A Man and a Tree: Cyril Bish and the ‘Holden’ Shagbark Hickory

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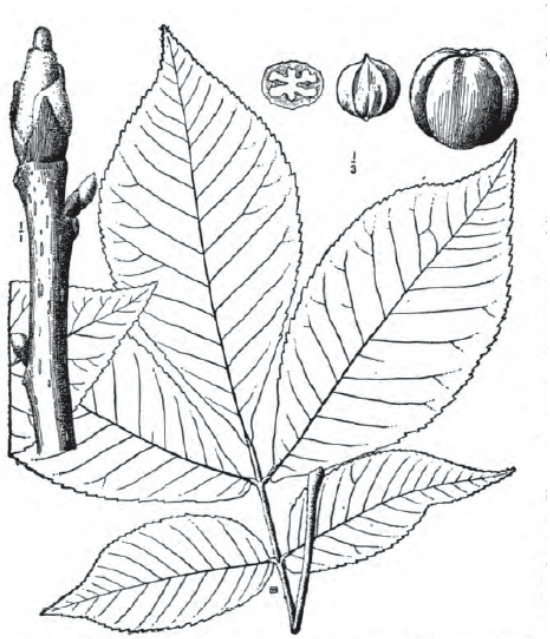
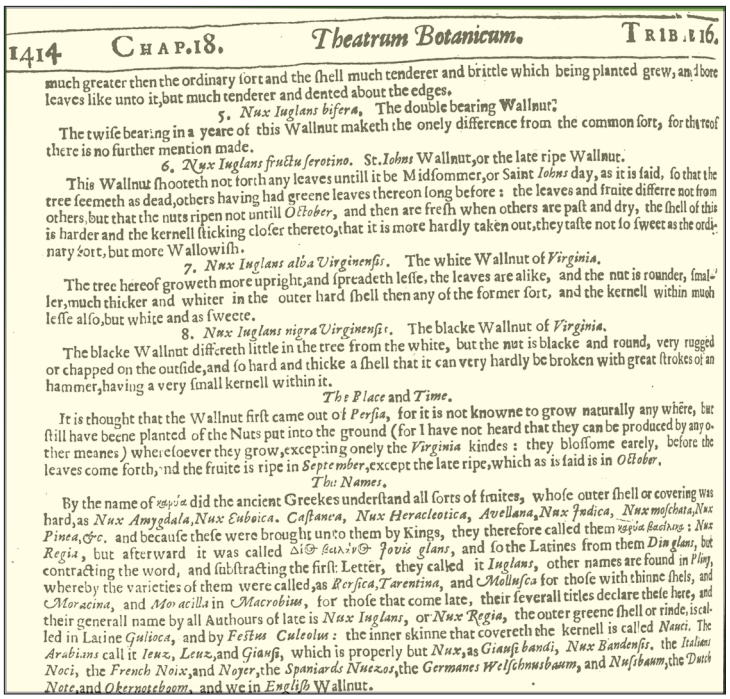


FIG. 5.—Shagbark (*Hicoria ovata*). Twig, natural size; leaf and fruit, one-third natural size.

A Man and a Tree: Cyril Bish and the 'Holden' Shagbark Hickory
Written and designed by Emily Levine © 2013
For the Office of the Vice Chancellor, IANR
University of Nebraska-Lincoln

Introduction

Just west of the prairie at the north end of the University of Nebraska-Lincoln's Earl G. Maxwell Arboretum stand two specimens of *Carya ovata*, the distinctive shagbark hickory. One of these trees was donated by Wilbur Dasenbrock, former director of the university's Landscape Services Department, and the other was procured and donated by longtime university County Extension Agent and nut tree enthusiast, Cyril Bish. Every plant in the arboretum has some sort of story and Cyril's shagbark hickory is no exception. Indeed, its story might be one of the more interesting and it deserves to be told.



1414 CHAP. 18. *Theatrum Botanicum.* TRIB. I 16.

much greater then the ordinary ſort and the ſhell much tenderer and brittle which being planted grew, and bore leaves like unto it, but much tenderer and dented about the edges.

5. *Nux Juglans bifera.* The double bearing Wallnut.

The twiſe bearing in a yeare of this Wallnut maketh the onely difference from the common ſort, for the reſt there is no further mention made.

6. *Nux Juglans fructu ſerotino.* St. *Johns* Wallnut, or the late ripe Wallnut.

This Wallnut ſhooteth not forth any leaves untill it be Midſommer, or Saint *Johns* day, as it is ſaid, ſo that the tree ſeemeth as dead, others having had greene leaves thereon long before: the leaves and fruite differre not from others, but that the nuts ripen not untill *October*, and then are freſh when others are paſt and dry, the ſhell of this is harder and the kernell ſticking cloſer thereto, that it is more hardly taken out, they taſte not ſo ſweet as the ordinary ſort, but more Wallowiſh.

7. *Nux Juglans alba Virginenſis.* The white Wallnut of *Virginia*.

The tree hereof groweth more upright, and ſpreadeth leſſe, the leaves are alike, and the nut is rounder, ſmaller, much thicker and whiter in the outer hard ſhell then any of the former ſort, and the kernell within much leſſe alſo, but white and as ſweete.

8. *Nux Juglans nigra Virginenſis.* The blacke Wallnut of *Virginia*.

The blacke Wallnut differeth little in the tree from the white, but the nut is blacke and round, very rugged or chapped on the outſide, and ſo hard and thicke a ſhell that it can very hardly be broken with great ſtrokes of an hammer, having a very ſmall kernell within it.

