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Biogeography and hosts of poroid wood decay fungi in North Carolina: species of *Trametes* and *Trichaptum*

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Abstract—Distribution and host plants are provided for seven species of *Trametes* and six species of *Trichaptum*. Twenty three of the host-fungus combinations reported here are new records for the United States. County distribution maps are provided for each species as well. This complete checklist can be found at:

www.cals.ncsu.edu/plantpath/people/faculty/grand/projects/mycotaxon_6.pdf

Keywords—fungus distribution, polypores

Introduction

Previous studies by Grand & Vernia (2004a,b) addressed the importance of biodiversity and biogeography of fungi in ecosystems of North Carolina. The occurrence of selected genera and host plants of poroid wood decay fungi in North Carolina have been reported by Jung (1987), Vernia & Grand (2000) and Grand & Vernia (2002, 2005a,b, 2007). These studies have expanded the geographical range and host plant associations of poroid wood decay fungi in the southern region of the United States. This report is the sixth in a series in a long-term study of poroid wood decay fungi in North Carolina.

Materials and methods

Poroid wood decay fungi were collected in North Carolina from 1997–2007. Collections were made of all species of *Trametes* and *Trichaptum* on new or unusual hosts. Specimens were placed in paper bags in the field with a sample of decayed wood for the majority of collections and field notes for all collections. Specimens were examined in the laboratory and identified using the taxonomic treatments of Gilbertson & Ryvarden (1987), Jung (1987) and Overholts (1953). Nomenclature and authorities are from Index Fungorum (CABI et al. 2007) for fungi and Kartesz (1994) and IPNI (2007) for host plants.

The majority of collection sites were in state parks, game lands and natural areas, the Nantahala, Pisgah, Croatan and Uwharrie National Forests and the Blue Ridge Parkway and Great Smoky Mountains National Parks. A county distribution map is provided for each species (Figs. 1–12).

Data from previous studies (Jung 1987, Grand et al. 1975), collections in the mycological herbarium (NCSC) at North Carolina State University (NCSU) and the University of Tennessee Mycological Herbarium (Ma & Petersen 2007), records of the Plant Disease and Insect Clinic, Plant Pathology Department, NCSU, and the BPI web site (Farr et al. n.d.) were used in developing distribution maps.

Results and Discussion

Seven species of *Trametes* were recorded. *Trametes elegans* (Fig. 3), *T. hirsuta* (Fig. 4), and *T. versicolor* (Fig. 6) are common and widespread throughout North Carolina. The limited distribution of *T. conchifera* (Fig. 2) does not reflect the statewide distribution of its most common host, elm (*Ulmus* spp.). One would expect *T. conchifera* to be more widespread throughout the state. *Trametes pubescens* (Fig. 5) was recorded from 13 counties in all three physiographic provinces. *Trametes cervina* (Fig. 1) and *T. villosa* (Fig. 7) were not collected frequently enough to determine a distribution pattern.

Six species of *Trichaptum* were recorded. *Trichaptum abietinum* (Fig. 8) and *T. biforme* (Fig. 9) are widespread in North Carolina. *Trichaptum abietinum* occurs only on conifers, and *T. biforme* occurs almost exclusively on deciduous trees. *Trichaptum fuscoviolaceum* (Fig. 11) was found in nine counties in all three physiographic provinces. *Trichaptum byssogenum* (Fig. 10) and *T. laricinum* (Fig. 12) were not collected frequently enough to determine a distribution pattern. *Trichaptum sector* (Fig. 12) was found in nine counties in the Coastal Plain. It is typically a southeastern species (Gilberston & Ryvarden 1987) and may reach the northern limits of its range in North Carolina.

List of species found in North Carolina

Plant host species for poroid wood decay fungi are listed beneath each fungus name. New fungus-host associations for the United States are indicated with a double asterisk (**). Counties, with citation where appropriate, are listed in the second column. Associations and locations derived from collections at the University of Tennessee Herbarium (TENN) and the National Fungus Collections (BPI) are listed with their accession numbers. Many of the TENN collections were previously cited by Jung 1987.

