Scott’s Hole

The Story So Far

Compiled by Peter White, with contributions from Mark Chilton, Carl Anderson, Carol Ann McCormick, Johnny Randall, the late Rogers McVaugh, Ken Wurdack, and others

March 5, 2018
Interested parties

- Carl Anderson, CH Historical Society
- Mark Chilton, Register of Deeds, Orange County
- Carol Ann McCormick, UNC Herbarium
- Mark Peifer, UNC Herbarium
- Julie Moore, Fish & Wildlife Service
- Sam Tessel, UNC
- Peter White, UNC
- Ken Moore, NCBG (retired)
- Johnny Randall, NCBG
- Ken Wurdack, Smithsonian
- Alan Weakley, UNC Herbarium
- Michael McVaugh, UNC (retired)
- Bob McCartney, Woodlanders
- Inspired by the work of Rogers McVaugh—and Elisha Mitchell’s botanizing in the 1820s
Scott’s Hole came to the attention of botanists because of a particularly rare plant, *Lindera melissifolia*, found by Elisha Mitchell, a professor at UNC who taught botany at Chapel Hill in the 1820s (specifically, he noted the plant on March 10, 1820, and made a second observation on Feb. 22, 1822, that is likely another interesting species—see later slide with text from Ken Wurdack).

Mitchell kept a plant diary of his wanderings and this was rescued from obscurity through the work of Rogers McVaugh and published in 1996 by the Botanical Garden Foundation as “Chapel Hill and Elisha Mitchell, the Botanist” (McVaugh, R., M. McVaugh, & M. Ayers 1996).

See the following page for photos from this book.

Other botanical specimens in the Herbarium of the University of North Carolina at Chapel Hill and other publications also refer to “Scott’s Hole” as a location.

The phrase “Scott’s Hole” was in use from at least the 1820s to the 1940s but it’s location has become uncertain.
From McVaugh et al. 1996

Page 11

Page 25

Page 26

The plant is unmistakable when in flower, and was well described by both Pursh and Elliott. It is common in the Coastal Plain and scattered elsewhere, least common in the Piedmont and not otherwise reported from Orange County although known from adjoining Alamance and Chatham Counties. There seems little reason to doubt Mitchell’s report.

An even more intriguing mention of a Coastal Plain species is Mitchell’s entry for March 10, [1820], as follows: “March 10. Laurus diospyrus. Pursh. Nutall. Good. Dioicous? Nutall. Found in the Pond S.E. from College. Dried the blossoms” (EM2, p. 113). A second mention of the plant appears two years later: “Feb. 22, [1822]. Down about Scott’s hole — ascertained the shrub in the pond to be Laurus geniculatus of Pursh and Elliott” (EM2, p. 151). It is difficult to believe that Mitchell, acute as he was, could have reached the determination he did unless he had the plant in question, or something very like it. In the Linnaean system used by both Pursh and Elliott the genus *Laurus* (having nine stamens) was a very small one including but three genera, two of which were herbarious and the other, *Laurus*, was woody. The latter included what are now called *Sassafras albidum* and *Lindera benzoin*, both of which were known to Mitchell as species of *Laurus*. The flowers are so unusual that he would hardly have assigned another species to the same genus unless the flowers corresponded. If “Laurus geniculata” had been a common plant of Orange County the identification would not have been questioned. As it is, the so-called Pond Spice or Pondberry, now officially called *Lindera melissifolia*, is a rare shrub, known today in North Carolina from three populations in two counties in the southeastern part of the Coastal Plain. Until the actual specimens collected by Mitchell were found recently in the herbarium of the Academy of Natural Sciences of Philadelphia (see above, p. 11), it seemed unlikely that it had ever occurred in ponds in the lower Piedmont, where natural ponds are rare. Evidently Scott’s Hole was such a pond in Mitchell’s time. Its name was current in botanical circles in Chapel Hill at least into the second decade of this century, but seems now to have been forgotten. If it has escaped the blight of urban development, Mitchell’s plant may eventually be rediscovered there. The plant was reported from North Carolina by M. A. Curtis (1860, 1867), on Mitchell’s authority, under the name of *Benzoin melissifolium*. It would be interesting to know if Curtis saw a specimen collected by Mitchell, or merely accepted a report without verifying it.