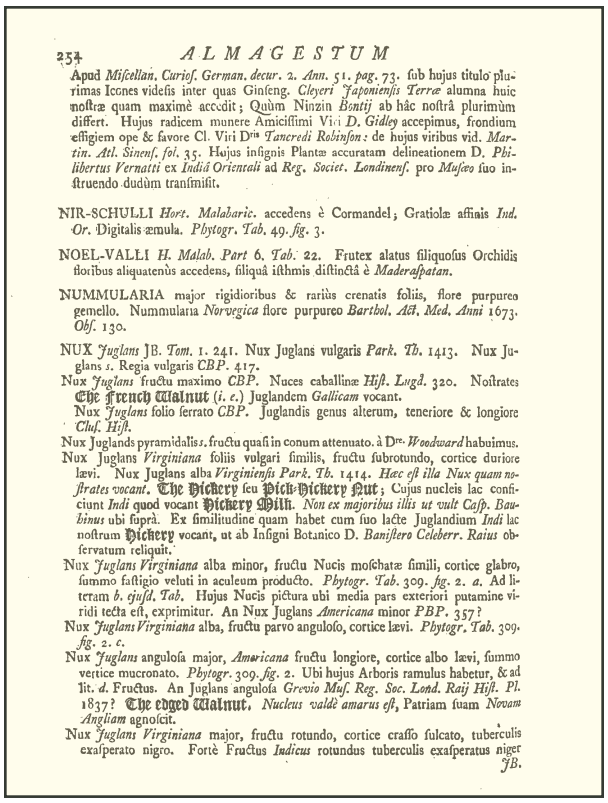
The Place and *Time*.

It is thought that the Wallnut firſt came out of *Perſia*, for it is not knowne to grow naturally any where, but ſtill have beene planted of the Nuts put into the ground (for I have not heard that they can be produced by any other meanes) whereſoever they grow, excepting onely the *Virginia* kindes: they bloſſome earely, before the leaves come forth, and the fruite is ripe in *September*, except the late ripe, which as is ſaid is in *October*.

The Names.

By the name of βασιλικα did the ancient Greekes underſtand all ſorts of fruites, whoſe outer ſhell or covering was hard, as *Nux Amygdala*, *Nux Euboica*. *Caſtanea*, *Nux Heracleotica*, *Avellana*, *Nux Indica*, *Nux moſchata*, *Nux Pinea*, &c. and becauſe theſe were brought unto them by Kings, they therefore called them βασιλικα βαλανοι: *Nux Regia*, but afterward it was called Διος βαλανος *Jovis glans*, and ſo the Latines from them *Dinglans*, but contracting the word, and ſubſtracting the firſt Letter, they called it *Juglans*, other names are found in *Pliny*, whereby the varieties of them were called, as *Perſica*, *Tarentina*, and *Molluſca* for thoſe with thinne ſhels, and *Moracina*, and *Mocilla* in *Macrobius*, for thoſe that come late, their ſeverall titles declare theſe here, and their generall name by all Authours of late is *Nux Juglans*, or *Nux Regia*, the outer greene ſhell or rinde, iscalled in Latine *Gulioca*, and by *Feſtus Culeolus*: the inner skinne that covereth the kernell is called *Nauci*. The *Arabians* call it *Ieuz*, *Leuz*, and *Gianſi*, which is properly but *Nux*, as *Gianſi bandi*, *Nux Bandenſis*. the *Italians Noci*, the *French Noix*, and *Noyer*, the *Spaniards Nuezos*, the *Germanes Welſchnusbaum*, and *Nuſsbaum*, the *Dutch Note*, and *Okernotebaom*, and we in *Engliſh* Wallnut.

The first published description of shagbark hickory.
Theatrum Botanicum, John Parkinson, 1640.



234 *ALMAGESTUM*

Apud *Miſcellan. Curioſ. German. decur.* 2. *Ann.* 51. *pag.* 73. ſub hujus titulo plurimas Icones videſis inter quas Ginſeng. *Cleyeri Japonienſis Terræ* alumna huic noſtræ quam maximè accedit; Quùm Ninzin *Bontij* ab hâc noſtrâ plurimùm differt. Hujus radicem munere Amiciſſimi Viri *D. Gidley* accepimus, frondium effigiem ope & favore Cl. Viri Dris *Tancredi Robinſon*: de hujus viribus vid. *Martin. Atl. Sinenſ. fol.* 35. Hujus inſignis Plantæ accuratam delineationem D. *Philibertus Vernatti* ex *Indiâ Orientali* ad *Reg. Societ. Londinenſ.* pro *Muſeo* ſuo inſtruendo dudùm tranſmiſit.

NIR-SCHULLI *Hort. Malabaric.* accedens è Cormandel; Gratiolæ affinis *Ind. Or.* Digitalis æmula. *Phytogr. Tab.* 49. *fig.* 3.

NOEL-VALLI *H. Malab. Part* 6. *Tab.* 22. Frutex alatus ſiliquoſus Orchidis floribus aliquatenùs accedens, ſiliquâ iſthmis diſtinctâ è *Maderaſpatan.*

NUMMULARIA major rigidioribus & rariùs crenatis foliis, flore purpureo gemello. Nummularia *Norvegica* flore purpureo *Bartbol. Act. Med. Anni* 1673. *Obſ.* 130.

NUX *Juglans* JB. *Tom.* 1. 241. Nux Juglans vulgaris *Park. Th.* 1413. Nux Juglans 1. Regia vulgaris *CBP.* 417.

Nux *Juglans* fructu maximo *CBP.* Nuces caballinæ *Hiſt. Lugd.* 320. Noſtrates **The French Walnut** (*i. e.*) Juglandem *Gallicam* vocant.

Nux *Juglans* folio ferrato *CBP.* Juglandis genus alterum, teneriore & longiore *Cluſ. Hiſt.*

Nux Juglans pyramidalis. fructu quaſi in conum attenuato. à Dre. *Woodward* habuimus.

Nux Juglans *Virginiana* foliis vulgari ſimilis, fructu ſubrotundo, cortice duriore lævi. Nux Juglans alba *Virginienſis Park. Th.* 1414. *Hæc eſt illa Nux quam noſtrates vocant.* **The Pickery** ſeu **Pick-Pickery Nut**; Cujus nucleis lac conficiunt *Indi* quod vocant **Pickery Milk**. *Non ex majoribus illis ut vult Caſp. Bauhinus* ubi ſuprà. Ex ſimilitudine quam habet cum ſuo lacte Juglandium *Indi* lac noſtrum **Pickery** vocant, ut ab Inſigni Botanico D. *Banſtero Celeberr. Raius* obſervatum reliquit.

Nux *Juglans Virginiana* alba minor, fructu Nucis moſchatæ ſimili, cortice glabro, ſummo faſtigio veluti in aculeum producto. *Phytogr. Tab.* 309. *fig.* 2. *a.* Ad literam *b. ejuſd. Tab.* Hujus Nucis pictura ubi media pars exteriori putamine viridi tecta eſt, exprimitur. An Nux Juglans *Americana* minor *PBP.* 357?