Trametes cervina (Schwein.) Bres.

Fig. 1

<i>Acer rubrum</i> L. **	Orange, Wake
<i>Carya glabra</i> (Mill.) Sweet	Wake
<i>Cornus florida</i> L.	Wake
<i>Fagus grandifolia</i> Ehrh.	Wake
<i>Liriodendron tulipifera</i> L.	Beaufort
<i>Quercus alba</i> L.	Franklin, Wake

<i>Q. laurifolia</i> Michx.	Robeson
<i>Q. prinus</i> L. **	Orange
<i>Quercus</i> sp.	Franklin, Wake (Vernia & Grand 2000)
unidentified substrate	Haywood (Jung 1987), Madison (TENN 59175)
<i>Trametes conchifera</i> (Schwein.) Pilát	Fig. 2
<i>Ulmus alata</i> Michx.	Chatham, Durham, Halifax, Montgomery, Orange, Vance, Wake
<i>U. americana</i> L.	Anson, Chatham, Gates, Northampton, Swain, Wake
<i>U. rubra</i> Muhl.	Franklin, Rowan, Wake
<i>Ulmus</i> sp.	Iredell, Orange, Richmond, Wake
unidentified substrate	Buncombe, Forsyth (BPI 206231)
<i>Trametes elegans</i> (Spreng.) Fr.	Fig. 3
<i>Abies fraseri</i> (Pursh) Poir. **	Avery
<i>Acer rubrum</i>	Columbus, Dare (Grand & Vernia 2002b), Gates, Northampton, Randolph, Stanly, Wake (Vernia & Grand 2000)
<i>Aesculus flava</i> Ait.	Swain
<i>Betula alleghaniensis</i> Britton	Buncombe, Graham, Watauga
<i>B. lenta</i> L.	Graham, Swain, Transylvania, Watauga
<i>B. nigra</i> L.	Durham, Granville, Halifax, Vance, Warren
<i>Carpinus caroliniana</i> Walter	Durham, Swain, Wake, Wayne
<i>Carya alba</i> (L.) Nutt.	Harnett
<i>C. cordiformis</i> (Wagenh.) K. Koch	Wake
<i>C. ovalis</i> (Wangenh.) Sarg.	Durham
<i>Carya</i> sp.	Johnston, Vance, Wake, Wayne
<i>Celtis laevigata</i> Willd. **	Bladen, Durham
<i>Cornus florida</i>	Burke, Stokes
<i>Cyrilla racemiflora</i> L.	Dare
<i>Fagus grandifolia</i>	Graham, Harnett, Jones, Macon, Wake
<i>Ilex opaca</i> Ait.	Wake
<i>Juglans nigra</i> L.	Jones
<i>Liquidambar styraciflua</i>	Anson, Bladen, Brunswick, Carteret, Craven, Currituck, Dare, Granville, Tyrrell, Wake (Vernia & Grand 2000)
<i>Liriodendron tulipifera</i>	Alamance, Ashe, Burke, Chatham, Gates, Graham, Jackson, Johnston, Macon, Orange, Polk, Stanly, Transylvania, Wake
<i>Magnolia fraseri</i> Walter	Macon, Wilkes
<i>Nyssa sylvatica</i> Marshall	Brunswick, Moore, Transylvania
<i>Persea borbonia</i> (L.) Spreng. **	Hyde
<i>Pinus echinata</i>	Wake
<i>P. serotina</i> Michx.	Craven

