

**2018 SOUTHEAST BIODIVERSITY CONSERVATION FORUM**  
**In partnership with NatureServe and the Network of Natural Heritage Programs**  
**At North Carolina Botanical Garden, Chapel Hill, NC**

AGENDA

**Day 1 (1/2 day) – March 6, 2018**

- 1:00 - Welcome and introductions, orientation, overview of conference goals
- Introductory presentations
  - NatureServe – Lori Scott, 15 min
  - NCNHP – Misty Buchanan, 15 min
  - NCBG – Damon Waitt, 15 min
- 1:45 - Exploring North Carolina – Tom Earnhardt, 45 min
- 2:30 – 2:45 Break
- 2:45 – 5:30 – Breakout sessions

**Day 1 March 6, 2018, cont.**

**2:45 – 5:30**

<b>Application of Biodiversity Data</b>	<b>Conservation and Mapping Initiatives</b>
<ul style="list-style-type: none"> <li>○ Prioritizing Natural Areas for Conservation in North Carolina Using Natural Heritage Data – Misty Buchanan, NC Natural Heritage Program (15 min)</li> <li>○ Prioritizing Important Plant Protection Sites of North Carolina - Lesley Starke, North Carolina Plant Conservation Program (15 min)</li> <li>○ “Comprehensive Conservation Vision”/Essential Conservation Sites – Rob Evans, VA Natural Heritage Program (15 min)</li> <li>○ Automated Delineation of Conservation Sites in Virginia – Kirsten Hazler, VA Natural Heritage Program (15 min)</li> <li>○ Group discussion (15 min)</li> <li>○ BREAK (15 min)</li> <li>○ Florida Forever Conservation Needs Assessment – Jon Oetting, Florida Natural Areas Inventory (15 min)</li> <li>○ Ecological Integrity Assessment in Arkansas – Milo Pyne (NatureServe), Theo Witsell, William Holimon, Tom Foti (AR Natural Heritage Program) (15 min)</li> <li>○ Ecological Site Descriptions – Milo Pyne (NatureServe) and Michelle Clendenin (15 min)</li> <li>○ Group discussion (15 min)</li> </ul>	<ul style="list-style-type: none"> <li>○ The Southeastern Grasslands Initiative: Charting A New Course for Conservation in the 21st Century – Dwayne Estes, Austin Peay State University (30 min)</li> <li>○ Longleaf Conservation Roadmap – Hervey McIver and Jodie LaPoint, The Nature Conservancy (30 min)</li> <li>○ Group Discussion (15 min)</li> <li>○ BREAK (15 min)</li> <li>○ NatureServe Landscape – Lori Scott NatureServe, Cindy Simpson, NC Wildlife Resources Commission (30 min)</li> <li>○ Species Distribution Modeling –Regan Lyons Smyth, NatureServe (30 min)</li> <li>○ Group Discussion (15 min)</li> </ul>

6:30 Evening reception at North Carolina Botanical Garden (dinner provided)

- Storytelling by Sam Pearsall

**Day 2 March 7, 2018**

<b>8:30 – 9:40 Plenary Session</b>	
<ul style="list-style-type: none"> <li>○ Southern Cumberland/Southern Ridge and Valley – Bill Finch, E.O. Wilson Biodiversity Foundation (30 min)</li> <li>○ Pine Mountain Protection in Kentucky – Hugh Archer and Zeb Weese, Kentucky State Nature Preserves Commission (30 min)</li> <li>○ Questions/Discussion (10 minutes)</li> </ul>	
<b>9:45 – 12:00 Application of Biodiversity Data</b>	<b>9:45 – 12:00 Biology &amp; Data Management Work Groups (combined)</b>
<ul style="list-style-type: none"> <li>○ Eno-New Hope Landscape Conservation Project – Julie Tuttle, North Carolina Botanical Garden (15 min)</li> <li>○ Green Growth Toolbox - Brooke Massa, NC Wildlife Resources Commission (15 min)</li> <li>○ Chatham Conservation Partnership - Allison Weakley - (15 min)</li> <li>○ Wake Nature Preserve partnership – Chris Snow (15 min)</li> <li>○ Discussion (15 min)</li> <li>○ BREAK (15 min)</li> <li>○ Applications of NatureServe data for North American Land Trust – Lee Echols and Williams Gandy (15 min)</li> <li>○ Explore Natural Communities – Erin Lunsford Jones and Alli Kenlan, NatureServe (15 min)</li> <li>○ Discussion/Questions (15 minutes)</li> </ul>	<ul style="list-style-type: none"> <li>○ Species Distribution Modeling Methods, Standards, and current network projects – Regan Lyons Smyth (NatureServe), Jon Oetting (Florida Natural Areas Inventory), Anne Chazal (VA Natural Heritage Program) (1 hour)</li> <li>○ Discussion/Questions (15 min)</li> <li>○ BREAK (15 min)</li> <li>○ Taxonomic Concept Mapping Panel Discussion – Anne Frances (NatureServe), Lori Scott (NatureServe), Alan Weakley (UNC Herbarium) (30 min)</li> <li>○ Communication within the NatureServe Network – NatureServe (15 min)</li> </ul>
<b>12:00 – 1:00 Lunch (provided)</b>	