(4) Even after Mitchell was devoting most of his time to geology and other matters, he made efforts from time to time to “get acquainted,” as he said, with such difficult groups in the local flora as *Panicum*, *Poa*, *Carex*, *Oreopsis*, *Hydrocotyle*, *Cichorium*, *Altoideae*, and *Ipswichia*. Among the herbarium material of the Academy of Natural Sciences which he brought down to the mainland from the island, there were several hundred specimens of the genus *Panicum* and a great number of species of *Hydrocotyle*. This is evidence that Mitchell was an observer of the grasses and sedges in a region where they are not generally known to be abundant. It is also true that he devoted his attention to the sedges and their allies, and the fact that he did not make a thorough study of the grasses as a whole may be explained by the fact that he did not have the opportunity to do so.
Specimen images contributed to by Ken Wurdack, Smithsonian

Litsea (left) and Lindera (right) are both of interest here!

See next page for explanation
Important explanation provided by Ken Wurdack

• If you look at the quotes in the McVaugh book (p25) a mention of Laurus diospyrus = Lindera melissifolia, and then Laurus geniculata = Litsea aestivalis. McVaugh doesn't parse this detail and conflates the 2 taxa. Both species frequently grow together both in NC and GA populations, and thus having the 2 data sources - both as specimens and in Mitchell's notes - is interesting and self-reinforcing as to likely habitat and naturalness (as opposed to cultivation of one or the other). One other confounding issue is that the journal entries are both early spring and flowering, when the 2 could be more easily confused, but the specimens are both leaf (L meliss also has a flowering branch) and would have had to be obtained much later in the season. The Litsea specimen in leaf is labeled "Bumelia," a not implausible det for a non-flowering collection; McVauch's book only has Bumelia on p12 in a list of plants apparently received by Schweinitz from Mitchell. Too bad there is not a full entry on the "Bumelia".

• One issue with these mounted specimens is that they were separated from many collections grouped together by species and one hopes that the "modern" mounting correctly put labels and collections together. Parts of the Schweinitz collection are less dispersed than these specimens which are out in the general collections at PH. On the Litsea specimen you can see the label cuts (each side of the word Bumelia) where the branch base would have slipped through the label. For the L. meliss that info was probably written on a group mounting page and cut out as 2 pieces.

• Added note by Peter White: this means that Lindera was the subject of the first Mitchell report (1820) with the following location: “found in the pond SE of campus”. Litsea was the subject of the second Mitchell report (1822) with the following location: “down about Scott’s Hole—ascertained the shrub in the pond to be...”. This, in turn, means he did not observe the two species, necessarily, in the same place. However, they had to be nearby places, if they were separate, by the following logic. Scott’s Hole IS, indeed, SE of the College, the two shrubs often grow together (see above), and Mitchell’s use of the phrase “the shrub in the pond” in the 1822 report suggests that he was indeed puzzling over his record or his memory of the plant from 1820 so that, in his mind, he was looking at a similar plant in a similar place. “Down about Scott’s Hole” suggests either that plants were scattered in the area OR that Mitchell is referring to himself in the sense that he was exploring and botanizing that day “down about Scott’s Hole”.

Also from McVaugh, McVaugh, and Ayers 1996

- McVaugh et al. 1996 also speculated on the location of Scott’s Hole on page 81 of their book.
- Note there are botanical references to Scott’s Hole in the 1930s and 1940s.
Other references to Scott’s Hole from botanical specimens and publications

Vascular plants: 22 records, for example—

• ¾ mile below Scott’s Hole 1909
• Rocks by Scott’s Hole on Morgan Creek 1922
• Along Morgan’s Creek near Scott’s Hole 1932
• Edge of low grounds near Scott’s Hole, Morgan’s Creek 1914
• Base of Mulberry tree, sandy soil by Morgan’s Creek, about 40 yards below ford at Scott’s Hole 1915 [BY THE WAY THIS IS A LOCALLY RARE SP: *Euonymus atropurpurea* SO WE HAVE A THIRD SPECIES TO LOOK FOR!]
• Between King’s Mill & Scott’s Hole 1915
• By road along east side of Scott’s Hole 1915
• By road at Scott’s Hole 1914
• Sandy creek bank below Scott’s Hole on Morgan Creek 1922
Trees of North Carolina, Coker and Totten (1916), references to Scott’s Hole