<i>P. taeda</i>	Dare, Hyde, Wake
<i>Platanus occidentalis</i> L.	Ashe, Durham, Mitchell, Wake, Watauga
<i>Populus heterophylla</i> L.	Martin
<i>Quercus alba</i>	Buncombe, Chatham, Craven, Durham, Jones, Mitchell, Montgomery, Northampton, Orange, Person, Vance, Wake (Vernia & Grand 2000), Warren, Wayne
<i>Q. coccinea</i> Münchh. **	Transylvania
<i>Q. falcata</i> Michx.	Beaufort, Halifax, Moore, Randolph
<i>Q. hemisphaerica</i> Bartr. **	Dare
<i>Q. laevis</i> Walter	Columbus
<i>Q. laurifolia</i>	New Hanover
<i>Q. lyrata</i> Walter **	Wayne
<i>Q. marilandica</i> Münchh.	Harnett, Moore
<i>Q. nigra</i> L.	Brunswick, Craven, Halifax, Richmond
<i>Q. phellos</i> L.	Halifax, Robeson
<i>Q. prinus</i>	Harnett, Wake
<i>Q. rubra</i> L.	Durham, Harnett, Jones, Stanly, Wake
<i>Q. velutina</i> Lam.	Harnett, Wake, Wayne
<i>Q. virginiana</i> Mill.	Beaufort, Carteret, Dare, New Hanover, Onslow
<i>Quercus</i> sp.	Burke, Clay, Granville, Guilford, Johnston, Orange, Rowan, Union
<i>Salix caroliniana</i> Michx.	Dare (Grand & Vernia 2002b)
<i>S. nigra</i> Marshall	Gates
<i>Tilia americana</i> L.	Macon
<i>Vitis rotundifolia</i> Michx.	Wake
unidentified hardwood	Cherokee
unidentified substrate	Ashe, Franklin, Macon (TENN 58183 & 58184), McDowell, Robeson, Swain (TENN 60189), Wilkes

***Trametes hirsuta* (Wulfen) Pilát**

<i>Acer rubrum</i>	Gates, Graham, Hyde, Wake
<i>Amelanchier</i> sp.	Ashe, Swain
<i>Betula alleghaniensis</i>	Haywood
<i>B. nigra</i>	Wake
<i>Carpinus caroliniana</i>	Dare, Halifax
<i>Carya alba</i>	Wake
<i>Celtis laevigata</i>	Wake
<i>Chamaecyparis thyoides</i> (L.) Britton, Sterns & Poggenb.	Washington
<i>Cornus florida</i> **	Wayne
<i>Elaeagnus pungens</i> Thunb.	Montgomery
<i>Fagus grandifolia</i>	Catawba, Halifax, Wake
<i>Juglans nigra</i>	Jones

Fig. 4

<i>Liquidambar styraciflua</i>	Beaufort, Carteret, Chatham, Craven, Dare (Grand & Vernia 2002b), Durham, Franklin, Gates, Jones, Pender, Tyrrell, Wake
<i>Liriodendron tulipifera</i>	Catawba, Gates, Granville, Jackson, Swain, Wake
<i>Magnolia fraseri</i>	Avery
<i>Malus ×domestica</i> Borkh.	Montgomery
<i>Persea borbonia</i>	Beaufort, Currituck, Dare, Hyde, New Hanover
<i>Pinus</i> sp.	Pamlico
<i>Prunus pensylvanica</i> L.f.	Jackson
<i>P. persica</i> (L.) Batsch	Harnett, Richmond
<i>P. serotina</i>	Ashe, Dare (Grand & Vernia 2002b), Hyde
<i>Prunus</i> sp.	Forsyth (BPI 210753)
<i>Quercus alba</i>	Chatham, Craven, Jones, Orange, Wake
<i>Q. falcata</i>	Johnston
<i>Q. laevis</i>	Richmond
<i>Q. laurifolia</i>	Robeson
<i>Q. marilandica</i>	Harnett
<i>Q. michauxii</i> Nutt.	Johnston
<i>Q. nigra</i>	Bladen, Dare (Grand & Vernia 2002b), Halifax
<i>Q. prinus</i>	Wake
<i>Q. rubra</i>	Chatham, Harnett, Transylvania
<i>Q. velutina</i>	Buncombe (BPI 210961), Harnett
<i>Q. virginiana</i>	Carteret, New Hanover, Pender
<i>Quercus</i> sp.	Durham (BPI 210937), Martin, Orange, Pender, Swain (TENN 47815), Transylvania, Wake
<i>Salix nigra</i>	Currituck
<i>Tilia americana</i> L.	Macon (Grand et al. 1975), Transylvania (Grand et al. 1975)
unidentified hardwood	Wake
unidentified substrate	Forsyth (BPI 209954), Henderson, Macon (BPI 210589), McDowell, Moore, Onslow (BPI 209936), Pamlico