Nux *Juglans Virginiana* alba, fructu parvo anguloſo, cortice lævi. *Phytogr. Tab.* 309. *fig.* 2. *c.*

Nux *Juglans* anguloſa major, *Americana* fructu longiore, cortice albo lævi, ſummo vertice mucronato. *Phytogr.* 309. *fig.* 2. Ubi hujus Arboris ramulus habetur, & ad lit. *d.* Fructus. An Juglans anguloſa *Grevio Muſ. Reg. Soc. Lond. Raij Hiſt. Pl.* 1837? **The edged Walnut**, *Nucleus valdè amarus eſt*, Patriam ſuam *Novam Angliam* agnoſcit.

Nux *Juglans Virginiana* major, fructu rotundo, cortice craſſo ſulcato, tuberculis exaſperato nigro. Fortè Fructus *Indicus* rotundus tuberculis exaſperatus niger *JB.*

Almagastrum Botanicum, Nux Juglans Virginiana alba.
Leonard Plunkenet, 1696.

6. JUGLANS (*Ovata*) foliolis lanceolatis ſerratis glabris ſubæqualibus. *Walnut with ſmooth, ſpear-ſhaped, ſawed lobes, which are equal.* Juglans alba fructu ovato compreſſo, nucleo dulce, cortice ſquamoſo. Clayt. Flor. Virg. *White Walnut with an oval compreſſed fruit, a ſweet kernel, and a ſcaly bark, commonly called Shagbark in America.*

The ſixth ſort grows naturally in North America, where it riſes to a middling ſtature. The leaves of this ſort are compoſed of three pair of ſmooth ſpear-ſhaped lobes, of a dark green colour, ſawed on their edges, and ending in acute points. The fruit is oval, the ſhell white, hard, and ſmooth; the kernel ſmall, but very ſweet. The young ſhoots of the tree are covered with a very ſmooth browniſh bark, but the ſtems and older branches have a rough ſcaly bark, from whence it had the appellation of Shagbark, in America.

Philip Miller's *The Gardener's Dictionary*, 1768.

THE TREE:

Carya ovata (Miller) K. Koch 'Holden'
Holden Shagbark Hickory

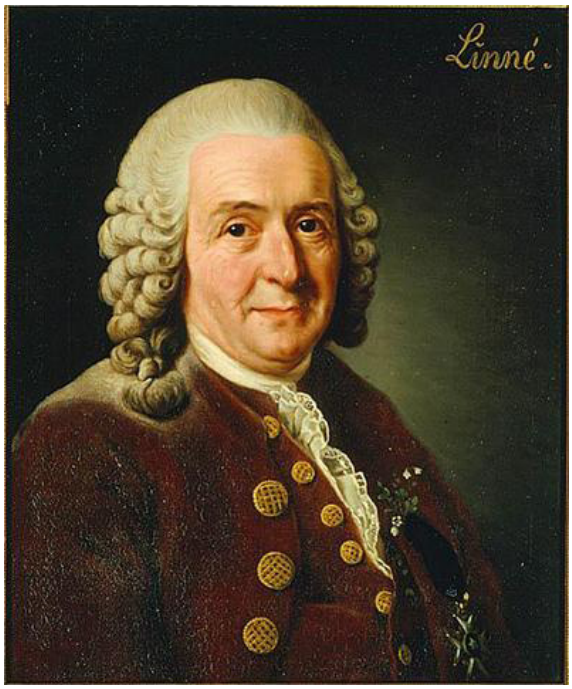
First things first: What's in a name?

From the time that Captain John Smith of the Virginia Colony gave us the first published documentation of what we believe to be hickory around 1610, to well into the twentieth century, both the generic and specific names of the shagbark hickory have been a matter of seemingly endless debate. Some of the confusion surrounding the generic name stems from the fact that hickories were originally thought of as a kind of walnut (*Juglans* or *Nux*), both taxonomically and in common observance. Indeed, hickories were not separated from *Juglans* until 1808. We know that shagbark hickory was introduced and cultivated in England prior to 1629 in response to the insatiable hunger that both horticulturists and wealthy plant-minded landowners had for North American "exotics." In the 17th and 18th centuries, to feed this hunger, American botanists were sending plants and seeds to English botanists as well as to the landowners whose "pleasure gardens" were becoming the landscape of choice for country estates.

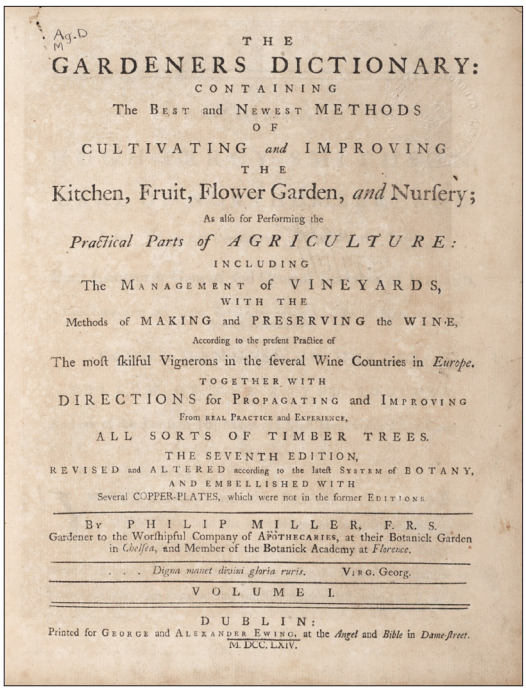
In 1640 we get the first published identification of the tree in John Parkinson's *Theatrum Botanicum*; he called it *Nux juglans alba Virginensis*. *Nux* simply being Latin for "nut," *juglans* being the ancient name for walnuts (supposedly derived from "Jove's glans," but that's a whole other taxonomic tale), *alba* for "white"—a description given to a number of different trees we now identify as hickories, and *Virginensis* denoting the colony in America from whence the tree was procured. For over one hundred years, variations on Parkinson's name are what identified the shagbark. Leonard Plunkenet, in both his *Phytographia* (1691) and *Almagestrum Botanicum* (1696) called it *Nux Juglans virginiana alba* and, while there is some debate on whether he was referring to the shagbark or shellbark hickory, the English naturalist Mark Catesby called it *Nux juglans alba virginiensis* in the first book published on the flora and fauna of North America, *Natural History of Carolina, Florida and the Bahama Islands* (1731-1743).