• Carolina scaly-bark or southern shell-bark hickory, by Morgan’s Creek at Scott’s Hole
• Bitter-nut hickory, by Morgan’s Creek at northeast end of Scott’s Hole
• Hop Hornbeam, at edge of low grounds, by road to Scott’s Hole
• River birch, by Scott’s Hole
• Deciduous holly, the large clump by upper road to Scott’s Hole
• Box elder, at Scott’s Hole
• Sparkleberry, both sides of Morgan’s Creek from King’s Mill to Scott’s Hole
• Green ash, by Morgan’s Creek near Scott’s Hole
• Swamp red oak, at Scott’s Hole
Coker, in papers on fungi

• By Meeting of the Waters Branch near Scott’s Hole
• 1/8 mile above Scott’s Hole on Meeting of the Waters Branch
• On Morgan’s Creek, 100 yards above Scott’s Hole
Some summary thoughts (but see also later slide on 3 possible locations)

- Scott’s Hole was a location on a road that went from the “cemetery” to Scott’s Hole and beyond (in other words, it was a popular destination along the road); there were woods and a tobacco farm along this road to Scott’s Hole.

- The road along the edge Scott’s Hole was at least on the east side; there are references to both an Upper Road and a Lower Road to Scott’s Hole.

- There was a ford adjacent to Scott’s Hole, apparently across Morgan Creek (in which case it was headed by the south bank to Laurel Hill, judging from old maps).
  - An oddity since “hole” means it also has some depth! Perhaps a shallow riffle area below Scott’s Hole marks the hard rock holding up the “hole” or pool above.

- There also seems to be a path along the edge.

- It was of some size in that there are several references to its upper end or NE end, suggesting it has a sort of geography to it.

- There were some rocks close enough that a rock-loving fern of dry slopes is close enough to have a Scott’s Hole reference.

- There were swampy low grounds nearby and there were fields nearby (as there are, on both sides of Morgan Creek, in the 1938 aerial photograph).

- Mitchell uses the phrase “the pond SE of the college” (March 10, 1820) and “down about Scott’s Hole...ascertained the shrub in the pond to be...” (Feb. 22, 1822) (note the the Cobb pictures in 1902 show still water, though otherwise hard to think of this as a “pond” since it has obvious wide flow above and below the confluence area).

- It was a fishing hole (Cornelia Phillips Spencer) and/or a swimming hole used by UNC students (Kemp Battle).

- It is named for a man who drowned there (if so, before 1820, so Battle is writing 100+ years after the event).

- It is near Meeting of the Waters Creek’s intersection with Morgan Creek.

- Kemp Battle also refers to siltation (swimming holes more shallow and muddy due to upslope clearing) (edition of 1907) (see later slides, also the Cobb photo shows a delta and opaque water), so if there was a hole, it might have silt in it now, a process that might have accelerated later with the construction of a diversion channel at the OWASA plant that cuts of the big bend of Morgan Creek, at least during high water (Johnny Randall note).
Cornelia Phillips Spencer

• in a Popular Science Monthly narrative about Elisha Mitchell, drawing form the Mitchell notebooks that McVaugh et al. 1997 analyzed


• “The notes of his excursions, which are recorded in a series of blank books kept for the purpose, give revelations of the habits of the author's mind; they chronicle his walks over farms which he names, and observations of individual plants and other objects in specified localities. "By such a rock," writes Mrs. C. P. Spencer, in an article of reminiscences, "in such a field, is a plant that he must identify. By Scott's Hole, near the willow is a Carex that he must watch. March 29, 1821, he finds yellow jessamine in bloom in Mrs. Hooper's garden, and 'in great abundance on the creek below Merritt's mill.'... May 30, 1821, occurs this note, that he had that day found the last of the twelve varieties of oak that are within two miles of the university; then follows a list of the oaks and notes of their situation. . . . In the third week of April, 1824, he begins a new Diary of Mosses, and hunts the Liskea hypnum through a dozen authorities, to be sure of it. He had the true scholar's disdain of taking anything at second hand. Such pages are diversified with 'Hints for the good instruction of the class'; or, 'Points to be meditated respecting the nature of light.' In the preface to one of these note-books—written in French—a plan of study was laid down for each week. So many hours were to be given to mathematics, so many to Latin...”
Cornelia Phillips Spencer (CPS)

