Bartram Broadside



Published by the John Bartram Association for the 'noble & curious friends' of Historic Bartram's Garden,

Preface

Franklinia alatamaha is the signature tree of John and William Bartram's botanical accomplishments, as well as of their living legacy, Historic Bartram's Garden. And, as Joel T. Fry proves in this long-awaited issue of the Bartram Broadside, for good reason. The legend is that father and son discovered the small tree growing along the Altamaha River in Georgia in 1765 and saved it from extinction by propagating its seed in their Philadelphia botanical garden, from which they introduced the Franklinia into cultivation. The legend also asserts that all Franklinias growing anywhere in the world today are descended from the Bartrams' original collection.

In 1999, as part of the 300th anniversary celebration of John Bartram's birth, the John Bartram Association launched an international Franklinia Census to find out where and how many Franklinias were growing, as well as locate the oldest specimens. Nearly 2,000 trees were reported from nine countries. The census collected data on age, size, source, and growing conditions. At the same time, the Association commissioned Joel T. Fry to write the definitive history of the species. Happily, the census results and Fry's exhaustive research, Part I of which is presented below, corroborate the legend.

The Franklinia Census and this publication dedicated to the Franklinia were generously supported by grants from the Stanley Smith Horticultural Trust of California, the Willowood Foundation of New Jersey, and Connecticut's F. A. Bartlett Tree Expert Company. The John Bartram Association extends its deep appreciation to these sponsors and to the faithful readers of the Bartram Broadside for their continuous support of the Bartram environmental legacy.

Martha Leigh Wolf, Executive Director

Franklinia alatamaha, A History of That "Very Curious" Shrub.

Joel T. Fry

Part I: Discovery and Naming of the Franklinia.

John and William Bartram discovered that "rare and elegant flowering shrub," *Franklinia alatamaha*, October 1, 1765, after losing their way to the crossing of the Altamaha River at Fort Barrington in southeast Georgia. Since that discovery, this rare plant has continued to fascinate gardeners and botanist alike. Much has been written about this plant—often ill informed, or incorrect. The celebrity and the scientific credibility of John and more importantly William Bartram have been intrinsically tied to the fate of the Franklinia. An academic dispute over the genus and official name of the shrub has simmered between botanists in the United States and Europe for over two centuries, and has yet to be settled. The Franklinia is still known as *Gordonia pubescens* in many European texts.

Franklinia alatamaha is apparently extinct in the wild. Prior to 1900 the Franklinia was extremely rare in gardens, and could easily have been lost to the world altogether. Surprisingly, there is little record of significant effort to ensure its survival after 1850, when the last Bartram heirs were forced to sell the family botanic garden. The current resurgence of the Franklinia is largely due to luck and the natural tenacity of the plant itself. Now at the end of the 20th century, the Franklinia is flourishing in cultivation. It

remains that curious plant saved from extinction, beautiful, floriferous, and just difficult and rare enough in cultivation to make it a prize to grow.

The Franklinia is a beautiful flowering shrub or small tree, long-lived and hardy well into the north. As a deciduous plant, the leaves of the Franklinia color a bright red to maroon in the late fall before dropping, adding to the show. The flowers are numerous, and although each lasts only a day, at the peak of flowering the plant is covered day after day with blooms, often continuing for months until frost. The flowers are scented "with the fragrance of the China Orange" (Marshall 1785: 49). As a member of the Tea family or Theaceae, it bears a strong family resemblances in both leaves and flowers to those prized Asian exotics the Tea and the Camellia, as well as to the native Gordonia and Stewartia. The Franklinia is a hardy shrub with large flowers like single camellias and an orange-blossom scent-this in many ways describes a perfect plant for the 18th century Anglo-American garden. If the actual plant did not survive, one could almost imagine it had been concocted to suit the fancies of John and William Bartram.

"The useful, the beautiful, the singular or the fragrant are to us the most material," wrote Dr. John Fothergill from London in 1772 in a series of instructions for William Bartram prior to his explorations in the American South (Fothergill 1971: 392-393). The Franklinia fulfills at least three of these criteria: it is singular, beautiful and fragrant. Singularity was perhaps the most valued feature to the collectors of the 18th and 19th century. To be the first to possess a rare plant created aesthetic, scientific, and monetary wealth. The Bartrams and their clients were prepared to wait years, even decades to see a prized flower raised from seed. Acquiring rare plants was an expensive diversion for wealthy amateurs and the titled nobility. Daniel Solander writing Linnaeus in October 1760 remarked of British nurserymen, "When buying is in question they never talk of less than half a Guinea and 1 Guinea, or often 2 or 3 Guineas and more for a young bush..." (Solander 1995: 144). Even relatively common North American plants could become valuable collectables in Europe for a time, but the singular Franklinia has remained a rare and difficult subject to this day.

The Franklinia's near relation—the Loblolly Bay:

The Franklinia has long been shadowed by a closely related plant of the southern coastal plain, the Loblolly Bay or *Gordonia lasianthus*. The Loblolly

"The Franklinia has long been shadowed by a closely related plant of the southern coastal plain, the Loblolly Bay or Gordonia lasianthus."

Bay is locally common in the low wet lands of the southeastern coast of North American. It remains evergreen, and is not hardy much north of eastern North Carolina. The Franklinia is still often confused with the more common Loblolly Bay.

John Bartram was well aware of the Loblolly Bay. It was in fact a plant he long desired. The English traveler, Mark Catesby had described and illustrated the plant in the first volume of his *Natural History of Carolina*, *Florida and the Bahama Islands* published in London in 1731, and Bartram had a copy of this book in his library. Catesby's book established the common name "Loblolly Bay." He described the plant as "Alcea floridana quinque capsularis..." creating the pre-Linnaean scientific name of "Alcea floridana" (Catesby 1731-1743: vol. 1, 44, tab. 44).

By 1765, the year he discovered the Franklinia, John Bartram had experimented with the cultivation of the "Alcea" or Loblolly Bay in his garden for at least five years. He may have even been successful in getting it to flower prior to his trip to Georgia and Florida as King's Botanist. John Bartram had first seen the Loblolly Bay in the wild in the spring of 1760 when visiting his brother, Col. William Bartram at his plantation Ashwood, in Bladen Co., North Carolina. Bartram also traveled to Charleston, South Carolina at the same time to visit Alexander Garden. He probably first received plants of the "Alcea floridana" from either Garden or the Lambolls in Charleston, latter in the fall of 1760. These first plants did not survive.

The next year John sent his son William to North Carolina to set up store as a merchant on his uncle's Ashwood plantation. William Bartram lived at Ashwood from the spring of 1761 until the summer of 1765, and certainly became quite familiar with the plants of the local environment. His father wrote often requesting rare plants, especially the Loblolly Bay. In his first letter to William in the summer of 1761 Bartram reminded him, "the lobloly Bay or alcea floridiana... grows up A little creek at ashwood...." In the fall he repeated "lobloly bay I cant have too much," and again in December "the Alcea & the horse sugar I want much thay are very dificult to transplant I had them from Charlstown but thay are gone off perhaps your northern one may do better" (Berkeley and Berkeley 1992: 518, 536, 543).

Through the early spring of 1762, John Bartram was still unsure if he had the "Alcea" or not. Writing Peter Collinson in May:

I am apt to think I have not yet got the true lobloly bay or alcea tho several say thay have sent it but I believe thay are species of sweet bay... (Berkeley and Berkeley 1992: 559).

By August of 1762, Bartram was positive he had the Loblolly Bay growing in his garden and even locates its approximate position in a border of the upper garden.

some plants that grows naturally in or near water bears the dry weather as well as any I have I have one lobloly bay that came over in hot dry weather that grows the best of any of the Carolina evergreens sent this year notwithstanding I planted it in the highest border of my upper garden not knowing it was the Alcea so that now I am in hopes it will do well with me if the hard frosts dont kill & disrobe it as the other evergreens (Berkeley and Berkeley 1992: 567).

The winter of 1762-1763 was particularly destructive to Bartram's southern plants, as recorded in letters to Daniel Solander and Collinson in April and May:

my lobloly bay tho growed prodigiously in the summer is intirely killed last winter tho in A warm place it is in vain for us to expect to have the broad leaved evergreens of Carolina to flourish in the winter unless in A green house (Berkeley and Berkeley 1992: 590).

Bartram's friends in Charleston were quick to replace many of his southern evergreens, including the Loblolly Bay. In the spring and fall of 1763, he received several boxes with plants from Thomas Lamboll and Martha Logan (Berkeley and Berkeley 1992: 590, 614, 617).

Bartram's Loblolly Bay survived the winter of 1763-1764 and in May he could report to Collinson that his "lobloly bay …hath some green leaves" (Berkeley and Berkeley 1992: 628). That summer it produced flower buds, but again the disappointed Bartram wrote in mid-August "my lobloly bay hath 4 fine buds for blosoms but this stormy day broke of the branch that produced them" (Berkeley and Berkeley 1992: 636).

John Bartram could not help but observe the Loblolly Bay on his trip south to St. Augustine in 1765. Along their route south from North Carolina from July through September 1765, and again on leaving Savannah September 30th for Florida, John and William Bartram passed through many bay or cypress swamps where the major growth was often Loblolly Bay. John recorded "alcea" in the vicinity of Charleston in swamps on the Santee in his journal for July and August. October 1st, the day the Franklinia was discovered, the day's riding was "very bad thro bay swamps." Bartram also recorded Loblolly Bay on the banks of the Altamaha south of Fort Barrington following the discovery of the Franklinia (J. Bartram 1942: 14, 19, 31, 32, 49).

"...we mised our way & fell 4 mile below fort mile barrington where we lodged this night this day we found severall very curious shrubs one bearing beautiful good fruite"

The Loblolly Bay remained an equally prized, but elusive plant in England at this time. Collinson also received the "Charming Plant" from Thomas Lamboll, but complained it did "not shoot away for want of Sun & Moisture" (Berkeley and Berkeley 1992: 493). Bartram sent other plants, probably from some of the stock sent from Charleston. These did well, but were stolen from Collinson's Mill Hill garden in December of 1765. Collinson reported "my no small Mortification, having been again robbed of my Most Curious plants What I most regret was thy kind present of Loblolly Bays throve which finely...." (Berkeley and Berkeley 1992: 657).

Because of the difficulty in growing and flowering the Loblolly Bay, it remained a puzzle to European botanists. Linnaeus gave it the name Hypericum Lasianthus in his first major work, the Hortus Cliffortianus. This placed it in the genus of St.-John's-worts. In the Gardener's Dictionary, Phillip Miller recorded it was difficult or impossible to grow and placed it under the genus Hibiscus. Plants that could not be easily grown or forced to flower in Europe were routinely mis-classed and poorly described by European botanists. The same European scientists often discounted first-hand accounts of these same difficult subjects from skilled observers describing the plant in its native environment. The Loblolly Bay and its relation the Franklinia would both suffer this fate.

