet sufficient habitat for this more northerly distributed species. This tree is currently considered a "Watch List" species in NC (Franklin 2004).

Alleghany Co.: The Russell Shaw residence at 34 Toms Lane on Shawtown Road in Glade Valley. Two trees exist on the property and each are approximately 10 m in height, but are likely derived from non-local populations, rare; associates: *Acer saccharum*, *Schedonorus arundinaceus*, *Poa pratensis*; 15 Oct 2005, *Poindexter 05-2268*.

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