**Day 2 March 7, 2018, cont.**

<p><b>1:00 – 2:45 Habitat Restoration</b></p>	<p><b>Concurrent Natural Heritage Workshops</b></p>
<ul style="list-style-type: none"> <li>○ North Carolina Plant Conservation Program Preserve Restoration Efforts – Cheryl Gregory, NC Plant Conservation Program (15 min)</li> <li>○ Plant Reintroduction and Seed Banking – Johnny Randall, NC Botanical Garden (15 min)</li> <li>○ The Development of Small-scale Meadow Restoration to Benefit Pollinators in Decline – Nell Allen (NC Zoo), Mike Kunz (NC Botanical Garden), Gabriela Garrison (NC Wildlife Resources Commission) (30 min)</li> <li>○ Isolated Wetland Restoration in the North Carolina Sandhills – Nathan Shepard, NC Natural Heritage Program (15 min)</li> <li>○ Discussion (15 min)</li> <li>○ Break (15 min)</li> <li>○</li> </ul>	<p>(see detailed schedule – all are welcome)</p>
<p><b>2:45 – 5:00 Landscape Conservation</b></p>	
<ul style="list-style-type: none"> <li>○ Piloting the Development of Landscape-scale Adaptation Strategies for Species of Greatest Conservation Need in Arkansas – D. Todd Jones-Farrand (20 min)</li> <li>○ Integrating Range-restricted Imperiled Species Conservation into the South Atlantic Conservation Blueprint – Rua Mordecai (20 min)</li> <li>○ Envisioning the Future of Conservation in the Florida Keys: Identifying Adaptation Options in Response to Rising Sea Levels – Beth Stys (20 min)</li> <li>○ BREAK (15 min)</li> <li>○ Conservation Delivery: Scaling Landscape Scale Science to Local Projects Through a Community of Practice – Jessica Graham (20 min)</li> <li>○ Adding It All Up – The Southeast Conservation Adaptation Strategy – Chris Goudreau (20 min)</li> <li>○ Facilitated Discussion: What’s working well and what isn’t with linking large landscape conservation and imperiled species? (20 min)</li> </ul>	

**Day 2 March 7, 2018, cont. Concurrent Natural Heritage Workshops**

	<b>Zoology and Data Management</b>		<b>Botany and Ecology</b>		
1:00 – 2:00	<ul style="list-style-type: none"> <li>○ Environmental DNA (eDNA) in Detection and Monitoring of Aquatic Species – James Godwin et al., (15 min)</li> <li>○ SEAFWA Update and Next Steps – Bob Gottfried (15 min)</li> <li>○ Overcoming Challenges to Using eBird Data in Heritage Contexts – Bruce Young (15 min)</li> <li>○ Priorities for Freshwater Invertebrates – Bruce Young (15 min)</li> </ul>		<ul style="list-style-type: none"> <li>○ Ecological Integrity framework and applications (including and beyond the EO) – Rickie White, NatureServe (15 min)</li> <li>○ Southern Open Pine Rapid Assessments (Level 2 EIA)- Carl Nordman, NatureServe (15 min)</li> <li>○ Discussion (30 min)</li> </ul>		
2:00-2:15	BREAK				
	<b>Data Access and Data Management</b>		<b>Zoology</b>	<b>Botany</b>	<b>Ecology</b>
2:15 – 3:30	<p><b>Environmental Review Tools:</b> Presentations of ERTs: (15 min each) NatureServe, NCNHP – Misty Buchanan and Rodney Butler, VANHP -Rene Hypes; LANHP, Other programs? Discussion</p> <p>BREAK</p>		Presentations and discussions coordinated by Judy Ratcliffe, NCNHP and Bruce Young, NatureServe	Presentations and discussions coordinated by Wes Knapp, NCNHP and Anne Frances, NatureServe	<p>Final list of topics TBD</p> <ul style="list-style-type: none"> <li>○ Community EO Data Exchange (15 min)</li> <li>○ Element Ranking (15 min)</li> <li>○ National Vegetation Classification – Milo, Don, or Mike Schafale (15 min)</li> <li>○ National Projects (Red Listing, Landfire, etc.) – Pat Comer (15 min)</li> <li>○ Discussions coordinated by Mike Schafale, NCNHP and Milo Pyne, NatureServe</li> </ul>
3:30 – 5:30	<b>Fees</b>	<b>Data Management</b>			
	<p>Presentations from states that charge fees: (15 min each) NCNHP, VANHP, KYNHP, Others?</p> <p>Discussion: What works, what doesn't, pros and cons of charging fees data and services</p>	<p>Presentations and discussions coordinated by Michelle Warf, NCNHP and Whitney Weber, NatureServe</p> <ul style="list-style-type: none"> <li>○ Topics will include: Biotics 5</li> <li>○ Bulk data uploads</li> <li>○ iNaturalist data</li> <li>○ SQL</li> </ul>			