The ultimate naming of the genus Gordonia was the result of a trans-Atlantic discussion that took over a decade. A series of letters regarding the Loblolly Bay passed between Alexander Garden, an Edinburgh trained physician recently immigrated to Charleston, South Carolina and John Ellis in London from 1756-1770. Garden recognized Linnaeus' error in classifying the Loblolly Bay under Hypericum. In 1756, he suggested a new genus to be named "Gordonia"—"in honour of my old master, Dr. James Gordon, at Aberdeen." Garden sent Ellis repeated shipments of plants and seed of the Loblolly Bay but apparently few if any were successful. The next spring, 1757, Garden retracted his name "Gordonia", probably because he had been informed of the death of Dr. Gordon. Once suggested, however, the name Gordonia appears to have stuck. Ellis continued to use Gordonia in his correspondence with Garden in spite of Garden's repeated statements to the counter: "you need not call the Loblolly Bay Gordonia," and "this must not be called the Gordonia." In 1760, Ellis suggested retaining the name Gordonia in honor of the London nurseryman, James Gordon (1708?-1780). Once gardener to Lord Petre, John Bartram's first patron, Gordon had succeeded in germinating

seeds of the Loblolly Bay at his Mile-End nurseries. Over the next ten years, Alexander Garden wavered between his own desires to publish on the Loblolly Bay and frequent reminders to Ellis to officalize the name of *Gordonia* (Berkeley and Berkeley 1969: 75-79).

It was not until 1770 that John Ellis was finally able to sufficiently describe the plant from flowering specimens produced near London. Ellis named the plant in a letter to Linnaeus that was published by the Royal Society. Reporting, "that we have lately got into a method of cultivating that elegant evergreen-tree, called in South Carolina and the Floridas, the Loblollybay, or Alcea Floridana," Ellis correctly placed the plant in the Linnaean class of Monadelphia Polyandria and announced the new genus Gordonia in honor of "that eminent gardener Mr. James Gordon" (Ellis 1770: 519-520). Garden received only slight credit in the published description by Ellis, but from December of 1770, the Loblolly Bay was officially known as Gordonia lasianthus.¹

The Bartram family continued to experiment with the cultivation of the Loblolly Bay in their Philadelphia garden, although without great success, except under glass. Through the first half of the 19th century they continued to list the *Gordonia lasianthus* or Loblolly Bay in their catalogues. From the 1828 catalogue onward it was marked as a greenhouse plant. To this day the Loblolly Bay, although beautiful in its native environment, is rarely successful in cultivation. A hardy plant similar in flower to the Loblolly Bay was a certain prize for both American and European gardens.

Discovery:

John and William Bartram were uniquely prepared for the discovery of the Franklinia when they encountered it October 1, 1765. John's remarkable skill as a "natural botanist" and his lifetime of observation in the wild and in his garden, combined with William's close experience with the plants of the southern coastal plain had left them particularly equipped. John Bartram recorded in his journal:

... we mised our way & fell 4 mile below fort barrington where we lodged this night this day we

¹ Ellis previewed his intentions to name the Loblolly Bay *Gordonia lasianthus* in a letter to Linnaeus in September 1770. Apparently Linnaeus was not happy in the change in nomenclature and preferred "Lasianthus" as the new generic name. Ellis wrote December 28, 1770: "I am sorry I cannot oblige you in changing the name of **Gordonia** to Lasianthus as it has been presented to the Royal Society, and my worthy friend James Gordon has accepted this compliment" (Smith 1821: vol. 1,

"On drawing near the fort, I was greatly delighted at the appearance of two new beautiful shrubs, in all their blooming graces. One of them appeared to be a species of Gordonia, but the flowers are larger, and more fragrant..."

found severall very curious shrubs one bearing beautiful good fruite (J. Bartram 1942: 31).

This cryptic record of the original encounter with the Franklinia confounds attempts to reconstruct the history of the plant. Was the plant in leaf? Did the Bartrams take leaf specimens, seed or seed capsules? "Curious" was an important code word to Bartram and his fellow 18th century scientists indicating rare, valuable, beautiful, and scientifically interesting. "Very curious" heightens the significance of the discovery. Based on William Bartram's later elaborations, the "severall very curious shrubs" have been identified as Franklinia alatamaha and the Fever Tree or Pinckneya bracteata (J. Bartram 1765-1766: 66), although it is possible John Bartram was noting more than two new species. Writing Robert Barclay in November 1788, William Bartram reported that the plant now known as Pinckneya was "discovered in the maritime parts of Georgia & E^t Florida, above 20 years ago, when attending my Father John Bartram on Botanical researches; but that excursion being in the Autumn, We saw only the dry Seed vessels" (W. Bartram 1968: 152). This suggests it was the Pinckneya that was "bearing beautiful good fruite."

As to the Franklinia, William Bartram would later write he and his father "could form no opinion to what class or tribe it belonged" (W. Bartram 1791: 467).

Someone unfamiliar with the plants of the southeast would probably not have noticed the Franklinia, and certainly not recognized its rarity. The following day, October 2nd, Bartram also noted:

...this uncommon season of rain which hath not been seen above 40 years has reached thro all these southern provinces by the best accounts hath destroyed much of thair rice where the waters rose commonly 5 foot deep... (J Bartram 1942: 31).

John Bartram's note of extensive, heavy rain may explain why the Bartrams were unable to provide a better description of the Franklinia at their first encounter. Although exceptionally long-flowered, often continuing until frost, the Franklinia will stop flowering in the face of heavy rains, and the shed flowers readily dissolve into an unrecognizable slime. Out of bloom, the Franklinia might not be distinguished from the more pervasive Loblolly Bay unless its leaves were changing to their fall red tone. It could have been this color that attracted the eyes of John and William Bartram. The seeds are generally shed from the shrub in the late fall in Pennsylvania, but it is possible and even likely seed dispersal was earlier in Georgia. Even so, the open woody seed capsules should have remained.

The first of several mysteries about the Franklinia

remains: did John Bartram take specimens of the plant when he first encountered it in October 1765? Specimens or even seeds could have been collected and sent to England with the Kings boxes in 1765-1766, or to Collinson with a copy of John Bartram's journal of the entire southern trip in December 1766.2 The whereabouts of both the King's specimens and Collinson's copies of Bartram's journals are unknown and presumed lost. John Bartram's own draft catalogue of "A Box sent to the King 1766 with the following plants" lists: "N. 21 A curious shrub" (J. Bartram 1766). This box for the King was probably prepared in Philadelphia in the fall of 1766, after Bartram's return from the South. While it seems unlikely this shrub was the Franklinia, at present there is no way to determine which "curious shrub" Bartram sent. There is not another word about the Franklinia from the hand of John Bartram.

The story of the Franklinia continues roughly eight years later when William Bartram returned to Charleston, with a stipend of £50 per year to collect for Dr. John Fothergill. The events of William Bartram's explorations can be largely reconstructed from two sources, his interim journals sent to Fothergill (W. Bartram 1943) and his volume of Travels... published in Philadelphia in 1791. William Bartram left Philadelphia March 20th and arrived in Charleston by April 1, 1773. His first expedition was a tour through the Georgia low country and Sea Islands. In the course of this collecting trip he crossed the Altamaha River at Fort Barrington, after traveling along the north bank from Darien. He recorded the crossing in the first volume of his manuscript journal, which was sent to Fothergill:

[April 24 or 25, 1773] Cross't this famous River at Barrington about 30 miles above the Inlet & continued down the other side o' the River keeping a Path through the Pine Forests generally in sight of the low lands of the River (W. Bartram 1943: 135, 174).

Although he probably passed the site of the Franklinia on this journey, there is no mention of it in the surviving manuscript journal. In the final printed version of his *Travels...*, a re-encounter with the two curious shrubs, *Franklinia* and *Pinckneya*, does occur at this point in his trip.

I set off early in the morning for the Indian trading-house, in the river St. Mary, and took the road up the N.E. side of the Alatamaha to Fort-Barrington. I passed through a well-inhabited district, mostly rice plantations, on

² John Bartram's specimens for the King and his journal from the trip to Florida are mentioned in several letters to Collinson (J. Bartram 1992: 668-669, 673-674, 679, 684, 688-

"I spent the remaining part of this season in botanical Will all the season in botanical with the season with the season in the season with the season wi excursions to the low countries, ... and collected seeds, roots, and specimens, making

drawings of such curious subjects as could not be preserved in their native state of excellence.

the water of Cathead creek, a branch of the Alatamaha. On drawing near the fort, I was greatly delighted at the appearance of two new beautiful shrubs, in all their blooming graces. One of them appeared to be a species of Gordonia,* [*Franklinia Alatamaha.] but the flowers are larger, and more fragrant than those of the Gordonia Lascanthus, and are sessile; the seed vessel is also very different. The other was equally distinguished for beauty and singularity... (W. Bartram 1791: 16).

Francis Harper theorized William Bartram combined several discrete explorations into a single narrative here in the final text of *Travels...*. The exploration of the St. Mary's River, which follows the encounter with the Franklinia at Fort Barrington in particular, probably did not occur until the late summer or fall of 1773 or the late spring-early summer of 1776 (W. Bartram 1943: 174; W. Bartram 1958: 337-338, 345-346). This calls into question William Bartram's account of the Franklinia and Pinckneya in bloom together in late April. However, Bartram is even more specific on the initial sight of the flowers in the materials he sent Robert Barclay in 1788. Describing his illustration of Pinckneya he wrote:

...about 15 years ago when on discoveries in the employ of Doctor Fothergill I revisited the same place, in the Spring Season, when I had the pleasure and satisfaction of seeing it in perfection, in full flower, together with the Franklinia which then flourishe'd in sight of it (W. Bartram 1968: 152).

While "flourishe'd" may not be the same as flowering, the text accompanying his specimen of Franklinia from the Altamaha indicates:

very large white fragrant flowers... from April until the Autumn when it ceases flowering, whilst the seed of the flowers of the preceding Year are ripening (W. Bartram 1968: 164).

The original time of flowering remains another of the mysteries surrounding the Franklinia. William Bartram was exceptionally lax in regard to dates, and the published dates that appear in his Travels... are virtually all incorrect. Still he does remain consistent in his record of flowers on the Franklinia in April. [Latter third person accounts suggest the Franklinia bloomed at least a month if not two months later in Pennsylvania than in its original location.]

From the text of *Travels...* it is clear that the spring of 1773 was not William Bartram's only visit to the unique location of the Franklinia on the Altamaha. As will be seen he revisited the site in the summer of 1776, prior to his return home to Philadelphia. But it

is also likely that he paid one or more additional visits to the site in 1773 or early 1774. A large block of his travels from July 1773 to March 1774 is recorded with only a brief overview:

I spent the remaining part of this season in botanical excursions to the low countries, between Carolina and East Florida, and collected seeds, roots, and specimens, making drawings of such curious subjects as could not be preserved in their native state of excellence. (W. Bartram 1791: 48).

William Bartram could have collected seeds and specimens of the Franklinia during this period for shipment to Fothergill. He would likely have timed a visit to collect ripe seed. He may have also prepared the earliest known drawing of Franklinia alatamaha in flower during this same period. It is even possible he gathered plants, which could have been cared for in Charleston by the Lambolls or Dr. Lionel Chalmers prior to shipment to London.