Mark Catesby's illustration of the hickory in his *Natural History of Carolina, Florida, and the Bahama Islands.*

In 1753, Carl Linnæus (Carl von Linné) published his famous *Species Plantarum* in which he introduced the binomial system of taxonomic nomenclature we use to this day. Linnæus called the tree *Juglans alba* (2, 997). And this brings us, finally, to the first "author" of the shagbark hickory, Philip Miller. A Scottish botanist who served as Chief Gardener at the famous Chelsea Physic Garden in London, Miller (1671-1771) had published descriptions of the tree in previous editions of his popular *Gardener's Dictionary*. In 1754 he had called the tree "*Juglans alba*, Shagbark Walnut," and wrote,



Swedish botanist Carl von Linné (1707-1778).
Oil on canvas, Alexander Roslin, 1775.



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BY PHILIP MILLER, F. R. S.
Gardener to the Worſhipful Company of APOTHECARIES, at their Botanick Garden in *Cheſſea*, and Member of the Botanick Academy at *Florence*.

. . . *Digna manet divini gloria ruris.* VIRG. Georg.

VOLUME I.

DUBLIN:
Printed for GEORGE and ALEXANDER EWING, at the *Angel* and *Bible* in *Dame-ſtreet*.
M. DCC. LXIV.

No portrait of Philip Miller (1691-1771) is known to exist. Above is the title page of the seventh edition of his *Gardeners Dictionary*.

"The Virginian sorts are preferved as Rarities, by fuch Persons who are curious in collecting the feveral Sorts of trees." But it was with the 1768 eighth edition that he fully adopted Linnæan binomials. He is, therefore, the original taxonomic author of the plant and as such his name appears first in the full Linnæan binomial. Miller lists the shagbark as number 6 in his 1768 list of *Juglans* species:

> 6. JUGLANS (Ovata) *foliolis lanceolatis ferratis glabris fubæqualibus*. Walnut with fmooth, fpear-fhaped, fawed lobes, which are equal. *Juglans alba fructum ovato compreffo, nuclio dulce, cortice fquamoso*. Clayt. Flor. Virg. White Walnut with an oval compreffed fruit, a fweet kernel, and a fcaly bark, commonly called Shagbark in America. (See page 4, bottom left.)

When Philip Miller gave the plant its specific name, *ovata*, he had apparently seen only the nut and a few leaves. Had he seen the actual tree, no doubt the name would be something that referred to its distinctive bark, the attribute by which it is most readily identified and which gives it its common name. Be that as it may, *ovata*, at least, was basically settled as the specific name at this point. And so *Juglans ovata* stood as the recognized name of the shagbark hickory for the next forty years.

In 1808, Constantine Samuel Rafinesque, the prolific autodidact and polymath, proposed separating the hickories from the walnuts. In "Prospectus of Two Intended Works on Botany" (*Medical Repository*, second hexade, 5, 350-356) he states, "I shall re-establish in this work abouty thirty new genusses, from plants already mentioned in authors; but which I have, by observation, found to disagree sufficiently from the genusses where they were placed, to oblige me to separate them for the advantage of the science. These will be. . ." And so follows his list, which for our present interest includes:

> "Scoria (tomentosa, mucronata, alba, pyriformis, globosa, &c.)
> Juglans alba L. tomentosa, mucronata, Mich. &c. the hiccory."

There are a few things to note here. First, the "typo" of what was clearly meant to be "Hicoria" and which has only added to the confusion in the discussion of the generic appellation of the shagbark hickory and second, the fact that this is the first time we see in print the separation of the hickories—with an assigned name—from the walnuts.

Lest there be any doubt as to his intentions or any dispute in terms of the rules of nomenclature priority, Rafinesque clearly published a description of more than one hickory using the term *Hicorius* in 1817 in his *Florula Ludoviciana*. He writes after his description of the bitternut hickory: "My genus *Hicorius*, long ago proposed, contains all the species of *Juglans* which have trifid male flowers (instead of six cleft) generally tetrandrous, and fruits with angular and quadrifid shells" (109). He lists "*Hicorius" in his index (126), the asterisk indicating a new genus.

Constantine Samuel Rafinesque (1783-1840), author of the genus *Hicorius*.

Thomas Nuttall (1786-1859), author of the genus *Carya*.

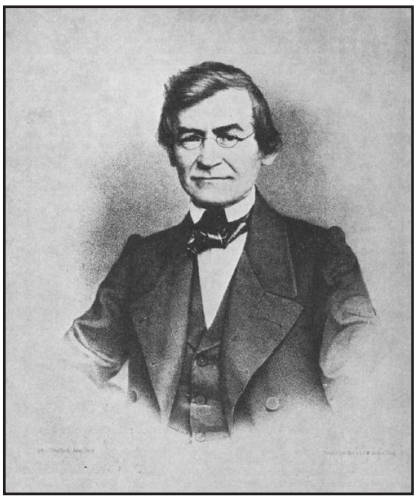
All might have been settled—*should* have been settled—at that point had not Thomas Nutall, the English botanist working in the United States, taken it upon himself to publish the already recognized genus as *Carya* the following year in his *The Genera of North American Plants* (1818). He also marks his main "CARYA" entry with an asterisk, denoting a new genus, and provides a footnote giving the Greek spelling and the following definition and explanation for his choice: "the Walnut tree, the name which the Greeks applied to *Juglans regia*" (2, 221). Why, you may ask yourself, would you bother to create a genus separate from *Juglans*/walnut, in order to differentiate certain species formerly within that genus, and then give the new genus a name meaning the same as the original genus? It is all the more perplexing given that there was already a recognized generic name assigned to the specific trees in question. The name *Hicoria*/hickory is an appellation signifying their unique place as North American trees as we will see in a later discussion of the common name. In stark contrast to Rafinesque's American-based name, the origin of the word *carya*, from the Greek Καρυδιά, is usually explained in relation to the ancient Greek myth of Artemis Caryatis, an epithet of Artemis derived from the polis of *Karyai* in Laconia, although it appears to be even older in origin, referring to the pre-Classical Nut Tree Goddess.