**Day 3 (Half Day, Optional Full Day) – March 8, 2018**

- 8:30 – 10:45 Communication

<b>Communication</b>	<b>Online Science Tools</b>
<ul style="list-style-type: none"> <li>○ How can I do science and communicate about science at the same time? – Roland Kays, NC Museum of Natural Science and NC State University (30 min)</li> <li>○ Sharing Science with Citizens – Steve Gerkin, NC Zoo (30 min)</li> <li>○ BREAK (15 min)</li> <li>○ Leveraging Biodiversity Data to Empower Kids to Act on Behalf of their Ecosystems – Courtney Kimmel, Captain Planet Foundation (15 min)</li> <li>○ Media Relations – Matthew Shipman, NC State University (15 min)</li> <li>○ Discussion/breakout groups – Rodney Butler, NC Natural Heritage Program and Buchi Akpati, NatureServe (30 min)</li> </ul>	<ul style="list-style-type: none"> <li>○ FloraQuest – Alan Weakley (UNC Herbarium) and Michael Lee (UNC-Chapel Hill) (15 min)</li> <li>○ Plant identification tools and resources: The SERNEC portal and North Carolina contributions – Alexander Krings, NC State University (15 min)</li> <li>○ Museum Informatics Data Security: A Need for Collaboration – Zack Murrell, Michael Denslow, and Herrick Brown (15 min)</li> <li>○ Flora of the Southern and Mid-Atlantic States (<a href="http://www.wotas.org">http://www.wotas.org</a>) - A guided tour of plant information resources at the North Carolina Botanical Garden – Damon Waitt, NC Botanical Garden (15 min)</li> <li>○ BREAK (15 min)</li> <li>○ Broad-scale Camera Trap Surveys – Stephanie Schuttler, NC Museum of Natural Science (15 min)</li> <li>○ Maryland Biodiversity Project – Jim Brighton, 15 min</li> <li>○ Use of Biodiversity Websites to Share Information Between Scientists, Conservationists, Educators, Naturalists, and the General Public – Steve Hall and Harry LeGrand, North Carolina Biodiversity Project (15 min)</li> <li>○ Shared Discussion (15 min)</li> </ul>

- 10:45 – 11:00 BREAK/reconvene in plenary room
- 11:00 – 12:00: Closing talk – Alan Weakley
- 12:00 – 1:00: Boxed lunch (provided)
- Afternoon: Field Trips (optional)

## **Local field trips (optional) – sign up during registration**

### **Fieldtrips**

#### **1 North Carolina Botanical Garden and Mason Farm Biological Reserve**

Led by Dan Stern, Heather Summer, Chris Liloia, Johnny Randall, and Neville Handel, 1:00-4:00 pm  
Begin this two-part field trip with a guided walk in the nation's first "Conservation Garden" and one of the most comprehensive centers of knowledge on the flora of the state and the southeastern U.S. The tour will start in the native habitat and display gardens and include a behind-the-scenes look at the seed processing and storage facilities that support our native species propagation and restoration activities. From the Garden proper, we will travel to the nearby 500-acre Mason Farm Biological Reserve and learn about the restoration and management of the native plant meadows (i.e., old field rehabilitation) and ancient bottomland and upland forests that have never been clear-cut.

#### **2 Weymouth Woods:** Led by Alan Weakley and Wes Knapp, 12:30-6:00 pm

Weymouth Woods Sandhills Nature Preserve offers an opportunity to see well-managed longleaf pine sandhills and associated wetland communities (sandhill seeps and streamhead pocosins). These fire-maintained communities support numerous narrowly endemic plant and animal species in the North Carolina Fall-line Sandhills. We will also see signs of the naval stores industry that supported North Carolina's and the Southeast's economy for centuries, leading to nicknames like the "Tar Heel State", but ultimately nearly destroyed the longleaf pine ecosystem and its thousands of endemic species.