British gardening records suggest the Franklinia was introduced to cultivation in 1774. William Aiton's large catalogue of the Royal Botanic Garden at Kew records Gordonia pubescens was introduced in 1774 by Mr. William Malcolm (Aiton 1789: vol. 2, 231). William Malcolm (d. 1798) was active as a nurseryman in Kennington, near London beginning in the 1750s. He may have been acting as an agent for Fothergill. Accepting that this date is correct (which is far from certain-many of Aiton's dates are now known to be inaccurate), and that the plant described as "Gordonia pubescens" was indeed the Franklinia, William Bartram is the only likely source of the plant.³

William Bartram sent Fothergill drawings of plants and animals on several occasions, as well as a large number of specimens from his explorations. He probably sent seeds and plants as well, but these are poorly documented. The drawings and specimens passed into the hands of Joseph Banks after

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³ Charles Jenkins' 1933 history of the Franklinia suggested a young English trader named "Williams," who had collected in the Cherokee country for Fothergill ca. 1773 or earlier, may have been the source of Malcolm's "Gordonia pubescens" (Jenkins 1933: 203). There is no evidence "Williams" was in the area of the Altamaha in 1773 or 1774, and in fact Fothergill's letters do not even give the name of this "young man from England" so it is not clear where Jenkins derived the name "Williams" (Fothergill 1971: 401). There were many known and many unknown collectors of seeds, plants, and specimens from the British colonial possessions in North America. We do know William Bartram was on the Altamaha in 1774. To date, there is no evidence anyone other than the Bartrams saw the Franklinia in the wild before 1765, and the few who saw it later were directed by the Bartrams or

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William Bartram's original illustration of the Franklinia, sent to Dr. John Fothergill in London, ca. 1774. (© The Natural History Museum, London).

the death of Fothergill in 1780 and are housed today in the Natural History Museum in London. The collection of drawings was reprinted in large folio format by the American Philosophical Society in 1968 in an edition by Joseph Ewan. Most attention has been drawn to the large colored drawing of the *Franklinia alatamaha* dating to 1788, which forms the frontispiece of Ewan's book. This drawing was part of a set of illustrations of four plants sent to Robert Barclay by William Bartram in November 1788 in something of a last effort to validate the names and descriptions of some of his most important discoveries. As shall be seen, this work was either ignored or suppressed in England.

A second illustration of the Franklinia in the collections of the Natural History Museum is actually more important as an historic document. It is the earliest known illustration of the plant. Ewan's Plate 23 is a pen and ink drawing of the *Franklinia alatamaha* that must have been completed in either 1774 or 1776, and sent to Fothergill as an illustration of the as yet unnamed shrub (W. Bartram 1968: 62-

63, Plate 23). The original drawing was untitled and labeled " N° . I". It shows a flowering branch of the Franklinia with a single perfect flower and an immature seed capsule. A detail comprising a single seed, a cross-section of the seed capsule, and the anther is given at the lower right. At a later date some one scrawled "Franklinia" on the bottom of the drawing, and traced or copied the sections of the mature seed capsule from William's 1788 drawing below the original figure.

The drawings William Bartram sent to Fothergill can be divided into several different sets, probably sent at different times. Descriptive text or at least a key, now lost, probably once accompanied the figures. Each set of drawings had a slightly different numbering system, beginning with either "Tab.," "Fig.," or in the case of the Franklinia drawing "No." The Franklinia was "No. I" from a series of six drawings including the Soft-shelled Tortoise, an Ipomoea from the St. John's River, a Canna, the Physic Nut, and Calycanthus florida. This set would seem to date after Bartram's trip to Augusta, Georgia in June-July 1773 and after his several explorations of the St. John's River in the summer of 1774. According to Harper, William Bartram may have prepared volume one of his journal, as well as some of his collections and illustrations in the vicinity of Spaulding's Lower Store in the fall of 1774. These were sent to Fothergill from Sunbury, Georgia, via Liverpool, at the end of 1774 (W. Bartram 1791: 304-306; W. Bartram 1943: 124). The Franklinia drawing might have been sent with this shipment, especially as it was grouped with several illustrations from the St. John's. Seeds or even plants of the Franklinia could also have been sent by the same route. For Fothergill's part he complained in a letter to John Bartram in August of 1774 that to date he had received about a hundred dried specimens of plants, "a very few drawings, but neither a seed nor a plant" (Fothergill 1971: 415).

Sometime during the late spring or summer of 1776 William Bartram revisited the Altamaha River. He returned to the remnant natural population of Franklinia, east of Fort Barrington, expressly to collect seed (W. Bartram 1958: 416-417). As Harper has pointed out, it is again difficult to detail where William Bartram was in the spring and summer of 1776. There is no documentation when his commission from Fothergill exactly ended, but presumably, at some point he was informed or aware he could act on his own. Gathering "seed of two new and very curious shrubs" forms the entire substance of a short chapter in his Travels...—the only major event chronicled after his return from the west. Here

"We never saw it grow in any other place, nor will all the



have I ever since seen it growing wild, in all my travels, from Pennsylvania to Point Coupe, on the banks of the Mississippi...

William Bartram inserted the longest and most effusive account of the new shrub (W. Bartram 1791: 467-468):

After my return from the Creek nation, I employed myself during the spring and fore part of summer, in revisiting the several districts in Georgia and the East borders of Florida, where I had noted the most curious subjects; collecting them together, and shipping them off to England. In the course of these excursions and researches, I had the opportunity of observing the new flowering shrub, resembling the Gordonia, in perfect bloom, as well as bearing ripe fruit. It is a flowering tree, of the first order for beauty and fragrance of blossoms: the tree grows fifteen or twenty feet high, branching alternately; the leaves are oblong, broadest towards their extremities and terminate with an acute point, which is generally a little reflexed; they are lightly serrated, attenuate downwards and sessile, or have very short petioles; they are places in alternate order, and towards the extremities of the twigs are crouded together, but stand more sparsedly below; the flowers are very large, expand themselves perfectly, are of a snowwhite colour, and ornamented with a crown or tassel of gold coloured refulgent stamina in their center; the inferior petal or segment of the corolla is hollow, formed like a cap or helmet, and entirely included the other four, until the moment of expansion; its exterior surface is covered with a short silky hair; the borders of the petals are crisped or plicated: these large white flowers stand single and sessile in the bosom of the leaves, which being near together towards the extremities of the twigs, and usually many expanded at the same time, make a gay appearance; the fruit is a large, round, dry, woody apple or pericarp, opening at each end oppositely by five alternate fissures, containing ten cells, 4 each replete with dry woody cuniform seed. This very curious tree was first taken notice of, about ten or twelve years ago, at this place, when I attended my father (John Bartram) on a botanical excursion; but, it being then late in the autumn, we could form no opinion to what class or tribe it belonged.

We never saw it grow in any other place, nor have I ever since seen it growing wild, in all my travels, from Pennsylvania to Point Coupe, on the banks of the Mississippi, which must be allowed a very singular and unaccountable circumstance; at this place there are two or three acres of ground where it grows plenti-

This detailed depiction was the result of long and close observation, and is still probably the best single description of Franklinia alatamaha.

The seed that William Bartram gathered on this last visit was the source of every Franklinia that later grew at Bartram's Garden. He again had the opportunity to ship seed to Fothergill in England with his final collections from Savannah (or Charleston), in early November 1776, but no documents remain to specify what might have been in those collections. William definitely brought seed back to his father's garden when he returned to Philadelphia in January 1777. From here the plant entered cultivation and it is likely most (if not all) Franklinia alatamaha growing today can be traced back to the plants William Bartram sprouted in his father's garden.

Naming the Franklinia—North America:

William Bartram probably planted seed of his very curious new shrub in the spring of 1777, if not immediately in his father's greenhouse in January on his return to Philadelphia. His father, John Bartram was at hand to supervise the planting and witness the first growth of the curious plant. Although John did not live to see the Franklinia in bloom in his own garden, he must have seen William's specimens and perhaps drawings of the flower. Humphry Marshall (1722-1801), William's cousin, recorded details of the first cultivation of the Franklinia in the description of the new genus for his Arbustrum Americanum the American Grove.⁵ He wrote that William:

had the pleasing prospect of beholding it in its native soil, possessed with all its floral charms; and bearing ripe seeds at the same time; some of which he collected and brought home, and raised several plants therefrom, which in four years time flowered, and in one year after perfected ripe seeds (Marshall 1785: 49).

Marshall is probably accurate in placing the first flowering of the shrub in the Bartram garden to 1781. This is corroborated by William Young (1742-1785), the "Queen's Botanist." Young was a neighbor of the Bartrams in Kingsessing Township. His garden lay west of the Bartram farm across the Darby Road (modern

⁴ There are actually only five cells in the seed capsule of Franklinia alatamaha.

⁵ Marshall's description of the Franklinia included an error in the date of discovery (1760), which has since been often

"On first observing the fructification and habit of this tree, I was inclined to believe it a species of Gordonia, ...upon stricter examination... I found striking characteristics abundantly sufficient to separate it."

Woodland Avenue at 52nd Street). Young recorded he saw the Franklinia in bloom in August 1781, when the plant was about four feet high (Young 1783: 51).

If the Franklinia first flowered in 1781, it produced ripe seed in 1782. The next year, 1783, saw the treaty of Paris that ended the American Revolution. This same year the Bartram brothers, John and William, issued a broadside *Catalogue* of the family collection of North American trees and shrubs—intending to restart their business, which had stagnated due to the war (Fry 1996). The catalogue of 218 species—listing scientific binomials and common names—was the work of William Bartram. It was published in Philadelphia and reprinted in Paris through the help of Benjamin Franklin. The Franklinia appears at the end of the catalogue list as a new and undescribed species: "Alatamaha," one of "Three Undescript shrubs lately from Florida" (W. Bartram 1783).6

It is possible the Bartrams had distributed a few rare plants of the Franklinia, even before the shrub had flowered in their garden. A manuscript "List of growing Roots of Trees Shrubs & Plants..." prepared in August 1779 by William Bartram for the first French minister in Philadelphia, Sieur Gérard, included "No. 22 ... A nondescript flowering Tree from east Florida" (W. Bartram 1779). This "undescript Tree" could be the Franklinia, but it could also be one of several other plants including Aesculus, Lyonia, Leucothoe, Nyssa, Illicium or Pinckneya.

The Franklinia was briefly mentioned in William Young's Catalogue d'Arbres, Arbustes et Plantes Herbacées d'Amérique, translated and issued in Paris in 1783 for the seed firm of Vilmorin. The second half of this catalogue list was comprised of plants Young could not obtain without a "costly voyage" or which had not been "raised in sufficient number to send to Europe." The Franklinia appears here as "dwarf Gordonia" or: "Gordonia pumila, deciduis foliis, qui habite en Floride." Noting that William Bartram discovered this plant, Young also recorded it formed a large shrub, about 20 feet tall (Young 1783: 51).