***Trametes pubescens* (Schumach.) Pilát**

<i>Acer rubrum</i>	Chatham, Durham, New Hanover, Swain, Wake
<i>Betula nigra</i>	Wake
<i>Betula</i> sp.	Swain (BPI 218089)
<i>Elaeagnus pungens</i>	Montgomery
<i>Liriodendron tulipifera</i>	Wake
<i>Prunus serotina</i> **	Alleghany
<i>Quercus falcata</i>	Moore
<i>Quercus</i> sp.	Chatham, Transylvania, Wake

Fig. 5

<i>Sassafras albidum</i> (Nutt.) Nees	Dare (Grand & Vernia 2002b)
unidentified hardwood	Caldwell
unidentified substrate	Caldwell, Forsyth (BPI 223499), Onslow (BPI 218040)
<i>Trametes versicolor</i> (L.) Lloyd	Fig. 6
<i>Abies fraseri</i>	Jackson, Watauga
<i>Acer pensylvanicum</i> L. **	Haywood, Swain
<i>A. rubrum</i>	Beaufort, Burke, Columbus, Durham, Gaston, Gates, Jackson, Johnston, McDowell, Mitchell, New Hanover, Pender, Swain, Transylvania, Wake (Vernia & Grand 2000), Watauga
<i>A. saccharum</i> Marshall	Watauga
<i>Ailanthus altissima</i> (Mill.)	Madison
Swingle	
<i>Alnus serrulata</i> (Ait.) Willd. **	Wake
<i>Betula alleghaniensis</i>	Avery, Buncombe (TENN 46955), Haywood, Swain
<i>B. lenta</i>	Ashe, Buncombe, Graham, Macon
<i>B. nigra</i>	Wake (Vernia & Grand 2000)
<i>Betula</i> sp.	Catawba
<i>Carpinus caroliniana</i>	Davidson, Halifax, Wake (Vernia & Grand 2000)
<i>Carya alba</i>	Durham, Jackson, Wake
<i>C. cordiformis</i>	Durham
<i>C. glabra</i> (Mill.) Sweet	Dare, Durham
<i>C. ovalis</i>	Durham
<i>Carya</i> sp.	Davidson, Durham, Swain
<i>Castanea dentata</i> (Marshall)	Jackson (BPI 225018)
Borkh.	
<i>Celtis laevigata</i>	Bladen
<i>Cercis canadensis</i> L.	Wake (Vernia & Grand 2000)
<i>Chamaecyparis thyoides</i>	Dare
<i>Cornus florida</i>	Wake (Vernia & Grand 2000)
<i>Cupressus arizonica</i> Greene	Wake (Vernia & Grand 2000)
<i>Cyrilla racemiflora</i>	New Hanover
<i>Elaeagnus pungens</i>	Montgomery
<i>Fagus grandifolia</i>	Durham, Granville, Harnett, Haywood, Macon, Montgomery, Swain, Wake
<i>Fraxinus americana</i> L.	Durham
<i>F. pensylvanica</i> Marshall	Chatham
<i>Ilex opaca</i>	Wake
<i>Juglans nigra</i>	Jones, Wake
<i>Kalmia latifolia</i> L.	Henderson (BPI 225115)
<i>Ligustrum sinense</i> Lour.	New Hanover, Wake (Vernia & Grand 2000)

