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Nuttall's Plant Collections in Southern Delaware

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Thomas Nuttall came to Philadelphia from England in 1807 or 1808.¹ Then a lad 21 years of age, he came under the influence of William Bartram and of Benjamin Smith Barton, by whom his botanical career seems to have been largely determined.

Nuttall's first collecting was in the immediate vicinity of Philadelphia, including southern New Jersey. His first longer trip, early in 1809, was, in the words of his nephew, T. J. Booth, "to the mountainous part of Delaware, Sussex County". Among the Barton papers recently discovered by Mrs. John R. Delafield (see Appendix E, of Dr. Pennell's sketch), is an interesting letter from Nuttall to Barton, dated "Lewes-town [now Lewes, in Sussex County, Delaware], June 16, 1809". It is marked, in Barton's handwriting, "Received Monday-evening, June 19, 1809".

This letter, given in full below, shows that Nuttall traveled by boat, leaving Philadelphia "Sunday morning at 7 o'clock". The boat anchored that night in the mouth of Duck Creek. Here Nuttall noted a few plants in the marshes, "but I believe nothing uncommon", and remarks on the abundance of King Crab on the "beech".

In this connection it is worth noting that the modern name "Bombay Hook", designating the strip of beach which extends southward several miles from the village of Woodland Beach, Kent County, Delaware, is derived from "Bumba", the Swedish word for the king crab, or *Limulus*. The Swedish settlers gathered these animals by the thousand, to be dried in the sun, crushed, and used for fertilizer. The name of this part of the Bay shore is properly pronounced "Bumba Hook".

On Wednesday, Nuttall was at Lewes, and this is the first of nine days, previous to the date of the letter, spent about Lewes and Cape Henlopen, and farther south in the vicinity of "Dagsbury" (Dagsboro), situated on a tributary

¹ See Pennell: "Travels and Scientific Collections of Thomas Nuttall", in *Bartonia*, 18: 2, 1936; and "An English Obituary Account of Thomas Nuttall", in *Bartonia*, 19: 52. 1938.

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of Indian River. The trip from Lewes to Dagsboro may have been by boat, sailing down the coast to the mouth of Indian River, thence inland by Indian River Bay. From the itinerary outlined in the letter, it is evident that the latest possible date for the start from Philadelphia was June 4th, but it may have been a week earlier. After June 16th, the date of the letter, nothing is known of the length of Nuttall's stay in Sussex County, or of the time and manner of his return to Philadelphia.

From Dagsboro, two excursions were made into the nearby Great Cypress Swamp. The letter to Barton follows. Matter in square brackets is inserted by the present editor.

"Received Monday-evening, June 19th, 1809." [in Dr. Barton's handwriting]

"Honor[e]d Sir,

I fear you have been anxiously expecting to hear from me before this time, but as I could not communicate any thing with certainty respecting the subject in hand at an earlier period you will perhaps excuse the delay. We did not reach Lewes-town, till Tuesday afternoon & left Phila[delph]ia Sunday morning at 7 o'clock. On Monday evening we harboured in the mouth of Duck-creek & went on shore on the lower side of the creek on a marsh about 10 miles long taking in both sides of the creek, and about 5 in breadth. I found here abundance of what they call samphire [*Salicornia*], Baccharis halimifolia, called kinks bush, a species of Aster with very broad leaves, but I believe nothing uncommon. With the Baccharis I found, a lucid red stalkd plant with longish narrow leaves recently sprung up from seed. On the beech lay in great abundance what is called the King Crab. On Wednesday in consequence of your introductory letter Dr. Harris favored me with his company part of the day but we unfortunately took a most uninteresting rout in & about the salt marshes in the vicinity of the town[.] all I saw extraordinary was the samphire in much greater perfection here than at Duck Creek, and a small procumbent plant with a purplish flower, & thick juicy leaf [? *Spergularia*]. On Thursday I visited the cape. On the sandy beach I found in great plenty a plant resembling the Heath, and called so here, full of fine yellow blossom [of course *Hudsonia tomentosa*]. About the light-house in a narrow wood which runs up 2 miles above it to salt-works, I met with what I take to be the ilex dahoon [? *Ilex glabra*], called bear-bush, a species of smilax evergreen [*Smilax laurifolia*], called goat-briar, & in a wet shady part of the wood abundance of the Viscum [*Phoradendron*], an Orchis which they say has white flowers but know no name for it [*Habenaria blephariglottis*]; not being in flower I could not tell what it was, but am afraid it will only turn out to be the Orchis ciliaris [*Habenaria ciliaris*]; the deer-berry [probably *Vaccinium stamineum*], &

Hudsonia tomentosa was described by Nuttall in 1818. He obviously observed and collected it for the first time at Cape Henlopen in 1809.