In 1783, seed of the Franklinia must have been extremely rare. The plant was probably not under cultivation anywhere else in the world, unless a plant or plants sent to Fothergill ca. 1774-1776 remained alive at Kew or elsewhere in England. John Fothergill had died in 1780, and his own garden was soon dispersed. William probably sowed more seed annually, and propagated the existing plants. He also continued to observe his plants, and by 1784 he had decided to establish a new genus:

On first observing the fructification and habit of this tree, I was inclined to believe it a species of Gordonia, but afterwards, upon stricter examination, and comparing its flowers and fruit with those of the Gordonia lasianthus, I presently found striking characteristics abundantly sufficient to separate it from that genus, and to establish it the head of a new tribe, which we have honoured with the name of the illustrious Dr. Benjamin Franklin. Franklinia Alatamaha (W. Bartram 1791: 467).

The new name is first found in the handwritten catalogue of a large shipment of plants and seeds "sent to Europe: for Mr. Pierpont, by John & W^{m.} Bartram, Philadelphia Octo". 1784." The Franklinia is listed as "N° 153 Franklinia Alatamaha a beautiful flowering Tree lately found in Florida seems allied to the Gordonia..." (W. Bartram 1784). It is not apparent from the list whether this represents shipment of a plant or seeds of the Franklinia.

At about the same time, an undated "Catalogue of growing Plants No. American Trees, Shrubs &c. For French Gentleman at Honble B. D. Marboise's," prepared by William Bartram, included "N. 53. Franklinia alatamaha" (W. Bartram ca. 1784-1785). François, Marquis de Barbé-Marbois (1746-1833), an amateur botanist himself, was secretary to the first French mission to the United States, from 1779 to 1785. He served as consul general and chargé d'affairs in Philadelphia from 1784-1785. The "French Gentleman" this order was prepared for is unknown, but the plants were probably destined for Paris. A similar large collection of seeds was apparently sent to Thomas Jefferson in Paris and included "N. 129 Franklinia Altamaha" (W. Bartram ca. 1786-1788). International shipments of the curious new shrub were underway, and from this point onward it seems likely that most if not all examples of the Franklinia that found their way to Europe originated from the Bartram garden.

William Bartram has been often faulted unfairly for the length of time it took to produce his *Travels...*. In the case of *Franklinia alatamaha*, publication of the new species was timely. Humphry Marshall published the name and Linnaean characters of the new plant in 1785 in *Arbustrum Americanum*, his annotated catalogue of North American trees and shrubs (Marshall 1785: 48-50). Marshall was careful to note that the source of the new name was "Bartram's Catalogue... a Sheet Catalogue published by John and William Bartram" (Marshall 1785: *xx*). Marshall may have relied on a more detailed manuscript description from William Bartram as well. As Joseph Ewan has noted, Bartram

⁶ The other two new shrubs were the Witch Alder, Fothergilla gardenii and the Mock Orange, Philadelphus inodorus.

"I am about publishing the Travels of Mr. Bartram Bull Bull Bottanist—I have some of the cuts viz. The Indian Warrior, the Paroquet of Carolina & the Franklinia which are done by Mr. Bartram in etching for the Vol."

sent Robert Barclay the Latin characters of four species in 1788, including *Franklinia alatamaha*, and his Latin text is virtually the same as Marshall's English characters of 1785 (W. Bartram 1968: 151-152).

With the successful re-discovery, cultivation and naming of *Franklinia alatamaha* all might seem right in the Bartram botanic garden, but trouble was just beginning to brew. In the next year the Franklinia would be renamed *Gordonia pubescens* in Paris, the first subscription for the publication of William Bartram's travel journals would fail, and he would suffer a crippling compound fracture in a fall from the bald cypress in the garden. Surprisingly, even cousin Humphry Marshall turned against the newly published genus in a short time. In November of 1788 he would write, "The Franklinia, I believe, is a species of Gordonia" (Darlington 1849: 549).

Benjamin Franklin had returned from Paris in September of 1785 to acclaim as Philadelphia's most honored citizen. Franklin was undoubtedly delighted to find the curious new shrub named in his honor. He may well have been an important moving force behind Enoch Story's subscription to publish William Bartram's travel journals. Story wrote Franklin at some point in 1786, announcing progress in his planned subscription. Story's letter indicates William Bartram already had a printed illustration of the Franklinia in 1786—intended for the volume of travels.

I am about publishing the Travels of Mr. Bartram Bottanist—I have inclosed proposals for the same and hope it will meet with your approbation...—I have some of the cuts viz. The Indian Warrior, the Paroquet of Carolina & the Franklinia which are done by Mr. Bartram in etching for the Vol. If you choose can let you see them (Harper 1945: 27-28).

The Indian Warrior, Mico Chlucco, became the frontispiece to the 1791 James & Johnson printing of William Bartram's Travels...., and the Carolina Parakeet is presumed lost. The Franklinia print may still survive. There are six colored engravings of seven plant species in the Barton Delafield Collection at the American Philosophical Society labeled "Bart. Journ." and signed "W. Bartram Delin. Trenchard Sculp." James Trenchard (b. 1746) was a well known Philadelphia engraver, active from 1777 onward. These engravings are captioned "Franklinia alatamaha," "Æsculus polygamia," "Aonymos & Kalmea celiata," "Bignonia bracteata," "Magnolia awriculata," and "Enothera grandiflora." [Two additional plates of the Gopher Turtle, Gopherus polyphemus, may also have been part of this set, but are not marked "Bart. Journ."] At least four sets of these illustrations are



"Franklinia alatamaha Bart. Journ." William Bartram's drawing engraved by James Trenchard, in Philadelphia, ca. 1786. This illustration is part of a set of six engravings, probably intended for the failed Enoch Story subscription to print Bartram's travels. (American Philosophical Society).

now documented and there may be others. Those at the American Philosophical Society belonged to Benjamin Smith Barton; William Bartram included these extra illustrations in at least two copies of his 1791 *Travels...*—one given to the Darby Library and another presented to William Hamilton; a fourth set probably remained in the Bartram family.

If this surviving engraving "Franklinia alatamaha Bart. Journ." is indeed the same described by Enoch Story in 1786, then William Bartram published the first illustration of the Franklinia in Philadelphia, two years before an incomplete European illustration of the plant appeared under the name Gordonia pubescens (Cavanilles 1785-1790: vol. 6, tab. 162). This fact has long been obscured, as has much of William Bartram's botanic career. These engravings have been described as proofs, but as several of the surviving sets are neatly colored, and two sets are bound into copies of Travels... they were probably intended as finished works. Considering the cost of

"These remains with some more that I have kept by me to this time, which I cheerfully offer for the inspection & amusement of the curious, expecting or desiring no other gratuity than the bare mention of my being the discoverer."

their production, it remains an important scientific mystery why they were not included in the general run of *Travels....* William's illustration received much wider exposure in 1999 however, as it served as the basis for the US postage stamp honoring John and William Bartram on the 300th anniversary of John's birth.

It is clear there was growing interest in the Franklinia as a rare and valuable plant. In the 18th century a single rare plant could make the career of gardeners and botanists alike. Dr. Thomas Parke (1749-1835) of Philadelphia wrote to Humphry Marshall, June 18, 1786 requesting seeds for

A young gentleman being about to sail for London, from whence he intends to go to Edinburgh to finish his medical education, is desirous of taking a box of seeds of the most curious flowering shrubs, &c. to present to the Professor of Botany in that University.... He is willing to pay £3 for the collection, and expects to have a sample of the most curious, particularly of the Franklinia (Darlington 1849: 529).

It is curious that here in 1786 the request for Franklinia seeds is directed to Marshall and not the Bartrams. It is unlikely that Marshall had access to any at this early date. The "young gentleman" may have been Benjamin Smith Barton (1766-1815), who was later to be professor of natural history and materia medica at the University of Pennsylvania. There has long been speculation that Barton was in some way responsible for the failure of Enoch Story's subscription effort to publish William Bartram's book of travels. Still, Barton wrote Bartram frequently from Europe. Writing from Amsterdam in December 1788, Barton again solicited a drawing, a botanical description, and a dried specimen of the Franklinia alatamaha. He proposed to publish a paper on the rare plant with Bartram's "assistance and permission" (Barton 1788). Although publication did not happen here, it became standard practice for Barton to query William Bartram and then publish. On Barton's return from Europe, he continued to work closely with Bartram. Some might say he relied too much on William's knowledge, but he did serve as an important conduit to the greater public for Bartram's work.

In all, 1786 was a particularly bad year for William Bartram. The year ended with the collapse of the subscription effort for his book, and with William's fall and severe fracture, which incapacitated him for some time. Thomas Say (1709-1796) the elder, wrote to William in December with solace for his troubles:

D^r Relation... thou mayst be patient under the Trying times that thee now lays under, for the Lord knows what is best for us, therefore don't be cast down under it but bare afflictions patiently... (Say 1786)

The years 1788-1789 saw a final effort by William Bartram and others in Philadelphia to endorse the name Franklinia alatamaha for his curious new shrub. In November 1788, Bartram prepared illustrations and wrote out the Latin botanic characters for four of his new discoveries-the Franklinia, the Pinckneya, the Oak-Leaved Hydrangea, and the Golden Oenothera. These finely finished drawings in color represent some of William Bartram's best botanic art, and were probably intended for publication.⁷ The image of the Franklinia far exceeds any of the contemporary European illustrations of the plant that followed. Bartram sent his illustrations and descriptions to Robert Barclay (1751-1830) of London. Barclay, a fellow Quaker, and a brewer by trade, was an avid gardener. He was one of the founders of the Linnaean Society in London, and a supporter of Samuel Curtis in the Botanical Magazine. At the same time, William also sent Barclay a volume of 38 dried plant specimens—the first specimen was Franklinia alatamaha (W. Bartram 1968: 151-154, 164).

William's letter to Robert Barclay accompanying the shipment particularly requested he "communicate These drawings and remarks to Mr. Walters the celebrated Author of the Flor. Caroliniana." Thomas Walter's (1740?-1789) specimens and manuscript catalogue of the flora of South Carolina had been taken to London and published in 1788 by the nurseryman John Fraser (d. 1811). This publication named many new plants originally discovered by John or William Bartram between 1765-1776, but did not include the Franklinia. News of the new book had probably just reached Philadelphia. Curiously there is no indication Bartram or Walter ever communicated in spite of William's many connections in Charleston and the South. Here William Bartram seems to assume Walter is in London.

Introducing his book of specimens, William Bartram wrote:

I collected these specimens amongst many hundred others about 20 years ago when on Botanical researches in Carolina Georgia and Florida duplicates of which I sent to Doctor Fothergill; very

⁷ These drawings eventually became the property of Sir Joseph Banks, and are now all at the Natural History Museum in London. The *Franklinia alatamaha* illustration has long been known and reproduced, but until recently the three other drawings were presumed lost. They were not included in the 1968 Ewan edition of the drawings, but they have been rediscovered.

"When William Aiton's large catalogue of the collection at Kew, *Hortus Kewensis*, was published in 1789 there was no mention of "Franklinia" or Bartram or Marshall in the entry on *Gordonia pubescens*."

few of which I find have entered the Systema Vegetabilium...