• Found on the web, apparently from the Fayetteville New Advertisement, Thurs., Feb. 21, 1878—but also the Observer (next slide)

• “The new stream thus formed runs for two miles south through unbroken forest lands belonging to the Morgan family, and enters the large Morgan creek at the well known fishing spot called "Scott's Hole," where in the old, old days was once an Indian village. But at this meeting of the waters our party halted to enjoy the wildness and beauty of the scene, and to quote such poetry as we could remember and eat as many apples as the one who carried the basket thought best to distribute.”

• My interpretation (see other slides) is that one of the two streams that contributes to the “new” stream, referred to above, comes from Chapel Spring—so that contributing stream has been also called Chapel Spring Branch and Chapel Branch. I also believe that Chapel Spring Branch has been applied to the whole stream—down to Morgan Creek—which is implied by the labels of the Cobb photos
Cornelia Phillips Spencer (CPS)—images from Carl Anderson who notes someone should map the route of this hike.

"The new stream thus formed runs for two miles south through unbroken forest land belonging to the Morgan family, and enters the large Morgan creek at the well known fishing spot called "Scott's Hole", where, in the old days was once an Indian village."
Of what was called "modern conveniences" there were none. There were practically no bath-rooms and no baths, except at two places half a mile off, where the waters of springs were conducted through gutters and fell sub divo in a delicious stream. Most of the students used bath tubs in their rooms. When the weather was warm a few resorted for swimming to Kings, afterwards Valley Pond, to Merritt's afterwards Purefoy's, to "Scott's Hole," so called from a man drowned in it, to Barbee's afterwards Cave's, or to Suter's Pond. These, except the last, still exist, though, probably owing to the clearing of the land above them, they are more shallow and muddy. They range from one and a half to two and a half miles from the dormitories.
• The Campus of the First State University, The University of North Carolina Press, 1949

• P. 23, footnote: “The “Graves place” was the spacious lot whereon the Carolina Inn and annexes now stands. The Chapel of Ease stood near the southwest corner of the Inn Annex quadrangle. It was still standing, although in dilapidated condition, in 1792, according to the evidence of the Daniel map. Near the Chapel of Ease was a spring of considerable size, known as Chapel Spring, from which flowed the “stream which winds its way through picturesque scenery, by the Meeting of the Waters to Morgan’s Creek at Scott’s Hole on the Mason plantation.””
Where is (was) Scott’s Hole?
1911 Clingman map (left)

Early 19th Century map (right)

Labeled on this map
Meeting of the Waters

Labeled on this map
Chapel Spring

Junction with Morgan Creek
1918 Orange County Soils Map

Red circle in following images is the junction of Meeting of the Waters Creek and Morgan Creek

1918 soils map shows two roads converging and fording Morgan Creek near mouth of Meeting of the Waters Creek.
Geology map from Johnny Randall
also: http://www.ncgeology.com/Chapel_Hill_Data_Archive_July2009/Index.html
1946/47 map shows ford
There is a diversion channel S of OWASA that bypasses the big bend in Morgan Creek and effects flow around that bend. The OWASA construction happened around 1950, but the diversion channel may be after that date. It would be interesting to know if OWASA archives contains maps that would help us understand the pre-OWASA topography.
Could large silted up area represent original basin of Scott’s Hole? Was the ford downstream of this?
From Orange County GIS, Carl Anderson
1938 Aerial Photograph Mosaic (right has google map overlay)
From Johnny Randall:

- The area and Morgan Creek flow was also altered by the “ditch” that was created on the SSW side of the OWASA plant – through which a considerable volume of Morgan Creek now flows.
- The old dam you mention just up from the creek confluence could very well be Scott’s Hole. There is no evidence that this was a millpond, and was perhaps just for watering cattle and bathing.
- The ownership of this site was originally listed “Louisa Morgan” according to the map in the McVaugh/Ayers text (which you of course know), but I haven’t tracked down subsequent ownership.
AJV 8-08 1938 picture cropped and with added brightness and contrast (left), from [http://library.unc.edu/data/gis-usda/orange](http://library.unc.edu/data/gis-usda/orange)

Johnny Randall capture of this photo that shows confluence
Blow-up of a higher resolution image of the aerial photograph, created by Lisa Pope, Orange County, February 6, 2018

- See next slide for some interpretations
Blow-up of a higher resolution image of the aerial photograph, created by Lisa Pope, Orange County, February 6, 2018

• Possible location of ford over Morgan Creek
• Wide place in Morgan Creek that might be Scott’s Hole
• Mouth of Meeting of the Waters Creek from Johnny Randall
The next slides concern the 3 nearly identical pictures taken by Collier Cobb in 1902 and the designation “Meeting of the Waters”

- Folder labels give the time and date of the photographs: 10 am, 10:20 am and 10:30 am on April 24, 1902.
- The location is “delta of Chapel Spring Branch entering Scott’s Hole.”
- Opposite is an excerpt from Chapter IX, Walks About Chapel Hill, from Kemp Battle’s history of the University of North Carolina.
- An interpretation is that “Meeting of the Waters” was initially a place where two streams met, as it is labeled on the Clingman Map of 1911, rather than one of the two streams.
- One of the two streams (opposite) is Chapel Branch which originates at the Chapel Spring (see excerpt opposite)—hence, Collier Cobb could be combining Spring and Branch and retaining this name, Chapel Spring Branch, for the stream itself (today called Meeting of the Waters Creek).

“Meeting of the Waters” can be pleasantly reached in two ways. One has been already described. The other takes the road on the right, or west of the cemetery, going straight forward until the “Brickyard Branch” is reached, and following the path down this, which I have named the “Disappearing Stream” because at some places it dives under the ground, to the “Meeting of the Waters.” The other stream contributing to this name is Chapel Branch, so called because of its source in “Chapel Spring,” named from the ante-Revolutionary worshippers quenching their thirst from its cool waters.

The walk up Chapel Branch is delightful, by high bluffs, among heart leaves, anemones, ferns, stellarias, tiarellas, irises, and other small, beautiful plants. Lofty beeches, their bark covered with the initials of students vainly seeking perpetual fame, overhang the everwinding stream and give a grateful shade at all hours of the day.
Cobb picture and folder (Wilson Library) note there are 3 pictures, with very minor differences, so I’ve included only one
Rocks, Mouth of Chapel Spring Branch
Rocks, Mouth of Chapel Spring Branch
Might be dogwood in bloom, Mouth of Chapel Spring Branch, April 24, 1902
Cobb picture on left—note wintery appearance on April 24, 1902; if tree is upright, tree shadow points NW or NNW, so Creek seems to aim NW to W (Cobb notes give picture exposure at 10:30 am)

Carl Anderson picture on right
Carl Anderson photos: dam on Meeting of the Waters Creek
The Cobb pictures are in folders (there are 3 very similar pictures) that say “Delta of Chapel Spring Branch entering Scott’s Hole”

A logical interpretation is that despite the similarity of name, Chapel Spring Branch is NOT Chapel Creek, which enters Morgan Creek downstream from Meeting of the Waters Creek, as seen here.

Further, Chapel Spring, thanks to Mark Chilton’s work, is the spring that was near the present day Carolina Inn—the spring that fed a creek that today is called Meeting of the Waters (this spring was the water source for the New Hope Chapel, the namesake for Chapel Hill).

The 1911 Clingman Map labels the confluence of two waters, one of which comes from Chapel Spring, as “Meeting of the Waters” and by this logic the creek itself could be called Chapel Spring Branch and hence the location of Scott’s Hole, using the Cobb pictures, is the junction of what is now called Meeting of the Waters Creek and Morgan Creek—but Cobb calls the former Chapel Spring Branch after the spring that gives rise to it (see earlier slide quoting Battle’s History of the University of North Carolina supporting this).