In any event, Nuttall's new *Carya* genus created over a century of argument, starting with none other than Rafinesque himself. In a fit of pique, Rafinesque published an article in which he makes no attempt to hide his annoyance and displeasure with Nuttall's intrusion. A year after Nuttall publishes *Carya* as a genus, Rafinesque writes that *hicorius*, "a été changé sans cause en Carya, N., nom posterieur radical et tres-mauvais" (was changed without cause [to] Carya, N[uttall], a name which is radical, as in root, and very bad, *Journal de Physique* vol. lxxxix, 1819, 260). Twenty years later one can still feel Rafinesque's irritation: In his *Alsographia Americana* (1838) he lists hickories as *Hicoria* and clearly gives himself nomenclature priority when under the main heading of HICORIA or HICKORY-TREES, he writes,

> Hicoria Raf. 1808. Carya Nuttal 1818 &c. As early as 1804 I proposed to separate the Hickories from Walnuts. . . . I did so in 1808 in my remarks on Michaux flora, and again in 1817 in my Florula Ludoviciana giving it the almost Grecian name of *Hicoria;* yet Nuttal changed it in 1818 (without mentioning my labor) into *Carya* which merely means *Nut*! and is as bad a name as that of *Nux* given by Adanson to *Juglans*, since it is the root of many other names *Caryocar*, *Caryota*, *Eucarya*, *Araucaria*, *Matricaria*, *Eleocarya &c!* some botanists have however adopted this bad name; but it is hoped will have no objection to my previous modification of it, when they may know of my previous claim—although this G.[enus] is well distinguished from *Juglans* by the fruit not a drupe, but a 4valve capsule(65).

Nuttall responded:

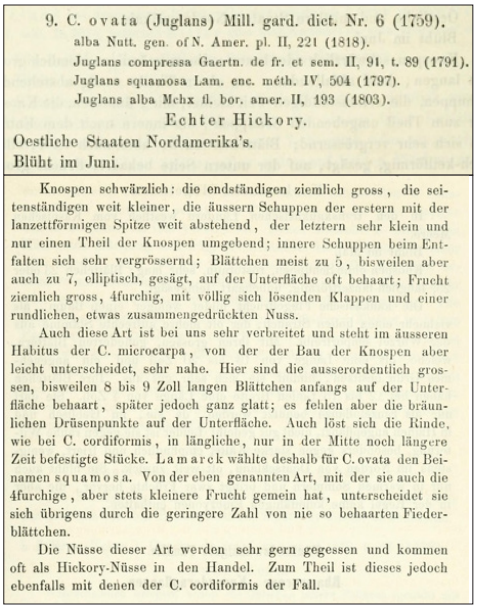
> *Hickory* is an Indian name for *some* of the species in this genus. Rafinesque applied the barbarous *Hickoria* to this genus, without describing or limiting it; in so doing he has no higher claims for the adoption of the name than our woodsmen and the aborigines (*North American Sylva*, 4, n.38).



Karl Heinrich Emil Koch (1809-1879), German botanist and second "author" of *Carya ovata*.

Nathaniel Lord Britton (1859-1934), American botanist and taxonomist and co-founder of the New York Botanical Garden.

Fifty years later, in 1869, the German botanist Karl Koch published a further description of the tree in his *Dendrologie* (below) using Nuttall's generic name *Carya*. As we have seen, by this time the hickories had been separated from the walnut genus, *Juglans*, but just what the new hickory genus was to be called was still a matter of heated debate among botanists. Koch opens his discussion of the hickories with: "Carya Nutt. Gen. Amer of N. PL. H, p. 220 (1818)" completely disregarding Rafinesque's generic name which he cites immediately following: "The name Hickory is American origin and means the edible fruits of some species. Rafinesque therefore called the genus: Hicorius" (591). After a brief botanical description of the species in general, Koch addresses the complication surrounding the Latin name for hickory in the days of Linnæus and Miller: "The older botanists, von Linné and Miller up to Willdenow, had no accurate knowledge of the hickory nuts.



9. C. ovata (Juglans) Mill. gard. dict. Nr. 6 (1759).
alba Nutt. gen. of N. Amer. pl. II, 221 (1818).
Juglans compressa Gaertn. de fr. et sem. II, 91, t. 89 (1791).
Juglans squamosa Lam. enc. méth. IV, 504 (1797).
Juglans alba Mchx fl. bor. amer. II, 193 (1803).

Echter Hickory.

Oestliche Staaten Nordamerika's.
Blüht im Juni.

Knospen schwärzlich: die endständigen ziemlich gross, die seitenständigen weit kleiner, die äussern Schuppen der erstern mit der lanzettförmigen Spitze weit abstehend, der letztern sehr klein und nur einen Theil der Knospen umgebend; innere Schuppen beim Entfalten sich sehr vergrössernd; Blättchen meist zu 5, bisweilen aber auch zu 7, elliptisch, gesägt, auf der Unterfläche oft behaart; Frucht ziemlich gross, 4furchig, mit völlig sich lösenden Klappen und einer rundlichen, etwas zusammengedrückten Nuss.

Auch diese Art ist bei uns sehr verbreitet und steht im äusseren Habitus der C. microcarpa, von der der Bau der Knospen aber leicht unterscheidet, sehr nahe. Hier sind die ausserordentlich grossen, bisweilen 8 bis 9 Zoll langen Blättchen anfangs auf der Unterfläche behaart, später jedoch ganz glatt; es fehlen aber die bräunlichen Drüsenpunkte auf der Unterfläche. Auch löst sich die Rinde, wie bei C. cordiformis, in längliche, nur in der Mitte noch längere Zeit befestigte Stücke. Lamarck wählte deshalb für C. ovata den Beinamen squamosa. Von der eben genannten Art, mit der sie auch die 4furchige, aber stets kleinere Frucht gemein hat, unterscheidet sie sich übrigens durch die geringere Zahl von nie so behaarten Fiederblättchen.

Die Nüsse dieser Art werden sehr gern gegessen und kommen oft als Hickory-Nüsse in den Handel. Zum Theil ist dieses jedoch ebenfalls mit denen der C. cordiformis der Fall.

Dendrologie, Karl Koch, 1869.