These remains with some more that I have kept by me to this time, which I cheerfully offer for the inspection & amusement of the curious, expecting or desiring no other gratuity than the bare mention of my being the discoverer, a reward due for traveling several thousand miles mostly amongs't Indian Nations which is not only difficult but Dangerous, besides suffering sickness cold & hunger... (W. Bartram 1968: 164).

The unusually even-tempered Bartram was beginning to show distress as European botanists disregarded his life's work. He may have begun to suspect that European scientists were not about to accept descriptions published in America, particularly by "collectors" such as Marshall or himself. Although the newly independent American state was a curiosity to European intellectuals, an independent American scientific community remained too radical to be borne. Incredibly, his impressive collection for Barclay was rebuffed or ignored.

At about the same time William Bartram was writing Robert Barclay, Humphry Marshall wrote Dr. John Coakley Lettsom (1744-1815). This letter might have even traveled with William Bartram's drawings and specimens. Lettsom had acquired Fothergill's collection of hothouse and greenhouse plants, and so could be another source for plants of the Franklinia or *Gordonia pubescens* in England.⁸ It is to Lettsom that Marshall confessed, "The *Franklinia*, I believe, is a species of *Gordonia*" (Darlington 1849: 549).

Barclay and Lettsom were actually smaller satellites around the actual arbiter of botany in London, Sir Joseph Banks (1743-1820), the new president of the Royal Society and defacto head of the Royal Botanic Garden at Kew (Desmond 1995: 89-90). It is perhaps not surprising that Humphry Marshall, and his nephew Dr. Moses Marshall (1758-1813), were actively courting Bank's patronage at this same time. May 6, 1789, Banks wrote Marshall a curt reply:

The Franklinia is, as you conjecture, a species of Gordonia. A drawing of that plant, sent here by Mr. Bartram to Mr. Barclay has been compared with specimens; so that no doubt now can remain on that subject (Darlington 1849: 562).

Certainly some doubt remained in the mind of

William Bartram and others in North America who had actually seen the Franklinia alive and in flower. There is a surprising lack of scientific discourse in this edict, which seems primarily intended to enforce European supremacy in botanical nomenclature. Nevertheless, European botanists remained sorely confused about the Franklinia for decades to come.

Dr. Thomas Parke, who had helped to convey William Bartram's drawings and specimens to Barclay, wrote Marshall, May 18, 1789:

R. Barclay writes me that he is much pleased with the plants received, which, with W. Bartram's drawing of the Franklinia, arrived in good order. The botanists in England will not, however, allow it to be properly named.... (Darlington 1849: 531).

Strict Linnaeans might have objected to a generic name honoring Franklin on the grounds that he was not a botanist, but this dispute seems grounded in the truth that British botanists would not allow a plant to be named for Benjamin Franklin so soon after the American Revolution. When William Aiton's large catalogue of the collection at Kew, Hortus Kewensis, was published in 1789 there was no mention of "Franklinia" or Bartram or Marshall in the entry on Gordonia pubescens. Aiton fashioned the rather ridiculous English common name "Pubescent Loblolly Bay" for the plant (Aiton 1789: vol. 2, 231).9 While Aiton could have been confused over the identity of the Franklinia, Banks was unequivocal in his determination that the Franklinia and the Gordonia pubescens were one and the same. The Hortus Kewensis remained a major reference for gardeners and botanist in the first half of the 19th century. (William Bartram himself owned a copy of the work, given to him by Robert Barclay in 1790.) When the work was enlarged and improved in 1811-1813 all mention of the Franklinia, the Bartrams, and Marshall's publication was still suppressed (Aiton 1811-1813: vol. 4, 243-235).

In 1791, after much delay, William Bartram's *Travels...* was finally published in Philadelphia by a new set of printers, James & Johnson. He published his descriptions and naming of *Franklinia alatamaha* with no suggestion of the European controversy over the name. If an illustration of the Franklinia

⁸ Lettsom published a catalogue of Fothergill's greenhouse and stove plants in 1781. *Gordonia lasianthus* was listed but not the Franklinia or *Gordonia pubescens* (Lettsom 1781: 29).

⁹ It is generally acknowledged that Aiton's catalogue was based on the work of Daniel Solander (1735-1782) (Desmond 1995: 104-106). Solander could be the ultimate source of the name *Gordonia pubescens*. The name may trace back to identifications of William Bartram's specimens or plants made by Solander for Fothergill. This has been suggested but never documented (W. Bartram 1968: 152).

"French botanists should have been more receptive to a plant honoring Franklin, but confusion between Franklinia and *Gordonia pubescens* eclipsed the honor."

had been included in the volume it would have gone far to support William's analysis of the plant as a new genus. It would be over a decade before a valid European illustration of the Franklinia appeared.

Naming the Franklinia—Europe:

In Europe the Franklinia was haunted by poor and incomplete descriptions from a scientific establishment that nevertheless was fascinated by the rare plant and its flowers. In the rush to describe new plants, the Franklinia was repeatedly published without observations on the flowers, fruit or seeds, which were rarely produced in Europe. As the valuable plant spread in the greenhouses of wealthy Europeans under the name *Gordonia pubescens*, it took on a life of its own, disconnected from any knowledge of the circumstances surrounding its discovery on the Altamaha. *Gordonia pubescens*, as doppelganger of the Franklinia, spawned a long literature in the botanic world.

As will be seen, few European botanists thought to correspond with William Bartram with questions about North American flora, and particularly the Franklinia. This is in sharp contrast to the trans-Atlantic cooperation seen in the early 18th century. William Bartram was surrounded by the tangible evidence of this in his father's vast European correspondence.

A complete history of the Franklinia in Europe is not yet possible, but following the major publications that include either Franklinia or *Gordonia pubescens*, it is possible to piece together a rough chronology. Correspondence, collateral publications, and unpublished manuscripts probably still conceal more of the history of the curious new shrub. As Paris was the undisputed capital of science in 18th century Europe, the story now shifts to France. French publications on the new plant are much more numerous than English.

Although Aiton's Hortus Kewensis gives 1774 as the date of introduction for the Gordonia pubescens in England, there is as yet no further evidence to establish its cultivation in England prior to 1789. Around 1786 the Franklinia surfaced in Paris as a new species. It was briefly described and published under the name Gordonia pubescens in the second volume of Jean Baptiste Lamarck's Encyclopédie Méthodique: Botanique. In the article describing the genus "Gordon" or Gordonia, the well known Gordonia lasianthus or Loblolly Bay was followed by a new species:

2. Gordon pubescens, *Gordonia pubescens*... This species appears to differ from the preceding by the disposition of the flowers and by the light cottony wool that covers the inner surface of the leaves, especially during their youth. This is a tree that greatly resembles the former in the bearing, the shape and disposition of its leaves: they are green, smooth & glossy above, downy and whitened below. The flowers are large, single, stalkless, & usually terminal: they have a crown-like calyx, cutout around, their petals white, concave, & their stamens yellow. This shrub is growing at the Trianon & in the garden of M. Cels; it is believed in all likelihood to come from America (Lamarck 1783-1808: vol. 2, 770).

This description provides several important facts. Lamarck, or whoever composed the description for the *Encyclopédie*, saw the plant alive and in bloom. The plant was growing at two (perhaps only two) places near Paris—the Trianon Garden at Versailles, and the garden of Jacques Philippe Martin Cels (1740-1806) in the Paris suburbs. And finally, the author did not know where the plant came from.

French botanists should have been more receptive to a plant honoring Franklin, but confusion between Franklinia and *Gordonia pubescens* eclipsed the honor. Lamarck's entry is apparently the first published description anywhere of the name *Gordonia pubescens*. The description is marked as a newly coined species, but Lamarck could have been publishing a name already in use in London or Paris, much as Garden and Ellis used the name *Gordonia* for years before it was official. It is significant that Lamarck was unsure where these plants came from. While they might have been propagated from English examples at Kew, or elsewhere, it is equally likely they had been shipped to Paris as live plants by John, Jr. and William Bartram.

The insistence of European observers on the pubescent or wooly appearance of the underside of the leaves raises some doubt. Were they actually describing the Franklinia or some other particularly pubescent relative? A rational observer examining an adult specimen of Franklinia alatamaha would not chose "pubescence" as its most salient characteristic. There is a very fine coat of hairs on the underside of the leaves, but it is often almost invisible. Pubescence likely served as an easy means for European gardeners to distinguish the immature Franklinia from the similar Loblolly Bay in a greenhouse, but it is more a horticultural distinction than a botanic classification. The large, virtually stem-less flowers, the deciduous leaves, and the spherical seed capsules are all more distinctive. Bartram, Marshall, and other observers in America do not even include pubescence in their descriptions of the Franklinia.

"Pubescence likely served as an easy means for European gardeners to distinguish the immature Franklinia from the similar Loblolly Bay in a greenhouse..."

As will be seen, this led several French botanists to classify the Franklinia as yet another species of *Gordonia*, similar to *Gordonia pubescens*, but with glabrous or hairless leaves.

What comes through these scientific descriptions is the fact that the plant was barely known in Europe where it was rare, and difficult to grow and to flower. Descriptions were made from extremely young plants that had been forced to flowerprobably under glass. Even though flowers were crucial to providing a Linnaean diagnosis of the plant, descriptions note flowers that were poorly formed or dropped before opening. Seeds were apparently never developed. Kept evergreen under glass, without flowers or seed capsules, the young Franklinia might just look like a downy Gordonia. Still the great detail published on the Franklinia when only single individuals were available in scattered gardens suggests it was a highly prized and valuable plant.

Humphry Marshall's *Arbustrum Americanum* was translated into French and published in Paris in 1788. This brought the name and description of *Franklinia alatamaha* to a much wider European audience, as the North American printing had sold very poorly. M. Lézermes, Assistant Director of the Royal Nurseries added notes on cultivation to the French edition. These confirm that the Franklinia under its own name was virtually unknown in France. Apparently no one was aware that the plant in cultivation under the name *Gordonia pubescens* was the Franklinia.

We have sown the seeds of the franklinia several times; but the poor state in which they arrived, always prevented germination. One can only hope for success if they are gathered at their perfect maturity, & if they are quickly dispatched in sound condition (Marshall 1788: 76).

The Franklinia (or *Gordonia pubescens*) as a member of the Linnaean class of Monadelphia was of considerable scientific curiosity. In 1788, the Franklinia was again published under the name *Gordonia pubescens*, by a Spanish botanist working in Paris, Antonio José Cavanilles (1745-1804). Cavanilles, originally trained as a mathematician and physicist, was a relative newcomer to botany, but from 1780 he had worked with most of the authorities in French botany including Lamarck, Jussieu, Thouin, Desfontaines, and Adanson. He studied at the Jardin du Roi, and had access to both the Trianon and the Cels garden where the *Gordonia pubescens* was under cultivation. Between 1785 and 1790 Cavanilles published ten dissertations on the



Cavanilles' illustration of Gordonia pubescens, engraved by Sellier for vol. 6 of Monadelphiæ Classis Dissertationes decem. Published in Paris in 1788. This drawing was based on a dried herbarium specimen at the garden of Jacques Philippe Martin Cels at Montrouge in the suburbs of Paris. (Special Collections, National Agricultural Library).