<i>Liquidambar styraciflua</i>	Anson, Beaufort, Camden, Craven, Currituck, Dare, Gates, Johnston, Tyrrell, Wake, Warren
<i>Liriodendron tulipifera</i>	Chatham, Durham, Gates, Granville, Jackson, Johnston, Jones, Macon, Orange, Transylvania, Vance, Wake, Watauga
<i>Magnolia fraseri</i>	Macon
<i>M. virginiana</i> L.	Columbus
<i>Ostrya virginiana</i> (Mill.) K. Koch	Wake
<i>Oxydendrum arboreum</i> (L.) DC.	Burke, Randolph, Wilkes, Wake
<i>Persea borbonia</i>	Dare, Hyde, New Hanover
<i>Photinia glabra</i> (Thunb.) Maxim.	Wake
<i>Photinia</i> sp.	Wake
<i>Picea rubens</i>	Avery
<i>Platanus occidentalis</i>	Ashe, Wake
<i>Prunus pensylvanica</i> **	Haywood, Swain
<i>P. serotina</i>	Currituck, Dare, Durham, Johnston, Pasquotank, Wake (Vernia & Grand 2000)
<i>Quercus alba</i>	Durham, Franklin, Halifax, Jackson, Orange, Vance, Wake
<i>Q. falcata</i>	Moore, Pasquotank
<i>Q. laurifolia</i> **	Robeson
<i>Q. nigra</i>	Bladen, Craven, Dare (Grand & Vernia 2002b), Martin
<i>Q. phellos</i>	Currituck, Granville, Montgomery
<i>Q. prinus</i>	Surry, Transylvania, Wake, Wilkes
<i>Q. rubra</i>	Ashe, Burke, Chatham, Durham, Granville, Jackson, Jones, Polk, Stanly, Swain, Watauga
<i>Q. velutina</i> **	Wake
<i>Q. virginiana</i>	Carteret, Dare
<i>Quercus</i> sp.	Durham, Graham, Guilford, Rowan, Swain (TENN 47812), Vance, Wayne, Wake
<i>Rhododendron maximum</i> L.	Macon, Madison
<i>Salix nigra</i>	Craven
<i>Sassafras albidum</i>	Dare (Grand & Vernia 2002b), Macon (BPI 225529), Richmond, Swain
<i>Sorbus americana</i> Marshall	Haywood
<i>Tsuga caroliniana</i> Engelm.	Wake
<i>T. canadensis</i> (L.) Carrière	Macon
unidentified hardwood	Graham, Macon (TENN 47973), Wake
unidentified substrate	Buncombe, Forsyth (BPI 224623, 224631), Henderson, Macon (BPI 223792, 224183; TENN 58185), McDowell, New Hanover, Wake, Wilkes, Yadkin (BPI 224242, 224243), Yancey (BPI 224188)

Trametes villosa* (Sw.) Kreisel*Fig. 7**

<i>Acer rubrum</i>	Hyde, Wake
<i>Carpinus caroliniana</i>	Graham
<i>Cedrus</i> sp.	Forsyth (BPI 217737)
<i>Juniperus virginiana</i> L.	Carteret
<i>Juniperus</i> sp.	Forsyth (BPI 217758)
<i>Quercus falcata</i>	Dare (Grand & Vernia 2002b)
<i>Pinus taeda</i>	Robeson, Wake (Vernia & Grand 2000)
unidentified substrate	Dare (BPI 217559, 217572)