They were either combined, such as by Linnæus, under his Juglans alba or grouped with several species under false names and given incorrect descriptions of the tree and the fruits." He finishes his introductory statements about hickory by letting us know where he stands: "Michaux is the first botanist who, in his history of the spectacular American forest trees, well describes and also depicts Hickory trees, and this is why I prefer to follow his lead and use Nutall, who first proposed the genus Carya, in his Genera of North American Plants. Each individual species is sharply and certainly determined. Most later botanists follow him" (592). Koch's detailed scientific description of the shagbark species follows on pages 598-99 as number nine of the hickories, "C. ovata (Juglans) Mill. gard. dict. Nr. 6 (1759)." Thus, he is recognized as the second author by the placement of the official "K. Koch" following the binomial and Miller's name. And yet the dispute between the use of *Hicoria* or *Carya* raged for another one hundred years.

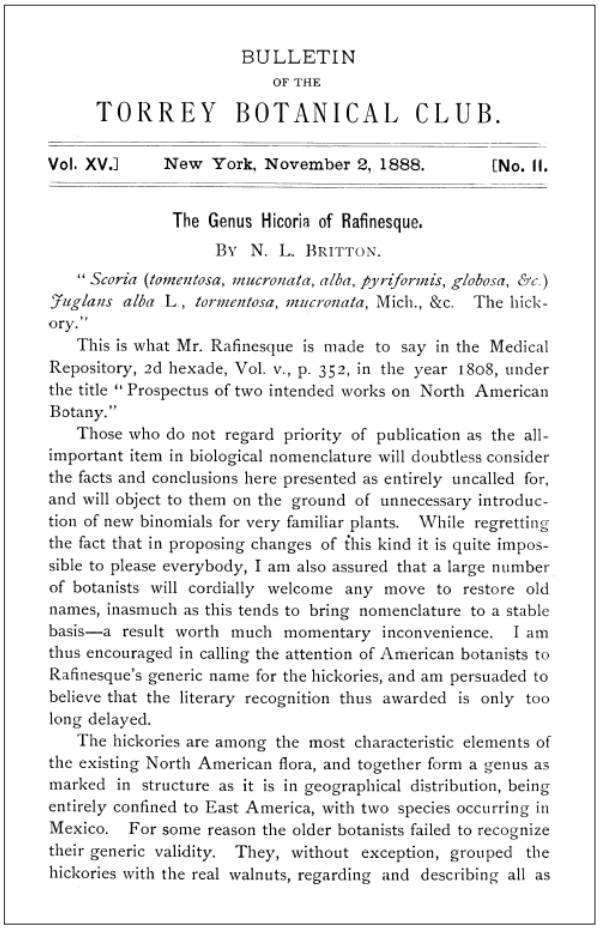
On November 2, 1888, Nathaniel Lord Britton, noted American botanist and taxonomist, and co-founder of the New York Botanical Garden, published "The Genus Hicoria of Rafinesque," a detailed examination of the history of the taxonomic and nomenclatural issues surrounding the hickories. He begins this article by quoting Rafinesque's first publication proposing the genus *Hicoria* in 1808. Britton does this clearly and unequivocally to support *Hicoria* as the proper name based on the rule of priority. He writes,

> Those who do not regard priority of publication as the all-important item in botanical nomenclature will doubtless consider the facts and conclusions here presented as entirely uncalled for .... I am also assured that a large number of botanists will cordially welcome any move to restore old names, inasmuch as this tends to bring nomenclature to a

stable basis—a result worth much momentary inconvenience. I am thus encouraged in calling the attention of American botanists to Rafinesque's generic name for hickories, and am persuaded to believe that the literary recognition thus awarded is only too long delayed" (277).

Britton continues with a discussion of the realization that hickories were a distinct genus from the "real walnuts." He credits Rafinesque with this discovery and with naming them. A few pages follow giving a brief outline of the taxonomic history of the seventeenth and eighteenth century up to "the time of Rafinesque," much as I have done here. He then tackles what he views as Thomas Nuttall's inexplicable and unjust renaming of the genus as *Carya* in 1818: "Quite ignoring Rafinesque, he publishes the genus. . . [and] he is generally cited as author of the binomials." Britton goes on to quote a Major John LeConte to support his position. In 1853 LeConte had published on a new species of "*Hickorea*" and wrote, "I have adopted Mr. Rafinesque's name *Hickorea* for the genus in preference to Mr. Nuttall's *Carya* on the ground of priority. Whatever may have been the errors and aberrations of Rafinesque, Nuttall was not justified in changing a name proposed by the former years before any publication of his own" (281, from LeConte's original in *Proceedings of the Philadelphia Academy*, 1854, 402).

The following year (1889), in his magazine *Garden and Forest*, Charles Sprague Sargent, the eminent American botanist and founder of the Arnold Arboretum, addressed "Carya" in his "Notes Upon Some North American Trees—XI." Sargent gives a brief accounting of the history of the generic name *Hicoria* as assigned by Rafinesque in 1808 and 1817 and notes that he was "the first author to separate the Hickories from the Walnuts and place them in a genus by themselves" (459). Like Britton, Sargent argues for a return to *Hicoria* as Nuttall's *Carya* was not proposed until 1818: "it is just and correct therefore to discard the now familiar *Carya* of Nuttall and take up the equally appropriate *Hicorius* of Rafinesque" (459-60). He says his only divergence from Britton is that he is changing the name to *Hicorius* from *Hicoria*, "although the rejection of *Hicoria* will add another to the heavy load of synonyms with which these trees are encumbered" (460). Britton quibbles back in a letter to *Garden and Forest* published in December of that year, taking Sargent to task for questioning that Rafinesque actually named the genus in 1808 as well as for changing the generic name from the feminine to the masculine form. In a note at the end of the letter, Sargent appears to acquiesce to Britton concerning the date of Rafinesque's naming of the genus and, although he does not address the subject of gender directly, the one time he refers to the genus of the tree he does so as *Hicoria*.



BULLETIN
OF THE
TORREY BOTANICAL CLUB.

Vol. XV.] New York, November 2, 1888. [No. 11.

The Genus Hicoria of Rafinesque.