Linnaean class of Monadelphia assigning a number of new genera and species. *Gordonia* appeared in the sixth volume of this work, and both *Gordonia lasianthus* and *Gordonia pubescens* were described and illustrated (Cavanilles 1785-1790: vol. 6, 307-308, tab. 161, 162; Pelayo & Garilleti 1993: 51-53).

Cavanilles was not able to observe the flowers of a living Franklinia. His illustration, the first in Europe, was based on an imperfect dried specimen without flowers. His entry for *Gordonia lasianthus* was based on observations of the living plant and also the dried fruit, but for *Gordonia pubescens* he saw only a dried specimen without flowers at Cels' garden, suggesting the plant once there had died. Lacking flowers, Cavanilles' description of the *Gordonia pubescens* largely repeated what Lamarck had published. He also reported his observations on 3 dried calyxes. These are apparently indicated in the upper leaf axils of his illustration. They suggest the specimen had been taken just after the flower

Mana "L'Héritier numbered three species of Gordonia...

confusion over the Franklinia and *Gordonia pubescens* lead L'Héritier to create a new species for the Franklinia, *Gordonia Franklini*."

petals dropped, but before the development of the fruit or capsule. The leaves are accurate, but the overall illustration is not characteristic of the Franklinia, and largely useless from a scientific standpoint. Cavanilles also reported the habitat of both species—Franklinia and Loblolly Bay—as "Carolina," a mistake that was repeated in most European works to follow.

The Monadelphia was a particularly artificial construction of the Linnaean system, which needed a rational division and organization. The proper naming of the Franklinia was at the center of ongoing scientific debate. Like the Franklinia, a number of plants in this class were rare and extremely valuable, and therefore difficult to study alive. There were disagreements over Cavanilles' new divisions of the class, and his method of study, which depended primarily on collections of dried specimens. Cavanilles and the French botanist Charles Louis L'Héritier de Brutelle (1746-1800) in particular disputed names and priority in naming. L'Héritier was in the process of publishing his own series of plates of new and curious plants entitled Stirpes Novae. This work was issued in pieces in Paris from 1785-1791. It featured life-sized plates of a number of new and curious plants, including many in the Monadelphia. Some were illustrated by the young artist Pierre-Joseph Redouté (1759-1840) (Buchheim 1965; Pelayo & Garilleti 1993: 54).

L'Héritier also wanted to feature the curious new Gordonia pubescens in his Stirpes Novae, but he was not able to obtain illustrations of any of the plants in the genus Gordonia for his work. They were merely summarized in the text following tabs 73 and 74, which illustrated his "Stuartia Malachodendron" and "Stuartia pentagyna." Here L'Héritier acknowledged the close similarity between Stewartia and Gordonia, and he suspected that the genus Gordonia might be withdrawn in future, after sufficient study of plants in flower (L'Héritier 1785-1791, fascicle 6: 156). L'Héritier numbered three species of Gordonia. All three were given as natives of South Carolina. Gordonia lasianthus and Gordonia pubescens, had been named and described before, but continuing confusion over the Franklinia and Gordonia pubescens lead L'Héritier to create a new species for the Franklinia, Gordonia Franklini. L'Héritier was not convinced that G. pubescens and G. Franklini were actually different plants. A pair of long notes attached to the table of contents for his sixth fascicle suggested the possibility they were the same, but apparently observations on a dried specimen of Franklinia were inclusive, and showed similarities with both Gordonia and Stewartia (L'Héritier 17851791, fascicle 6: xv).

The description of *Gordonia pubescens* was based on the plant that had flourished in the Trianon Garden at Versailles for a "long time." It needed shelter from the cold in winter and rarely flowered well. The year L'Héritier intended to describe the plant and have a figure made, (probably 1788), the flowers all dropped in an early frost. Without flower or fruit, the description of *Gordonia pubescens* in *Stirpes Novae* was reduced, in tautological simplicity, to repeat that the leaves were pubescent beneath.

L'Héritier reported that Gordonia Franklini had not yet flowered in Europe, but under this name, he provided a much better description for the Franklinia, apparently from a dried specimen. Although no source for the specimen is noted, it almost certainly came from the Bartrams or André Michaux. The description gives details of the flower, leaves, and the seed capsule. Most importantly, the leaves were specified as glabrous or smooth. It is significantly curious that a trained observer could determine that the Franklinia and Gordonia pubescens were not the same plant after examining specimens of both. This again suggests a marked difference between Gordonia pubescens under cultivation in European greenhouses and the typical growth of the Franklinia in North America, either on the Altamaha or in cultivation as a garden plant.

L'Héritier's work has served to confuse the history of the Franklinia since it appeared. The volume title page of Stirpes Novae was dated 1784, and throughout most of the 19th century it was given priority in naming the Franklinia as Gordonia pubescens L'Her. This is ironic, as his work gave virtually no description for the Gordonia pubescens. It is now known that none of L'Héritier's work was published before 1785 and the section describing Gordonia pubescens and Gordonia Franklini was issued in 1791, although the text might have been finished as early as 1789 (Buchheim 1965: 32, 35). In any case, L'Héritier's work suggested future interpretations might likely recombine Stewartia and Gordonia, and the Franklinia would certainly have been included in this larger genus.

While most European botanists were certain they had named the new pubescent Gordonia properly in their greenhouses in London and Paris, an Italian botanist and traveler from Milan, Luigi Castiglioni (1757-1832), who had seen the Franklinia in Philadelphia, ca. 1785-1787, agreed with the descriptions of Bartram and Marshall. Castiglioni was apparently quite taken with the Franklinia "a new acquisition for lovers of natural history, so named in honor of Benjamin Franklin."

"While most European botanists were certain they William &



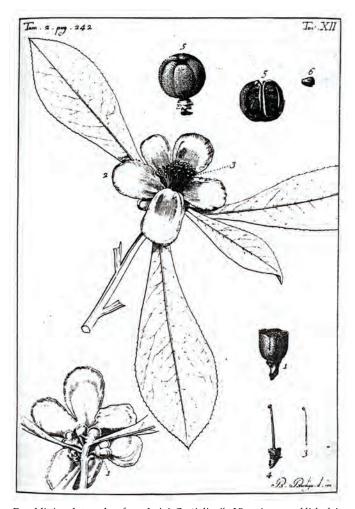
had named the new pubescent Gordonia properly in their greenhouses, an Italian botanist from Milan agreed with the descriptions of Bartram and Marshall."

According to the observations of Mr. Marshall, verified by me, Franklinia ought to form a new genus between the Stewartia and Gordonia in the Monadelphia polyandria class of Linnaeus. One can hope with good reason that this shrub can hold up in our Lombardy climate, since it flourishes vigorously in that of Pennsylvania (Castiglioni 1983: 381).

Castiglioni had an illustration of the new plant engraved for the account of his travels published in Milan in 1790 (Castiglioni 1790: tab 12). This proved to be the first European illustration of the Franklinia flower and fruit, although probably prepared from a dried specimen. A large portion of Castiglioni's Viaggio... was devoted to detailed descriptions of North American plants. Under his description of Gordonia, he further distinguished Franklinia:

From a comparison of the generic description given by Linnaeus of *Gordonia* and from the one I gave of Franklinia, it is easy to see how much difference there is between the two genera, although some have brought them together into a single one: 1) the calyx of Gordonia is formed of five leaves, while in Franklinia it consists of a single leaf divided into five parts; 2) the ovary of Gordonia is oval, that of Franklinia almost round—the style of the former has five angles and ends in five stigmas, and that of the latter is round with a blunt stigma; 3) the fruit of Gordonia is pointed, has a calyx that almost half covers it, and the winged seeds are about six in each little locule with the seed toward the base, whereas, Franklinia has nearly spherical capsules and its numerous and wingless seeds are set one on top of the other according to the length of the fruit. In addition to these dissimilarities that constitute the essential difference in the genus there are many others by which these two plants are easily distinguished, since the flowers of Gordonia have a longer peduncle, and are not so large as in Franklinia, and the leaves are more dentate and narrower. The capsules of Gordonia are covered with silvery hair and are smaller... (Castiglioni 1983: 388).

Castiglioni's Viaggio... was not widely known in North America or in Europe outside of Italy. In spite of his detailed and accurate analysis, Castiglioni had little impact on questions of North American botany. has written that Castiglioni "ultraconservative" in his species concept, preferring to assign plants to long-recognized Linnaean species. If so, his recognition of Franklinia as a new genus is that much more definitive (Castiglioni 1968: 343).



Franklinia alatamaha from Luigi Castiglioni's Viaggio..., published in Milan in 1790. This detailed illustration, drawn and engraved by B. Bordiga, was probably prepared from a dried specimen brought from North America. Unfortunately for the fate of the name Franklinia in Europe, Castiglioni's work was virtually unknown in Paris and London.

It is striking that William Bartram's own account of the Franklinia had no impact on European descriptions of the species. Following the publication of Travels... in Philadelphia in 1791, it saw wide distribution throughout Europe. It was reprinted in editions in London in 1792 and 1794, Dublin in 1793, Berlin and Vienna in 1793, Haarlem in 1794-1797, Amsterdam in 1797, and Paris in 1799 and 1801. Much has been written on Bartram's influence on romantic writers in Europe, but rarely if ever was his work quoted as a source by botanists in works on taxonomy. This suggests William Bartram's audience in Europe did not include systematic botanists. As a result, the narrow natural habitat of the Franklinia on the Altamaha remained unknown.

In 1800, the Franklinia was catalogued in the 4th

"Botanists have long desired an exact and complete figure of the *Gordonia pubescens*. This beautiful species has been cultivated several years in Europe, without producing perfectly developed flowers..."

ed. of Linnaeus' Species Plantarum edited by the German botanist Karl Ludwig Willdenow (1765-1812). Gordonia pubescens and Gordonia Franklini were both new additions to this edition. Willdenow probably never saw specimens or plants of the Franklinia. His work was dependent on the impressive, if incorrect, bibliography that had already built up on the plant in Europe. Willdenow quoted the descriptions of Gordonia pubescens from L'Héritier, Aiten, Lamarck and Cavanilles, and gave L'Héritier's description for Gordonia Franklini with Marshall's Franklinia Alatamaha as a synonym. Willdenow did contribute his own German common name for each species of Gordonia: the Loblolly Bay was the "long-stalked Gordonia," G. pubescens the "hairy Gordonia," and G. Franklini the "stalkless Gordonia" (Willdenow 1797-1825, vol. 3, 840-842).

Willdenow's work is however significant in the intellectual biography of William Bartram. It was one of the few European references published on the Franklinia that Bartram had access to in North America. In the spring of 1804 William Hamilton presented Bartram with a part of Willdenow, and promised, "When the remainder of Wildenow is published—there will be two sets forwarded to me as to complete yours as well as my own" (Hamilton 1804, 1804a). William Bartram's Catalogue...of the Bartram collection issued in 1807 cited "Willdenow, the Hort. Kewensis, Walter's Flora Caroliniensis, and other moderns" as the primary source for the names of plants discovered since the last edition of Linnaeus (W. Bartram 1807: 5). As will be seen, Willdenow may have led William Bartram to believe that the Franklinia differed from Gordonia pubescens.