Cornelia Phillip Spencer’s writing refers to the junction of Meeting of the Waters Creek and Morgan Creek as the meeting of waters at Scott’s Hole (see earlier slide).

BUT perhaps there are wetlands along Chapel Creek that have Linder/Litsea habitat even if they aren’t the original locations.
Where was Scott’s Hole? By the way, it is possible that *Lindera m.* occurred at all 3 of these places, so all can be searched

- 3 possibilities

  1. It was the now silt-ridden large expanse of Morgan Creek adjacent to the intersection with Meeting of the Waters Creek
     Pro: On plant labels and related publications, Scott’s Hole is always at, on, or near Morgan Creek, near a ford, and adjacent to a dry slope; the Cobb photo says it was where Chapel Spring Branch *enters* Scott’s Hole and creates a delta; Cornelia Phillips Spencer notes “*enters* the large Morgan creek at the well known fishing spot called *Scott’s Hole*”; Carl Anderson has taken a photo that looks like the 1902 scene
     Con: Could it be deep enough to be a “hole”? Or deep or wide enough to drown in (If Battle is correct about the name)?

  2. It was the pond behind the dam on Meeting of the Waters Creek that is about 100 yds upstream from #1
     Pro: Mitchell calls Scott’s Hole a pond (and in the second reference, the pond “down about” Scott’s Hole); the dam is considerably higher than the current stream, so it could attain depth for swimming or to qualify as a hole
     Con: it is 100 yds (or so) away from Morgan Creek and it would seem that references to this spot would mention a millpond or the name of the valley (Meeting of the Waters or Chapel Spring Branch)

  3. It was some other pond in the low ground in this general area, whether a farm pond or natural or a combination of the two
     Pro: Mitchell calls it a pond
     Con: If on the floodplain as a natural feature, unlikely to be deep as a “hole” or to be a place someone could drown
Pictures taken by Carl Anderson downstream from confluence on Morgan Creek showing shallow water possibly associated with a ford and fast water indicating what might have caused still water above.
Miscellaneous other notes

• Steve Davis of UNC Research Labs in Anthropology says he knows of no info from archaeological surveys that might help (location of Indian Village near Scott’s Hole), but I’ll keep trying

• Info on the history of the dam along Meeting of the Waters, and the size of pool behind it, would be helpful (Scott’s Hole was there by 1820 and the name was in use at least until the 1940s)

• Carl Anderson asks why did Cobb, a geologist, choose Scott’s Hole for a photograph? A possible answer, besides that it seems to have been a beautiful (see Spencer newspaper article) and well-known spot, is because this is where the fast moving waters of the hilly Carolina Slate Belt enter the flat-lying Triassic Basin. This change in gradient would also deposit sediment (and Cobb notes the delta in the picture in his label). Research shows that a large amount of silty material eroded off the uplands and into valleys from settlement (approx. 1750) to the early 1900s. The 1907 edition of Battle’s History of the University of North Carolina says “These [swimming places]...except the last, still exist, though, probably owing to the clearing of the land above them, they are more shallow and muddy.” Development is now causing additional erosion, of course, and fast run off. It has been argued that the down cutting on flood plains that is common now is not only because of the faster run off but also the fact that streams are cutting through the soft sediments produced by earlier erosion. In a paper titled “Forests of North Carolina” (1912), Collier Cobb writes about the problem of soil erosion in North Carolina
  • https://catalog.hathitrust.org/Record/002012276
There were at least two previous Scott’s Hole Expeditions

• This one had the date March 24, 2007, and include (left to right): Peter White, Michael McVaugh, someone whose name escapes me!, Rob Evans (then of the NC Plant Conservation Program), Carolyn White, and Ziggy (the picture may have been taken by Mrs. Michael McVaugh who was along on the trip)

• We walked down Morgan Creek from near Elephant Rock to OWASA
Expedition of February 10, 2018

• Left to right:
  • Sam Tessel, UNC
  • Carol Ann McCormick, UNC Herbarium
  • Aziz Sancar, UNC
  • Mark Peifer, UNC Herbarium
  • Carl Anderson, CH Historical Society
• Taking picture: Peter White, UNC
February 10th: left, pool area along Morgan Creek just below confluence; right looking downstream from OWASA bridge
What did we speculate about on February 10th?