Myrica cerifera are here in great abundance. I have forgot to mention in its place, that on the sandy beach I found a large thick fleshy leaf'd plant which I have sent [no doubt *Cakile edentula*]. On Friday I went again thro' the cape, part of the time in company with a Mr. Rodney late chief judge of the state[.] we went particularly in quest of a plant said by several people of the town to be native of the cape, called Coral Honey-suckle [*Lonicera sempervirens*], on account of the fine scarlet colour of its corolla. it is what I have seen cultivated in many gardens in Phila[delph]ia and I believe known there by the same name, but after carefully searching the places where it was said to grow we could not find it; it had either been all taken up to supply gardens, or has been buried in the advancing & almost perpendicular sand hills, which skirt the wood on the side next the sea. In and about the wet open woods and ponds near the town I found a diandrous plant with a fine yellow flower resembling gratiola [*Gratiola aurea*], an aquatic plant having the leaves which are under the water pinnate in almost capillary divisions, the leaves above the water serrated, these 2 are in great abundance [unmistakeably *Proserpinaca palustris*]. A small plant with light green leaves spreading close to the surface of the ground armed with setaceous stipula [perhaps *Diodia virginiana*]. On Saturday I went into a swampy wood about 2 miles from Lewes belonging to Daniel Wolfe a well known respectable farmer. In the open part of the swamp I found the Heritiera [? *Lachnanthes tinctoria*] & I believe the Pleea [? *Tofieldia racemosa*][.] abundance of Utricularia was here in flower in loose spikes of 4 or 5 flowers each & a plant which at first I took to be aletris but which I found to be very distinctly different but not yet in flower. [This may have been *Polygala ramosa*, now found in some abundance at Ellendale.] In the wood I found what I suppose is called the Fringe-tree [*Chionanthus virginica*], but very sparingly and here they had no name for it, I have sent some shoots of it. In the edge of the swamp grew the Sarracenia purpurea, and Kalmia angustifolia. On Monday I went towards Dagsbury, found little or nothing of consequence in the road excepting that I saw an iris with very narrow leaves [*Iris prismatica*], and a dydinamious plant with a brownish flower in the road side. Coming to the head of Indian river I anxiously expected to find the Illicium[.] I sought for it carefully, & went 2 or 3 miles round its head but all in vain, I am persuaded it has never been found here. The appearance of the river here is that of a stagnant pond filled with half dead trees, but not so as to hinder the prospect[.] all the aquatic plants I could percieve and those not in abundance were the Nymphaea odorata & N. lutea now in flower, the trees were principally Dyospyros, Nyssa, Maple, Ash, Magnolia, &c. many of them half covered with moss and Viscum. Leaving the river, & proceeding on my way to Dagsbury, (& indeed I had spent a considerable time about the river, and

felt much disappointed), I came to a place about 3 miles this side Dagsbury w[h]ere the road divided[.] I went up to a good looking house belonging to a Colonel Kalosk to enquire the road by whom I was very politely treated, and upon understanding my object he furnished me unasked with an introduction in the 1st place to a Mr. Waples proprietor of the head of the swamp and also to Mr. Wells, Esquire, proprietor of nearly all the swamp. On Tuesday morning leaving Mr. Waples, within a mile of the entrance of the swamp I met with an old man who usually conducts strangers into the swamp. Near his house but in the woods & evidently wild grew the Yucca but very small. The old man went with me and in about a mile from this house we began to enter one of the most frightfull labyrinths you can imagine[.] it was filled with tall tangling shrubs thickly matted together almost impervious to the light[;] among the shrubs was the illex already mentioned[.] smilax, &c. It was very wet; knee deep in sphagnum if you stept off the bridges of wooden causeways. There were some open places called savannahs, but were literally ponds at this time of the year, but are dry in summer I could perceive nothing growing in them but the 2 Nymphaeas, and what I have taken to be the Plelea, and on the edges of these ponds grew the cupressus disticha [*Taxodium distichum*]. In a shady part of the swamp the old man pointed out to me what they here call the Bay-bush which they use for dying yellow, it was not in flower; I suppose it must be the Hopea [no doubt *Symplocos tinctoria*]. I saw nothing else new that I remember, & I proceeded to Dagsbury where I was very kindly entertained by Mr. Wells[.] on Wednesday I went across the swamp about 7 miles without meeting with one extraordinary vegetable excepting the Bartonia but which of the species I could not tell, about the place where I found this solitary specimen there had last year been abundance but appeared to have been destroyed before it had come to seed, nearly all this part of the swamp I passed through appeared too wet for herbaceous vegetation being covered with little else but Sphagnum, fern, Magnolia, illex dahoon, &c. There are no cranberrys, in the swamp at all where I passed thro and the people living on the edge of this part of the swamp scarcely knew what I meant by cranberrys when I described them, neither did I see the Drosera[.] having passed thro the swamp and coming to higher ground I met with abundance of the Hopea as I take it—some trees 20 foot high & $\frac{1}{2}$ a foot diam. In this part of the swamp there are bears not unfrequently met with as many as 7 having been caught not many months back. On Thursday I returned to Lewes-town[.] met with nothing particular on the way till with[in] about 3 miles of the town in a dry wood I met with a tetrandrous plant which at first I took to be some species of Gentiana, but it is evidently no such thing [? ————]. I can trace almost all the way from Dagsbury the Spermacoe diodina [*Diodia teres*]. On Friday I