By the turn of the 19th century, the Franklinia was growing in the collection of the Empress Josephine of France, at her garden at Malmaison. In 1803, *Gordonia pubescens*, drawn by Redouté, appeared as the first plate of the *Jardin de la Malmaison*, the illustrated catalogue of the rare plants from this garden by E. P. Ventenat (1757-1808). It speaks much to the continued value of the Franklinia in Europe that it was chosen to open this volume. Ventenat accepted L'Héritier's delineation of three distinct species of North American *Gordonia*, and so was unaware the *Gordonia pubescens* was identical with the Franklinia. He gave no information on the origin of the plant at Malmaison, but it may have come from England.

In his dedication to Madame Bonaparte, Ventenat described "the beautiful garden at Malmaison as the sweetest souvenir of the conquests of her illustrious Spouse," and although the Franklinia was not there by conquest of Napoleon, it shared the garden with

plants from "the deserts of Arabia and the burning sands of Egypt." Ventenat placed the curious shrub in Jussieu's family of Malvacea, and remarked:

native to South Carolina, cultivated for several years in the gardens of Europe, remarkable for the size and beauty of its flowers. It spends the winter in the orangerie, and flowers towards the end of summer (Ventenat 1803-1804: vol. 1, tab 1).

Redouté's illustration was the first accurate European portrayal of the flower of a living Franklinia, and included details of the calyx, pistil, and fruit. His leaves however appear much wider and more serrated than plants grown in North America—actually suggesting Stewartia more than the Franklinia. The illustration was followed by the most detailed botanic description of the *Gordonia pubescens* to date, based on the plant at Malmaison, which had flowered and perfected seed capsules. Ventenat followed his description with a series of general observations on Gordonia and the closely related Stewartia. He repeated the difficulty of describing these plants without proper specimens or illustrations.

Botanists have long desired an exact and complete figure of the *Gordonia pubescens*. This beautiful species has been cultivated several years in Europe, without producing perfectly developed flowers...

Ventenat also noted the close similarities in flower and fruit between *Stewartia* and *Gordonia*. He suggested they should be assigned to a single genus, except for Jussieu's observation that the seeds of *Stewartia* contained perisperm while those of *Gordonia* did not. In an attempt to confirm this, Ventenat noted:

I have analyzed many seeds of *Gordonia pubescens*, that have been sent to me by my estimable friend, citizen Michaux, but as they proved to be empty, it was not possible to study their structure, and confirm the observation of Jussieu.

"Citizen Michaux" is certainly André Michaux (1746-1802), the French botanist and plant collector who along with his son, François André Michaux (1770-1855), had been collecting in North America since 1785. The son of a farmer on the royal estates at Versailles, André Michaux demonstrated the same mixture of practical growing ability and botanic skill that marked the genius of John Bartram.

Michaux began botanic studies at the Trianon garden in 1777 under Bernard de Jussieu, and continued at the Jardin du Roi in Paris in 1779. By

"I cannot give you longer details on what I have gathered and seen in the Bartram garden. There is only one new and interesting tree: the Franklinia..."



Pierre-Joseph Redouté's drawing of Gordonia pubescens, engraved by P. F. Legrande. This colored plate opened Ventenat's large folio volume, Le Jardin de la Malmaison, published in Paris in 1803. (Ewell Sale Stewart Library, The Academy of Natural Sciences of Philadel-

the time he left Paris for New York in 1785 he was closely associated with all leaders of French botany, including most who would soon write on the Franklinia or *Gordonia pubescens*. He had collected in the Auvergne with André Thouin and Jean Baptiste Lamarck. Michaux was particularly close to Cels, L'Héritier, Antoine Laurent de Jussieu, and the artist Pierre-Joseph Redouté (Savage and Savage 1986: 7-11, 162-163). In an earlier work, Ventenat had described Michaux as "one of the most celebrated naturalist-travelers of the century," and noted that he had contributed a great number of new North American species to the garden of J. M. Cels (Ventenat 1800).

Indefatigable travelers in the model of the Bartrams, the two Michauxs surely provided eyewitness testimony on the Franklinia in North America after their return to Paris in the 1790s. Oddly enough, there is no current evidence that either Michaux sent Franklinia plants or viable seeds to Paris. Three specimens labeled "Franklenia" survive in the Michaux herbarium in Paris (IDC 83-1, 83-2, 83-3), with descriptive notes by André Michaux, but no indication where or when they were gathered. Ventenat's remark is just about the only concrete evidence that André Michaux sent plant material of the Franklinia or Gordonia pubescens to France.

In June of 1786, André Michaux traveled from New York and visited the Bartram garden for the first time. Writing to an unidentified correspondent in France, Michaux noted, "...I cannot give you longer details on what I have gathered and seen in the Bartram garden. There is only one new and interesting tree: the Franklinia..." (A. Michaux 1786). Michaux had arrived in New York in November 1785 and spent much of his time collecting in the area of New York and New Jersey, and in establishing a botanic garden for the French crown in what is now Hoboken, New Jersey. His assessment that he saw little new should be taken in context. Michaux had recently left Paris where the Bartrams (and others) had been shipping vast quantities of North American seeds since 1779. It is significant that he remarked the Franklinia as a new and interesting tree. Apparently he had not seen the Gordonia pubescens at Paris or Versailles. Michaux and his son would return to Bartram's Garden often in the future.

During spring of the next year, André Michaux, and his son explored in south Georgia. While André Michaux remained in Sunbury to nurse a hurt leg, his son François André and others visited the banks of the Altamaha, May 6-9, 1787. They may have passed the site of the Franklinia, but if they did, it was not recorded (A. Michaux 1889: 12; Savage and Savage 1986: 69). The Michauxs would seem a logical source for the introduction of the Franklinia to the Charleston area however. They established a second botanic garden for the French crown there in 1786.

Michaux's son, François returned to France in 1790, but André Michaux remained in North America until 1796—traveling widely east of the Mississippi and shipping large collections of plants and seeds to the French state nurseries and gardens. Returning to France in 1796, André Michaux remained in Paris through 1800, organizing his collections and preparing two manuscripts on North American plants. He left Paris in the spring of 1801 for an expedition to India and the South Seas, while his son returned to America to shut down the

"From these considerations I must follow John

Bartram the venerable discoverer of the tree now figured, in separating it from *Gordonia*, though against the authority of that excellent botanist L'Heritier..."

French-owned nurseries in New Jersey and South Carolina. André Michaux died in Madagascar in November 1802. His work on North American oaks had been published in Paris in 1799. His larger North America flora, *Flora Boreali-Americana*, was incomplete, but was finished by François André Michaux (and others) from his notes and specimens (Savage and Savage 1986: 187-189).

Flora Boreali-Americana... published in Paris in 1803 was the first work to clearly equate Gordonia pubescens and the Franklinia. It provided a sketchy Latin description for Gordonia pubescens and referenced only Marshall, suggesting Michaux or his editors were not familiar with the already large European literature on the plant (A. Michaux 1803, vol. 2, 42). André Michaux's own herbarium specimens bluntly described the "Franklenia" as a Gordonia with deciduous leaves, a characteristic never mentioned in contemporary European publications. The Latin characters attached to two of his specimens were more complete and more accurate than the description that appeared under Gordonia pubescens in his North American flora.

The Flora Boreali-Americana was specific about the habitat of the Franklinia: "beside the Altamaha River, Georgia." With knowledge gained from William Bartram and firsthand observations on the Franklinia in North America, Michaux's statements should have ended the confusion in Europe between the Franklinia and Gordonia pubescens, but this was not so. By mistake or typographical error, Marshall and Bartram's Franklinia alatamaha became Franklinia americana in Michaux's work, adding yet another published name for the Franklinia in Europe. In works that followed Franklinia americana was often repeated as a synonym for Gordonia pubescens. It was even differentiated from the "true" Franklinia, Franklinia alatamaha, by some authors.

The Franklinia was again illustrated and renamed in Europe in December of 1806. The British botanist and horticulturalist Richard Anthony Salisbury (1761-1829) published the plant under the name "Lacathea florida" or "Florid Lacathea." It appeared as plate 56 in the series of illustrations by William Hooker entitled The Paradisus Londinensis. Ironically, Salisbury was in a position to know more about the work of the Bartrams than almost any other European authority. He had acquired Peter Collinson's garden at Mill Hill, and had corresponded directly with William Bartram. In Salisbury's first letter to William Bartram, July 7, 1793, he introduced himself as nothing less than a fan of William's book, Travels... (Darlington 1849: 474-475). Salisbury also named a genus Bartramia (now unknown) in honor of John Bartram. In spite of these connections, Salisbury gave William Bartram no credit in the discovery or naming of the Franklinia, and either forgot or ignored the description of the plant in *Travels...*.

Salisbury did reference the prior writings of André Michaux, L'Héritier, and Cavanilles on the *Gordonia pubescens*, but he was convinced that the Franklinia was a new, monotypic genus. Although Salisbury was also aware of Marshall's original publication of *Franklinia alatamaha*, for unspecified reasons he dismissed the name *Franklinia* in favor of his own name *Lacathea*:

Nothing evinces the sound judgment of a botanist more than his opinions respecting genera: it behoves him therefore who labours in this branch of the science, to proceed cautiously, and study if possible, all the genera allied to that which he means to establish. Linnè first promulgated the important truth that they are natural; or in other words, that they depend upon a certain degree of conformity in the fructification of different vegetables, which decides the matter imperatively, and often contrary to our will and pleasure: for while some genera consist of a hundred, two hundred, and even three hundred species, in other such a peculiarity of flower and fruit is confined to one individual.

From these considerations I must follow John Bartram the venerable discoverer of the tree now figured, in separating it from *Gordonia*, though against the authority of that excellent botanist L'Heritier: he knew so little about it however as to make two species of it...

I have given this genus a name from its wide receptacle, as there is not a shadow of a pretence to call it *Franklinia*: it differs from *Gordonia* in the filaments not being inserted in 5 solid bodies; from *Hæmocharis* (*G. Hæmatoxylum* Swartz) in its monopetalous corolla; from *Stuartia* in its deciduous calyx; from *Malachodendron* in its simple style; and from all of them in the structure of its fruit and seeds (Salisbury 1805-1808: tab 56).

Salisbury based his new description on observations from one or more plants in London that had flowered "in the open air" in the fall of 1806. This provides interesting first hand information on the cultivation of the Franklinia in Europe.

Nothing could be more luxuriant than the flowers were this autumn in the open air at Messr. Lee and Kennedy's nursery, where the

"G. pubescens... now not uncommon in green-



houses, flowering in autumn. A handsome shrub, whose branches, calyx, and the backs of its leaves, are clothed with fine white depressed down...

drawing was made; but the dissection of the fruit is from one imported some years ago, by Mr. Allport, seedsman...