Trichaptum abietinum* (Pers.) Ryvarden*Fig. 8**

<i>Abies fraseri</i>	Jackson (TENN 46855), Mitchell, Yancey
<i>Picea rubens</i>	Haywood, Henderson, Mitchell, Swain (TENN 46278), Yancey
<i>Pinus echinata</i>	Beaufort, Burke, Clay, Craven, Durham, Gaston, Harnett, Montgomery, Orange, Polk, Stanly, Vance, Wake, Wayne
<i>P. palustris</i>	Moore, Richmond
<i>P. pungens</i>	Alleghany, Wilkes
<i>P. rigida</i> **	Alleghany, Clay
<i>P. serotina</i>	Craven
<i>P. strobus</i>	Avery, Buncombe, Chatham, Cherokee, Durham, Macon, Swain, Watauga
<i>P. taeda</i>	Anson, Beaufort, Bladen, Brunswick, Camden, Carteret, Chatham, Columbus, Currituck, Dare, Franklin, Gates, Granville, Halifax, Hyde, Johnston, Jones, Montgomery, New Hanover, Orange, Pasquotank, Pender, Wake, Warren, Wayne
<i>P. thunbergiana</i> Franco **	Carteret
<i>P. virginiana</i>	Davidson, Gaston, Graham, Granville, McDowell, Orange, Randolph, Rowan, Stokes, Transylvania, Wilkes
<i>Pinus</i> sp.	Henderson (BPI 200875), Union
<i>Tsuga canadensis</i>	Burke, Graham, Haywood, Macon, Polk, Transylvania
unidentified substrate	Henderson, McDowell

Trichaptum biforme* (Fr.) Ryvarden*Fig. 9**

<i>Acer pensylvanicum</i>	Avery
<i>A. rubrum</i>	Anson, Burke, Chatham, Columbus, Currituck, Durham, Gaston, Gates, Graham, Guilford, Halifax, Jackson, Macon, Madison, Montgomery, Randolph, Swain, Transylvania, Wake, Wilkes
<i>A. saccharum</i>	Graham, Macon
<i>Acer</i> sp.	Macon (BPI 204360), Watauga

<i>Betula alleghaniensis</i>	Ashe, Avery, Burke (Grand & Vernia 2002a), Haywood, Macon, Swain, Watauga, Wilkes (Grand & Vernia 2002a)
<i>B. lenta</i> **	Alleghany, Ashe, Avery, Buncombe, Burke, Graham, Macon, Transylvania, Watauga, Wilkes
<i>B. nigra</i>	Clay, Davidson, Granville, Halifax, Montgomery, Richmond, Vance, Warren, Wake (Vernia & Grand 2000)
<i>Carpinus caroliniana</i>	Avery, Buncombe, Durham, Graham, Macon, Polk, Wake (Vernia & Grand 2000)
<i>Carya alba</i>	Durham, Harnett
<i>C. cordiformis</i>	Durham
<i>C. glabra</i> (Mill.) Sweet	Dare, Durham, Swain, Transylvania
<i>Carya</i> sp.	Buncombe, Craven, Franklin, Wayne
<i>Castanea dentata</i>	Avery
<i>Cornus florida</i>	Durham, Montgomery, Transylvania
<i>Fagus grandifolia</i>	Chatham, Durham, Halifax, Haywood, Macon, Wayne
<i>Fraxinus americana</i>	Wake
<i>Ilex opaca</i>	Wake
<i>Kalmia latifolia</i>	Transylvania
<i>Liquidambar styraciflua</i>	Anson, Beaufort, Camden, Chatham, Dare, Durham, Gates, Jones, Moore, Pender, Sampson, Vance, Washington, Wake (Vernia & Grand 2000)
<i>Liriodendron tulipifera</i>	Clay, Granville, Macon, Pasquotank, Transylvania, Vance, Wilkes, Wake (Vernia & Grand 2000)
<i>Magnolia fraseri</i>	Ashe, Macon
<i>Myrica cerifera</i> L.	Robeson
<i>Nyssa aquatica</i> L.	Dare
<i>N. sylvatica</i>	Swain
<i>Osmanthus americanus</i> (L.)	Carteret
Benth. & Hook. f. ex Gray **	
<i>Oxydendrum arboreum</i>	Avery, Durham, Orange, Wilkes
<i>Persea borbonia</i>	Dare
<i>Prunus pensylvanica</i>	Mitchell, Swain
<i>P. serotina</i>	Alleghany, Chatham, Gates, Graham, McDowell, Swain, Wake (Vernia & Grand 2000)
<i>Quercus alba</i>	Buncombe, Caswell, Clay, Durham, Granville, Halifax, Jackson, Johnston, Macon, Montgomery, Orange, Randolph, Transylvania, Wake, Wayne, Wilkes
<i>Q. coccinea</i>	McDowell, Transylvania
<i>Q. falcata</i>	Jones, Wake