went about in the neighbourhood of the town, but found nothing extraordinary and the day turned out wet. I expect the person by whom this letter & the plants come will take the utmost care of them[.] the plants are in 2 boxes[,] the 1st contains all the plants I found about Lewes town & the Cape, the 2nd contains chiefly what I found in the road to Dagsbury and the swamps. I recieved your letter containing another for Col. Hale which I deliverd, and telling him my intention of going again thro the swamp in another direction to Nanticock [Nanticoke] river he promised me an introductory letter to a General Bull, &c. &c. I have forgot to mention that while at Mr. Wells, the late governor of the state General Mitchell was there on a visit & very kindly invited me to call upon him if I came to broad-creek [This is no doubt the present Broadkill River]. I have not got the tin-boxes you spoke of in your letter.

Yours, &c

T. NUTTALL."

The fate of all the specimens sent to Barton is a matter of conjecture. Some can be accounted for, however, as among the plants deposited at the Academy of Natural Sciences by the American Philosophical Society, there is a small packet marked in Barton's hand "Plants coll. by Mr. Nuttall, Delaware". At the request of Dr. Francis W. Pennell, I have examined these specimens, and identified them as far as possible. They are preserved in 10 by 12-inch folders of rough drying paper, and are entirely without labels or other clue to their history, excepting only the above inscription on the outside of the package. Many of the specimens are in poor condition, and they consist for the most part of small twigs broken from trees or shrubs, and the upper portions of herbaceous plants. I am indebted to Mr. Bayard Long for checking my identifications of them.

The roster of species in this collection follows. Curiously enough, only 8 of the 43 plants are mentioned in the letter to Barton, as having been seen. The list comprises: *Taxodium distichum*; *Chamaecyparis thyoides* (represented by a 3-inch twig); *Pinus virginiana* (young leaves of the season only); *P. Taeda* (3 leaf-bundles only); *Festuca myuros*; *Arrhenatherum elatius*; *Smilacina racemosa*; *Smilax laurifolia* (in early fruit); *Habenaria* sp. (immature fragment); *Arethusa bulbosa*; *Cleistes divaricata*; *Quercus alba*; *Q. nigra*; *Q. marilandica*; *Celtis occidentalis* (with fruits and leaf-galls); *Silene antirrhina*; *Persea palustris* (two collections in early bud); *Sarracenia purpurea* var. *gibbosa* (in full flower); *Drosera intermedia* (scraps); *Itea virginica*; *Rosa eglanteria* (fragment); *Sanguisorba minor* (leaves only); *Melilotus alba*; *Polygala ramosa* (2 collections: now known in Delaware from Ellendale only); *P. incarnata*; *P. lutea*; *P. mariana* (fragment); *Ilex glabra* (one collection in flower; one in ripe fruit); *Hudsonia tomentosa* (3 collections); *Rhexia mariana*; *Proserpinaca palustris*; *Leucothoe racemosa*; *Vaccinium macrocarpon* (one spray with bud); *Samolus floribundus*;

Nymphoides aquaticum; *Asclepias verticillata* (leaves only); *Chionanthus virginica* (4 collections); *Utricularia fibrosa*; *Houstonia purpurea*; *Lonicera sempervirens*; *Viburnum nudum*; *Artemisia vulgaris*; and *Tragopogon porrifolius* (one head,—neither stem nor foliage).

The presence of Coral Honeysuckle and Cranberry among the specimens, both of which are mentioned in the letter to Barton as looked for but not seen, seems to show that at least a little time for further collecting was available between June 16 and Nuttall's return to Philadelphia.

Going back to the text of the letter: Duck Creek, where the first landing was made, is the present Smyrna River, which is the boundary between New Castle and Kent counties, Delaware. The plants seen there were probably all in Kent County. All the rest belong to Sussex County.

Of the discoveries in the vicinity of Lewes, the "plant resembling the Heath" is of course *Hudsonia tomentosa*²; "ilex dahoon" is quite likely *I. glabra*; "smilax evergreen" must be *S. laurifolia*, which is represented in the collection; "Viscum" is *Phoradendron*. Near the head of Indian River, Nuttall "anxiously expected" *Illicium*, and "sought for it carefully", but why he should expect to find it so far north of its range is hard to understand.

The great Cypress Swamp is still full of "the most frightfull labyrinths" over a wide area, but a good road now traverses it from Selbyville on the east to Gumboro on the west. *Symplocos* still grows there in considerable abundance, as well as in drier places elsewhere in the county. Nuttall was no doubt pleased to be able to inform his patron of his discovery in the Swamp of Barton's namesake (species undetermined). Both of our northern species of *Bartonia* are to be found there at the present time.

² This was Nuttall's first acquaintance with this species which, nine years later, he described as new to science.