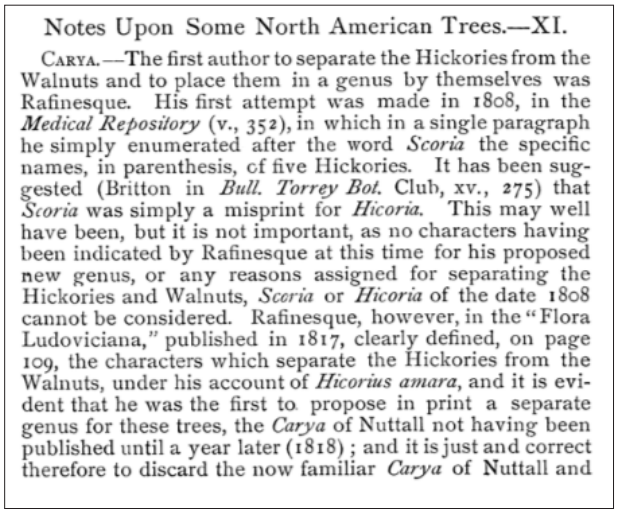
By N. L. Britton.

"*Scoria* (*tomentosa, mucronata, alba, pyriformis, globosa, &c.*) *Juglans alba* L., *tormentosa, mucronata*, Mich., &c. The hickory."

This is what Mr. Rafinesque is made to say in the Medical Repository, 2d hexade, Vol. v., p. 352, in the year 1808, under the title "Prospectus of two intended works on North American Botany."

Those who do not regard priority of publication as the all-important item in biological nomenclature will doubtless consider the facts and conclusions here presented as entirely uncalled for, and will object to them on the ground of unnecessary introduction of new binomials for very familiar plants. While regretting the fact that in proposing changes of this kind it is quite impossible to please everybody, I am also assured that a large number of botanists will cordially welcome any move to restore old names, inasmuch as this tends to bring nomenclature to a stable basis—a result worth much momentary inconvenience. I am thus encouraged in calling the attention of American botanists to Rafinesque's generic name for the hickories, and am persuaded to believe that the literary recognition thus awarded is only too long delayed.

The hickories are among the most characteristic elements of the existing North American flora, and together form a genus as marked in structure as it is in geographical distribution, being entirely confined to East America, with two species occurring in Mexico. For some reason the older botanists failed to recognize their generic validity. They, without exception, grouped the hickories with the real walnuts, regarding and describing all as



Notes Upon Some North American Trees.—XI.

Carya.—The first author to separate the Hickories from the Walnuts and to place them in a genus by themselves was Rafinesque. His first attempt was made in 1808, in the *Medical Repository* (v., 352), in which in a single paragraph he simply enumerated after the word *Scoria* the specific names, in parenthesis, of five Hickories. It has been suggested (Britton in *Bull. Torrey Bot.* Club, xv., 275) that *Scoria* was simply a misprint for *Hicoria*. This may well have been, but it is not important, as no characters having been indicated by Rafinesque at this time for his proposed new genus, or any reasons assigned for separating the Hickories and Walnuts, *Scoria* or *Hicoria* of the date 1808 cannot be considered. Rafinesque, however, in the "Flora Ludoviciana," published in 1817, clearly defined, on page 109, the characters which separate the Hickories from the Walnuts, under his account of *Hicorius amara*, and it is evident that he was the first to propose in print a separate genus for these trees, the *Carya* of Nuttall not having been published until a year later (1818); and it is just and correct therefore to discard the now familiar *Carya* of Nuttall and

Ar right: Britton's detailed discussion of the *Hicoria* genus; above: Sargent's overview of the *Carya* genus.

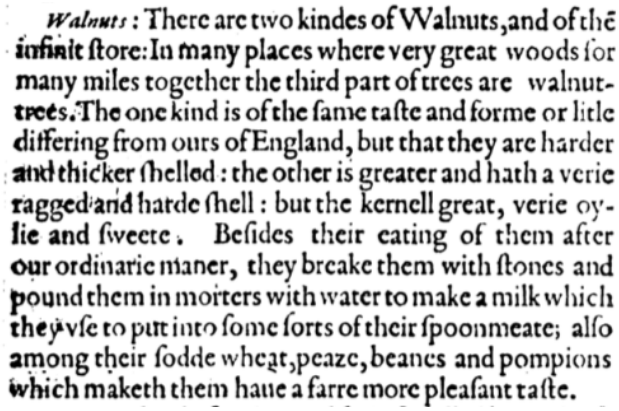
A decade later, in the USDA Division of Forestry's definitive *Nomenclature of the Arborescent Flora of the United States*, George B. Sudworth lists the genus "HICORIA" and cites the author as "Raf. Med. Rep., V, 352 (1808)" clearly delineating where he stands on the issue, even indicating with a footnote that he does so because it "antedates Nuttall's *Carya* (Gen., II, 221, 1818)" (109). In his introduction to the work, B.E. Fernow, chief of the Division of Forestry, writes a lengthy discourse on the complexities of botanical nomenclature and states that the goal of the work is "reform and uniformity in the use of names" and that "the essential basis upon which the revision has been made is the so-called 'law of priority,' i.e. . . . for genera the first established generic name, either alone or in combination with a type specific name" (v).

As we obviously use the generic name *Carya* today, Mr. Britton's plea for priority fairness apparently went unheeded; *Hicoria's* usage among the leading botanists, horticulturists, and foresters continued to fade. There seems to have been a period of overlap; a survey of sources into the 1920s shows continued use of the word *Hicoria*, while after that time *Carya* appears to have gained favor; and once *Carya* ruled the day, there was no going back. In 1943, US Forest Service botanist and author Elbert L. Little wrote the final history of hickory taxonomic nomenclature. His detailed analysis of the rivalry between the names *Hicoria* and *Carya*, "Notes on the Nomenclature of Carya Nutt.," concludes that, with the abandonment of the American Code of Nomenclature, *Hicoria* is finally and forever set aside. With the increasing pervasiveness and authority of the International Code of Botanical Nomenclature, as Dumrose and Skinner write, "the genus *Carya* (Nuttall, 1818), the hickories (Juglandaceae), has been conserved against an older name with nomenclatural priority, *Hicorius* (Rafinesque, 1817) because *Carya* is in such widespread use that adoption of *Hicorius* would be disruptive" (60).

§

Although we have lost the American etymological origin of the tree in its scientific name, it remains in the quintessentially American common name: hickory. Conjuring smoky fall days, cured hams, and carved wooden tools and agricultural implements, "hickory" seems rooted in the early days of our nation. Indeed, it goes far beyond that to the English exploration and settlement of the Virginia Colony.