<i>Q. laevis</i>	Columbus, Richmond
<i>Q. laurifolia</i> **	Columbus, Robeson
<i>Q. nigra</i>	Bladen, Carteret, Dare, Halifax, Pender
<i>Q. phellos</i>	Granville, Halifax, Montgomery, Robeson, Warren
<i>Q. prinus</i>	Ashe, Burke, Macon, Stokes, Surry, Transylvania, Wilkes
<i>Q. rubra</i>	Alleghany, Ashe, Buncombe, Burke, Chatham, Clay, Durham, Gaston, Harnett, Jackson, Jones, Macon, Rutherford, Stanly, Swain, Transylvania, Watauga, Wayne
<i>Q. velutina</i>	Macon, Orange, Wake
<i>Q. virginiana</i>	Carteret, New Hanover
<i>Quercus</i> sp.	Buncombe, Cherokee, Cleveland, Gaston, Henderson (BPI 299795), Johnston, Macon, Orange, Wake
<i>Rhododendron catawbiense</i>	Swain
Michx.	
<i>Salix caroliniana</i>	Dare (Grand & Vernia 2002b)
<i>S. nigra</i>	Dare (Grand & Vernia 2002b)
<i>Tilia americana</i> L.	Macon
<i>Tsuga canadensis</i>	Transylvania
<i>Vitis</i> sp.	Wake (Vernia & Grand 2000)
unidentified hardwood	Rowan, Macon (TENN 47971, 58062), Swain (TENN 47813), Tyrrell
unidentified substrate	Buncombe, Henderson, Iredell (BPI 312495), McDowell, Onslow (BPI 204353), Wake

Trichaptum byssogenum* (Jungh.) Ryvarden*Fig. 10**

<i>Prunus serotina</i>	Haywood
<i>Quercus lyrata</i> **	Wayne

Trichaptum fuscoviolaceum* (Ehrenb.) Ryvarden*Fig. 11**

<i>Abies fraseri</i>	Avery (TENN 46894, 46976, 46979), Jackson (TENN 46801, 46845, 46819, 46950), Mitchell (TENN 46965), Swain (TENN 46257, 46376), Transylvania (TENN 46787, 46788), Yancey (BPI 200678; TENN 46871, 46872, 46875, 46877, NCSC)
<i>Pinus taeda</i>	Durham, Tyrrell, Wake

unidentified substrate Swain (TENN 46076)

Trichaptum laricinum* (P. Karst.) Ryvarden*Fig. 12**

<i>Abies fraseri</i>	Swain (TENN 46192, 46194)
<i>Pinus virginiana</i> **	Stokes

***Trichaptum sector* (Ehrenb.) Kreisel**

<i>Acer rubrum</i>	Dare (Grand & Vernia 2002b)
<i>Liquidambar styraciflua</i>	Washington
<i>Liriodendron tulipifera</i>	Craven
<i>Myrica cerifera</i> **	Carteret, Dare
<i>Persea borbonia</i>	Dare
<i>Quercus falcata</i>	Dare
<i>Q. nigra</i>	Bladen, Carteret, Pender
<i>Q. phellos</i>	Currituck
<i>Q. virginiana</i>	Carteret, Dare, Onslow
<i>Quercus</i> sp.	Carteret, Craven
<i>Salix nigra</i>	Currituck
unidentified hardwood	Beaufort, Dare

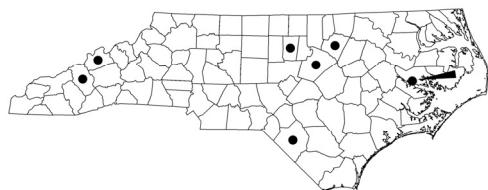
Fig. 12

Fig. 1. Distribution of *Trametes cervina* in North Carolina.