- Since Mitchell, in his first observation says “pond SE of college” and in his second observation, 2 years later “down about Scott’s Hole—ascertained the shrub in the pond to be...”, one theory is that the pond is near Scott’s Hole but is not equal to Scott’s Hole. Mitchell was botanizing around Scott’s Hole and took the occasion to also continue his thoughts on the shrub.

- Cobb and Carl Anderson’s photos of the mouth of Meeting of the Waters Creek at Morgan Creek (which Cobb called “Chapel Spring Branch” “entering Scott’s Hole”) and other references to Scott’s Hole being on Morgan Creek lead to the theory that the fishing/swimming hole was part of Morgan Creek. Though much has changed, there were several locations at and downstream of the Meeting of the Waters confluence that have still water and look like typical “swimming” holes though we do not know the depth of these or whether they are filled with sediment or have moved in the period since 1820 (Mitchell), 1870s (Spencer), 1902 (Cobb), or Battle (1907). Carl Anderson has photographed candidate “holes” between the confluence and the OWASA bridge over Morgan Creek. He also photographed candidate sites for a ford.

- If so, we know where Scott’s Hole was/is. However, that spot looks neither like a “pond” nor like the habitat that Julie Moore, Alan Weakley, and Johnny Randall have described for the shrubs we are looking for.

- There could have been other ponds near Scott’s Hole, but the only one we know about is the pond that would have formed above the dam on Meeting of the Waters Creek when that dam was in place. We visited, and Carl has photographed, the remains of this dam which is within site of the confluence and Carl estimated was about 100 yds away. We could use the remnants of the dam to chart out the depth, length and breadth of such a pond.

- Above the remnants of the dam there are flat woods with pools on a rainy winter day. Even when the dam was functional, the upper end of the pond probably had these open swampy areas. Of the places we saw, this area came closest to being a wetland (if we exclude the sides and occasional flats next to Morgan Creek in the active floodplain). These swampy areas are located west of the Duke Power substation and extend upstream to the area of the NC Botanical Garden's nature trail bridge. We didn’t’ walk from the Duke Power substation to find the vernal pool at the Garden’s entrance, but that pool is not far away.

- Sam Tessel went downstream on Morgan Creek and then into the Chapel Creek (Chapel Branch, not Chapel Spring Branch) drainage and said that she didn’t see any promising habitat there.

- We also checked out the rocky slope S of and uphill from the confluence.
Habitat for *Lindera melissaeefolia*

*picture from: //projects.ncsu.edu/cals/plantbiology/ncsc/rare/lindera.htm*

- *Lindera melissaeefolia* can be in full sun, like the population in the Carolina bay in Sampson Co, NC, or in high, hardwood shade like in Arkansas and Mississippi. I'd say seasonal standing water restricts the growth of competitive shrubs and trees and in sites where the ponding cycle has been changed usually by various drainage efforts, competition increases and the population suffers.—Julie Moore

- To follow up on Alan's email, all the populations of pondberry I have visited are NOT associated with running water but rather are in wet depressions like the sink holes at Honey Hill in SC, depressions within broad floodplains in Mississippi, Arkansas and Missouri or here in NC in Carolina Bays. I think another edaphic factor is that the majority of the sites I know are embedded within landscapes with fairly sandy soils with no associated hard rock formations. The same pretty much goes for *Litsea* habitat.—Julie Moore

- My impression is: can be in shady or sunny situations, cannot be in silty situations.—Alan Weakley

- My only experience with *L. melissifolia* is in Pondberry Bay (a Plant Conservation Program preserve in Sampson County), where pondspice (*Litsea aestivalis*) also occurs. The site was in high shade (until the relatively recent “removal” of loblolly pines) and a prescribed fire that consumed a considerable amount of the duff/peat/organic substrate – beneath which is a clay layer that traps the water and creates the “ponding” in a generally sandy site. —Johnny Randall
2 other plants of note

Litsea aestivalis from: //vaplantatlas.org/index.php?do=plant&plant=2929

Euonymus purpurea from: //www.carolinanature.com/trees/eurat.html
We resolved to return March 3rd

• Every and all parties should be encouraged to botanize freely, whether alone or in groups, the vernal pools, seeps, and other promising areas over a broad area from the Garden’s entrance even as far as Silers Bog at the far end of Mason Farm. If the plants were once near Scott’s Hole they could have been found in other areas or subsequently established there and Silers Bog is probably not much botanized. The area is recorded on early maps with the “swamp” USGS symbol, unlike any of the areas we saw on February 10th.