"Lee and Kennedy's nursery" was the famous Vineyard Nursery in Hammersmith, Middlesex, which had been in operation from ca. 1746. In 1806 it was under operation by James Lee (1754-1824) and John Kennedy (1759-1842), the sons of the original partners. John Kennedy advised the Empress Josephine and provided plants for her garden, suggesting the Franklinia at Malmaison came from this nursery as well (Desmond 1977: 355, 536-537). "Mr. Allport" may be John Allport, a seedsman and nurseryman at several locations in London in the 1790s-1810s (Desmond 1977: 9). The Franklinia rarely if ever ripened seed in Europe. The ripe fruit and seeds of the Franklinia illustrated by Hooker could have originated at the Bartram Garden.

Salisbury was the only European writer of this date, aside from Michaux, to accurately describe the narrow natural distribution of Franklinia on the Altamaha. He recorded it was "only found native south of Ft. Barrington, on well drained soil, collected by J. Bartram." While it is possible Salisbury was confusing John and William Bartram, or combining their work into a single individual, he remained one of the few European botanists to credit the discovery of the Franklinia to the Bar-

Overall, Salisbury's description and Hooker's illustration were an accurate portrayal of the Franklinia. The flower appears somewhat distorted, but with the addition of the seed capsule the illustration approaches the scientific utility of William Bartram's 1788 drawing. In summarizing the generic differences between Gordonia and Stewartia and the Franklinia or Lacathea, Salisbury centered on the structure of the seeds and fruit—the same detail that convinced William Bartram the plant was a new genus. Nevertheless Salisbury's new name was not widely accepted, and this rare publication had little impact on European or American botany. There is a hint, however, that William Bartram was aware of Salisbury's re-naming of the Franklinia. In the 1807 Bartram Catalogue... the Franklinia was listed as Franklinia florida, suggesting William Bartram had adopted the species name Salisbury had coined.10

By the beginning of the 19th century the Franklinia



William Hooker's engraving of Lacathea florida drawn from plants flowering at the Lee and Kennedy nursery in Hammersmith in the fall of 1806. Plate 56, dated December 1, 1806, from Salisbury's Paradisus Londinensis. (Rare Books Division; The New York Public Library; Astor, Lenox and Tilden

had gained a place in standard botanic references, and began to appear in more general encyclopedias. Although the Franklinia did not make it into either the 3rd edition of the Encyclopaedia Britannica completed in Edinburgh in 1797 or the Philadelphia edition issued by Thomas Dobson from 1789-1798, it did appear in Abraham Rees' Cyclopædia begun in 1802 in England and reprinted concurrently in Philadelphia from 1805 onward. Here the Franklinia was also referred to the genus Gordonia (Rees 1805-1825: vol. 15). Following L'Héritier, both Gordonia pubescens and Gordonia Franklini appear:

G. pubescens...

Native of South Carolina, now not uncommon in green-houses, flowering in autumn. A handsome shrub, whose branches, calvx, and the backs of its leaves, are clothed with fine white depressed down.... Ventenat's fig. drawn

¹⁰ This same nomenclature, "Franklinia florida" was repeated in 1814 and 1819 reprintings of this catalogue. "Gordonia pubescens Hort. Kew" also appears as an entry in William Bartram 's 1807 list, suggesting he considered it a distinct

"I have seen several trees of this species in the garden of J. and W. Bartram, whose growth was luxuriant, and which, during 25 years, had remained uninjured by the severe winters which congeal this part of Pennsylvania."

by Redouté, the first in the splendid Jardin de la Malmaison, is one of the finest representations of a plant that can any where be seen...

G. Franklini...

Native of South Carolina. *Flowers* sessile, solitary, large, white, very much admired in their native country, but we have not heard of their being produced in Europe, nor have we seen even a dried specimen... (Rees 1805-1825: vol. 17).

While it seems hard to believe that the Franklinia was ever "not uncommon in green-houses," this probably refers to a total population of one or two hundred plants. Greenhouses were themselves uncommon in the early 19th century and the *Cyclopædia* was designed for a limited, educated elite with time and money to spend.

The Supplément to Lamarck's Encyclopédie Méthodique: Botanique, appeared from 1810-1817, and now included Franklinia, but referred it to the genus Gordonia. Under Gordonia, L'Héritier's Gordonia franklini was published as a valid species—synonymous with Bartram and Marshall's Franklinia alatamaha. Gordonia franklini was virtually the same Gordonia pubescens illustrated by Cavanilles and Ventenat, but "its leaves are perfectly smooth on both faces" (Lamarck 1810-1817: vol. 2, 668, 815-816).

A second edition of *Hortus Kewensis* enlarged by William Townsend Aiton to five volumes appeared from 1810-1813. The entry on *Gordonia pubescens* remained little changed from the first edition with no mention of Franklinia. The authorities for the name were updated to Willdenow and Ventenat with Salisbury's *Lacathea florida* added as a synonym. This edition also modulated the common name to "Downy Loblolly Bay" (Aiton 1810-1813: vol. 4, 234-235).

Between 1810 and 1814 two more major works in North American botany were issued in Europe, in effect finalizing the naming of the Franklinia as Gordonia pubescens. François André Michaux's Histoire des Arbres Forestiers de L'Amérique Septentrionale appeared in Paris from 1810-1813. Pierre-Joseph Redouté again illustrated the Franklinia under the name Gordonia pubescens for this work (F. A. Michaux 1810-1813: vol. 3, 135-137 & plate). The book was translated into English and issued with the same plates as The North American Sylva in 1819. Michaux confirmed "Franklinia" as the common name for the plant widely known in Europe as Gordonia pubescens. He was also quite specific about the "very narrow bounds" of the plant on the banks of the Altamaha in Georgia. In spite of his long acquaintance with William Bartram, Michaux credited John Bartram with the discovery and naming of the Franklinia, incorrectly placing the discovery in 1770. A mistake in the English translation also recorded the seed capsules split along four seams when ripe, not five. This rather serious botanical error was not corrected even when *The North American Sylva* was reprinted in Philadelphia in 1859 suggesting few had actually seen the fruit of the Franklinia (F. A. Michaux 1859: vol. 2, 31-33).

Michaux also suggested the Franklinia could stand strong winter cold.

...I have seen several trees of this species in the garden of J. and W. Bartram, about 4 miles from Philadelphia, whose growth was luxuriant, and which, during 25 years, had remained uninjured by the severe winters which congeal this part of Pennsylvania.

The Franklinia has long been cultivated in France and England; but though the cold is less intense, it grows less kindly at Paris than at Philadelphia. This tree seems to be less highly esteemed than it deserves: it might easily be naturalized, and its magnificent flowers, especially when rendered double, would richly contribute to the decoration on our pleasure grounds (F. A. Michaux 1819: vol. 1, 298, plate 59).

Frederick Pursh (1774-1820), a German-born botanist with Philadelphia connections issued his North American flora, Flora Americæ Septentrionalis, in London in 1814. Pursh had been employed as head gardener at William Hamilton's "The Woodlands" in Philadelphia from 1802-1805, and went on to work with Benjamin Smith Barton, and then Dr. David Hosack in New York. Like Michaux, Pursh had often visited the Bartram garden and certainly seen the Franklinia there and elsewhere in Philadelphia. Pursh noted he had seen the living plant in his description, and gave the proper habitat on the Altamaha. Although he collected in the South in the fall of 1805, he was largely in the mountains, and so probably never saw the site of the Franklinia in south Georgia. His brief entry for Gordonia pubescens quoted the standard Willdenow edition of Species Plantarum. Pursh did reinforce the fact that the Franklinia was synonymous with Gordonia pubescens—G. Franklinia [not G. Franklini!] of Willdenow, Franklinia Alatamaha of Marshall, and Lacathea florida of Salisbury were listed as synonyms. Pursh also remarked on the hardiness of the Franklinia: "though a native of a very southern latitude, is able to stand a considerable northern climate" (Pursh 1814: vol. 2, 451).

"There was certainly evidence from North Manual Earlier America on the hardiness of the Franklinia, but it may have taken some daring to risk a valuable exotic outside through the winter."



A second Redouté drawing of the Franklinia or Gordonia pubescens engraved by Gabriel for François André Michaux's Histoire des Arbres Forestiers de L'Amérique Septentrionale published in Paris 1810-1813 and re-issued in English as The North American Sylva in

The Swiss botanist Augustin Pyramus de Candolle (1778-1841) codified the previous generations of botanists in his massive *Prodromus Systematis Naturalis Regni Vegetabilis...* of 1824. Here the Franklinia appeared under the tribe of GORDONIEÆ. Candolle organized the genus *Gordonia* into three sections, with the Franklinia falling under SECT. III. LACATHEA. The only species in this section was *Gordonia pubescens*, but Candolle defined two subspecies under this name, based on previous literature, and his own observations of dried specimens:

"velutina"—encompassed the Gordonia pubescens of Ventenat, L'Héritier, and Cavanilles, and curiously the Franklinia Americana of Marshall, [which never existed].

"subglabra"—included the Gordonia franklini of L'Héritier and Marshall's Franklinia alatamaha.

Candolle's synthesis of the conflicting descriptions and names for the Franklinia was a noble, if academic effort (Candolle 1824, vol. 1, p. 527-528). It remains unlikely there could have been more then one species of Franklinia represented in the relic population at Fort Barrington on the Altamaha.

After the European world of science had completed observation on the Franklinia and sufficiently classified the plant, it was largely forgotten. Like many once valuable North American plants in Europe changes in fashion and the availability of commercial propagation rendered the plant less rare and less precious. But the Franklinia was probably never cultivated in large numbers, even after it entered the nursery trade. It remained a rare greenhouse plant in Europe, propagated on a small scale and only rarely tried outdoors in the ground.

A mid-19th century French gardening manual by Pirolle listed both *Gordonia lasianthus* and *Gordonia pubescens*. The "Gordonia Pubescent" was described as a plant with "superb white flowers, with the scent of violets," a somewhat different characterization of the odor of the Franklinia. It was still a plant of the orangerie (Pirolle 1848: 420-421). In England the Franklinia appeared as the "Pubescent Gordonia" in Jane W. Loudon's *Ladies' Flower Garden of Ornamental Greenhouse Plants* also in 1848. Mrs. Loudon did give *Franklinia alatamaha* as a synonym, and properly located the original source on the Altamaha in Georgia (Loudon 1848: 42).

By middle of 19th century a few Franklinias were growing outdoors in Britain. There was certainly evidence from North America on the hardiness of the Franklinia, but it may have taken some daring to risk a valuable exotic outside through the winter. This may also suggest the value of the plant had decreased enough to make the test worthwhile. *Gordonia pubescens* and *Gordonia lasianthus* as well as two *Stewartia* survived the winter of 1850 outdoors "without protection" in the garden of Lady Rolle in Devonshire (Barnes 1850: 176). *Gordonia pubescens* also survived the winter of 1853-1854 unharmed at Chiswick (Anonymous 1855: 230).

The Franklinia remained a curious plant in Europe through the end of the 19th century, and continues so to this day. It was difficult to flower well, and eventually no longer fashionable. Stripped of its interesting history and connections with the Bartrams and Franklin, there was little interest in its cultivation outside of botanical collections.

In North American the plant became a staple of the Bartram's trade through 1850. After the garden was closed, the foundling plant was left to its own—both in the garden and in the wild. Part II of this history will examine the decline and revival of the Franklinia in North America.

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