Weymouth Woods is among the most significant natural areas in North Carolina. A mixture of Longleaf Pine and Sandhills habitats will be encountered including, Xeric Pine Scrub, Pine Scrub Oak, Streamhead Pocosin, and Sandhill Seeps. Over 40 species and natural communities tracked by NCNHP are found here including Sandhills Lily (*Lilium pyrophyllum*), Bog Spicebush (*Lindera subcoriacea*), Red-cockaded Woodpecker (*Picoides borealis*), Pine Barrens Treefrog (*Hyla andersonii*) and much, much, more. The primary focus of this field trip will be botanical. Although the season will be early for plants, we will engage in forensic botany. We should see the 6-county endemic Little-leaf pixiemoos (*Pyxidantha brevifolia* G3 S3) plus a few other early spring species in flower. We will have good chances to see the Federally Endangered Red-cockaded Woodpecker. The field site is nearly an hour and a half from the Botanical Gardens so come prepared for a lengthy day. Bring hats, water, sunscreen, and seasonally appropriate attire.

#### **3 Deep River (paddling trip):** Led by Scott Pohlman and Judy Ratcliffe, 12:30 – 6:00 PM

The Deep River is part of the only global population of Cape Fear Shiner (*Notropis mekistocholas*), and also provides habitat for the Carolina redhorse (*Moxostoma* sp. 3), and numerous other rare species, including freshwater mussels, dragonflies, and aquatic plants. The Deep is a scenic, mostly forested waterway, with some interspersed farmland, and its name comes from its steep banks rather than the water's depth. The total trip will take 6 hours (3-4 hours on the water), and participants can choose between canoe or kayak. There may be a couple of Class 1 rapids, depending on seasonal flow.

#### **4 Occoneechee Mountain State Natural Area** – Led by Misty Buchanan and Nathan Shepard 1:00 – 4:30 Get a taste of the mountains without leaving the Piedmont. Rising more than 350 feet from the Eno River, the Occoneechee Mountain summit is the highest point in Orange County. The mountain is a Piedmont Monadnock natural community hosting many species that are rare in the central Piedmont but more

common in North Carolina's mountains, including large stands of mountain laurel and Rhododendron. Participants will hike the loop around the west side of Occoneechee Mountain, then up the Overlook Trail and Brown Elfin Knob trail, a total of approximately 2.5 miles. At the summit, visitors will look down into an abandoned pyrophyllite quarry. This has been described as "an exhilarating walk over steep terrain and along the peaceful Eno River."

**5 Swift Creek Bluffs and Hemlock Bluffs** – Led by Michael Schafale, Ecologist, 1:00 – 5:00 PM

These two natural areas are both examples of effects of local topography and geology on biota. Swift Creek Bluffs is underlain by amphibolite, a mafic rock that produces unusually rich, non-acidic soils. This, combined with a cool microclimate associated with the north-facing slope, produces a site known for its spring wildflowers and locally uncommon species such as *Magnolia tripetala*. Hemlock Bluffs is also a north-facing bluff with a cool microclimate. It hosts a population of Canada hemlock, an Ice Age relic disjunct many miles from its current range. Both sites offer bluff top views as well as creek side walking. Both are relatively small natural areas with substantial public use, one owned by a local land conservancy, the other run by a municipal government. Issues we might discuss as we enjoy the flowers, budding trees, and first returning migratory birds, include vegetation-site relations, viability of small isolated populations, exotic plant invasion, stream conservation, and natural area stewardship in a settled landscape. This trip will involve walking on trails and climbing steps.

**6 Willie Duke's Bluff Wildflowers** Led by Milo Pyne, Ecologist 1:00 – 5:00 PM

This hike is somewhat difficult and will be off trail, with some bushwhacking and one steep climb. This usually requires about three hours. If there have been recent rains, parts of the trail may be muddy. The hike will lead you to a noteworthy natural area called Willie Duke's Bluff where you see outstanding displays of spring wildflowers, including some that are rare and unusual in our area of the Piedmont.

The site boasts a showy display of spring ephemerals, with extensive areas of Dutchman's Breeches (*Dicentra cucullaria*), along with the rare Eastern False Rue Anemone or *Isopyrum (Enemion biternatum)* and numerous other wildflowers, including Bloodroot (*Sanguinaria canadensis*), and both Southern or Dimpled Troutlily (*Erythronium umbilicatum*), and its northern, tetraploid counterpart (*E. americanum*). The shrub layer consists of Spicebush (*Lindera benzoin*), Pawpaw (*Asimina triloba*), and Painted Buckeye (*Aesculus sylvatica*), which will be in various stages of flowering. Wear sturdy shoes and long pants, and bring gloves in case you feel inclined to pull out any invasive Chinese privet seedlings which you might encounter. You will also learn some history and geology along the way.