From Scott’s Hole to Silers Bog on topo maps

Botany Pond (called Muscrat Pond by John Terres was created in the 1960s by the NC Botanical Garden’s first director Ritchie Bell
Expedition of March 3, 2018

• Carl Anderson, Mark Chilton, Ken Moore, Julie Moore, and Peter White met at the OWASA public parking area, some 196-198 years after Elisha Mitchell’s observations

• After a brief meeting, one party headed up Meeting of the Waters Creek to the remnants of the dam and the swampy woods beyond to look for Lindera/Litsea and to evaluate the habitat for those species (Mark, Ken, Julie—Carl could not stay for the walk) (similar to the route we took on February 10th)

• Did not find either Lindera m. or Listsea, but Julie made a recommendation to repeat the search later in spring when leaves are out which can begin from the Garden Nature Trail and then head downstream along Meeting of the Waters Creek as a quicker access to the wet woods

• Habitat does not seem ideal for Lindera m., based on other populations (Julie Moore report via Ken Moore)

• Peter went downstream from the Morgan Creek-Meeting of the Waters confluence, along Morgan Creek, to the concrete bridge near the Golf Course Clubhouse (old Mason Farm house location) to look for Euonymus atropurpurea

• Peter searched both sides of Morgan Creek, both along the shore and then in the woods of the floodplain (this is wider N of Morgan’s Creek than the rather thin strip on the OWASA side), paying particular attention to spots 40 40 yards downstream from two possible locations of the old ford across Morgan Creek (40 yards based on reference cited in an earlier slide)

• No sign of the plant, but spring not far advanced—just some bud swelling, along with some buckeye buds just open, trout lily, spring beauty
Miscellaneous loose ends

• Does OWASA have site plans and photographs from just before construction about 1950?

• Who was the Scott for whom Scott’s Hole is named?

• Given the frequency with which Scott’s Hole is referred to as a landmark (Mitchell, Spencer, Cobb, Battle, and Coker and Totten and other botanists), do other writings or maps in the 1800s to 1950 refer to Scott’s Hole?

• Trace the route of walks described by Battle and Spencer and hold a public walk to retrace their steps!

• Find out details of the history of the dam on Meeting of the Waters Creek and possibly survey

• Find out if there is any detail about the Indian village (or archeological observations) near Scott’s Hole
Chapel Creek note

• Carl Anderson notes: “Another place to look is the area along Chapel Creek, especially the area between Highland Woods and Glenwood School (hatched area on attached map). If you walk out of the NCBG parking lot, cross Mason Farm, and start up the road to Highland Woods, there is an old road where Highland Woods turns right that turns into a cross-country trail. The trail goes on either side of the Chapel Creek bog, and continues around to the fields across from OWASA. There also is a trail that goes up the east side of Glenwood School to just behind the SECU. Should be good hunting grounds. I don’t know what is upstream on the other side of Fordham.”

• Johnny Randall notes: “The entire area of which you speak was re-contoured a few years ago for the Chapel Creek stream restoration project. This restoration was phase 1 of the Mason Farm Biological Reserve/Morgan Creek berm “perforation” project done through the NC Ecosystem Enhancement Program.”
Addendum: The Morgan Creek Flood of August 3, 1924

• In June, 2018, Carl Anderson sent images of several clippings from the Chapel Hill weekly (issues of August 7, 1924, and August 14, 1924) describing the rain storm and floods of August 3, 1924

• This flood destroyed several bridges and old mills, including Purefoy and Kings Mills on Morgan Creek upstream from the junction of Morgan Creek and Chapel Spring Branch (known today as Meeting of the Waters Creek)

• This flood must have caused change in the area we are searching for Scott’s Hole