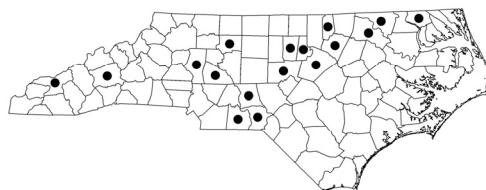


Fig. 2. Distribution of *Trametes conchifera* in North Carolina.

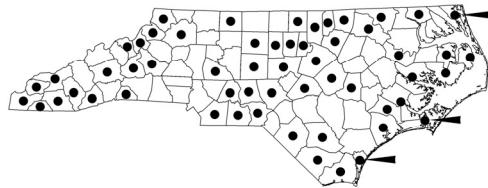


Fig. 3. Distribution of *Trametes elegans* in North Carolina.

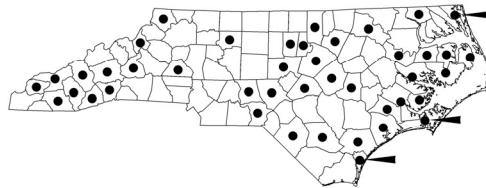


Fig. 4. Distribution of *Trametes hirsuta* in North Carolina.

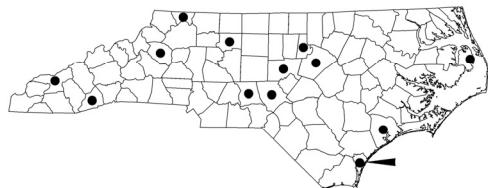


Fig. 5. Distribution of *Trametes pubescens* in North Carolina.

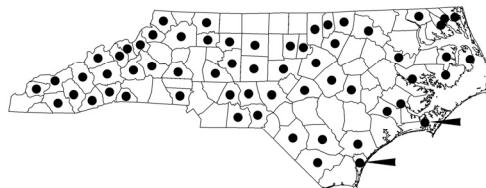


Fig. 6. Distribution of *Trametes versicolor* in North Carolina.

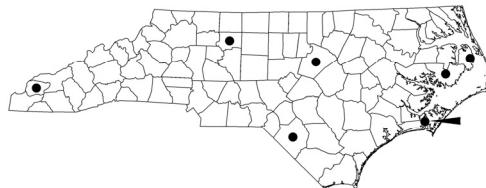


Fig. 7. Distribution of *Trametes villosa* in North Carolina.

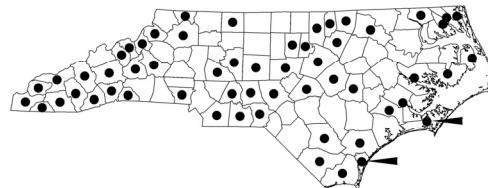


Fig. 8. Distribution of *Trichaptum abietinum* in North Carolina.

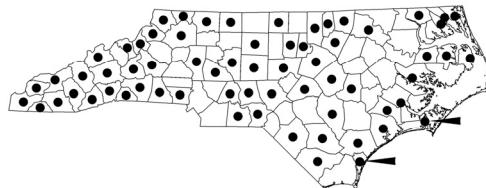


Fig. 9. Distribution of *Trichaptum biforme* in North Carolina.



Fig. 10. Distribution of *Trichaptum byssogenum* in North Carolina.

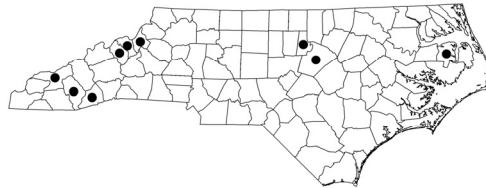


Fig. 11. Distribution of *Trichaptum fuscoviolaceum* in North Carolina.

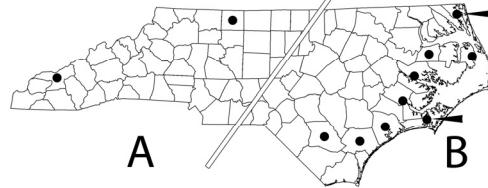


Fig. 12. Distribution of (A) *Trichaptum laricinum* and (B) *T. sector* in North Carolina.

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