As we have seen, originally hickories were not generically distinguished from their close relatives the walnuts. And so when the first Englishmen set out to describe these trees that they found in the New World, we read descriptions of hickories such as the following in the earliest published book by an English colonist in Virginia, Thomas Hariot's 1588 *A Brief and True Report of the New Found Land of Virginia*:

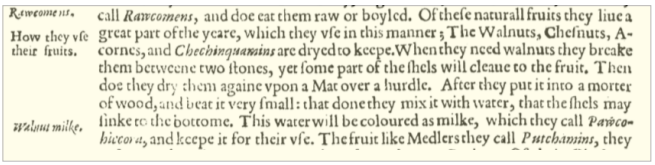

Walnuts: There are two kindes of Walnuts, and of the infinit ſtore: In many places where very great woods for many miles together the third part of trees are walnut-trees. The one kind is of the ſame taſte and forme or litle differing from ours of England, but that they are harder and thicker ſhelled: the other is greater and hath a verie ragged and harde ſhell: but the kernell great, verie oylie and ſweete. Beſides their eating of them after our ordinarie maner, they breake them with ſtones and pound them in morters with water to make a milk which they vſe to put into ſome ſorts of their ſpoonmeate; alſo among their ſodde wheat, peaze, beanes and pompions which maketh them haue a farre more pleaſant taſte.

WALNUTS: There are two kinds of Walnuts, and of the infinit store: In many places where very great woods for many miles together the third part of trees are walnut trees. The one kind is of the same taste and form or little differing from ours of England, but that they are harder and thicker shelled: the other is greater and hath a very ragged and hard shell: but the kernel great, very oily and sweet. Besides their eating of them after our ordinary maner, they break them with stones and pound them in morters with water to make a milk which they use to put into some sorts of their spoonmeat; also among their sodde wheat [maize], peas, beans and pompions [pumpkins] which maketh them have a far more pleasant taste (25).

Thomas Hariot (1560-1621)

As we read in William Strachey's manuscript, *The Historie of Travaile into Virginia Britannia*, c. 1612, it is the milk the Algonkians made from pounding "walnuts" that gives us the common name for hickories: "Of walnuts there be three kindes. . . . The third sort is, as this last, exceedingly hard shelled, and hath a passing sweet karnell; this last kind the Indians beat into pieces with stones, and putting them, shells and all, into morters, mingling water with them, with long wooden pestells pound them so long together until they make a kind of mylke, or oylie liquor, which they call powcohicora" (129). At the end of his holograph Strachey wrote a "Dictionarie of the Indian Language" which includes the following entry: "Milke made of walnuts, *pocohiquara*" (191). At the end of another less well known copy of Strachey's manuscript, a word list contains the following as transcribed by John P. Harrington (1955): "Milke made of walnuts Powhigwava" (key to sheet 10).

Not long after, Captain John Smith wrote: "Of walnuts there is 2 or 3 kindes" (25) and "When they need walnuts they breake them betweene two stones, yet some part of the shels will cleaue to the fruit. Then doe they dry them againe vpon a Mat over a hurdle. After they put it into a morter of wood, and beat it very small: that done they mix it with water, that the shels may sinke to the bottome. This water will be coloured as milke, which they call Pawcohiccora, and keepe it for their vse" (24, *The Generall Historie of Virginia*, The second Booke. The Sixt Voyage, 1606, 1624).


Rawcomens. call *Rawcomens*, and doe eat them raw or boyled. Of these naturall fruits they liue a
How they vse their fruits. great part of the yeare, which they vse in this manner; The Walnuts, Chesnuts, Acornes, and *Chechinquamins* are dryed to keepe. When they need walnuts they breake them betweene two stones, yet some part of the shels will cleaue to the fruit. Then doe they dry them againe vpon a Mat over a hurdle. After they put it into a morter of wood, and beat it very small: that done they mix it with water, that the shels may sinke to the bottome. This water will be coloured as milke, which they call *Pawcohiccora*, and keepe it for their vse. The fruit like Medlers they call *Putchamins*, they
Walnut milke.

If one traces use of the word, we see that the term originally used to designate the "milke" produced from "walnutts" soon grew to mean the tree itself, the hickory. Through the years we get the following permutations: pohickory, pohickery, pohickerry tree, pohiccory, pohickry, pohiccoria, hiccory, hiquery, hickary, hickery, *ad infinitum*.

And the Algonquian dialect spoken by the people of Powhatan who gave us the word hickory? It was extinct within two hundred years of English contact.


"C[aptain] Smith Taketh the King of Pamaunkee Prisoner 1608," detail of an engraving in *The Generall Historie of Virginia, New-England, and the Summer Isles* , by Captain John Smith, London, 1624.

Captain John Smith (1581-1631)

Now that we know what to call it, just what *is* a shagbark hickory?

Carya ovata, the Tree

Now that we know what to call it, what *is* a shagbark hickory? Where does it grow? What does it look like? Of what use is it?

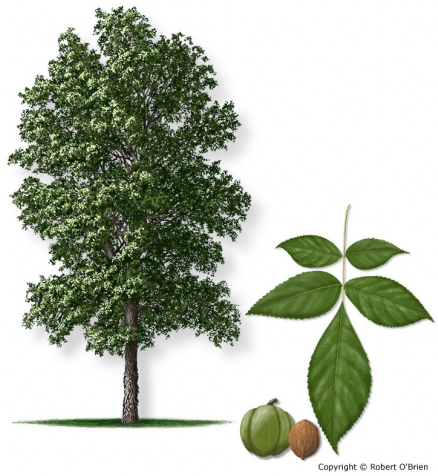
Like the proverbial blind men explaining what an elephant is, different people have entirely different explantions of what a hickory tree is and what it's good for.

The botanists will tell us this:

Trees, to 46 m. Bark light gray, fissured or exfoliating, separating freely into long strips or broad plates that persist, ends often curling away from trunk. Twigs greenish, reddish, or orangish brown, retaining color or turning black on drying, stout or slender, hirsute or glabrous. Terminal buds tan to dark brown to black, ovoid, 6-18 mm, tomentose or nearly glabrous; bud scales imbricate; axillary buds protected by bracteoles fused into hood. Leaves 3-6 dm; petiole 4-13 cm, petiole and rachis hirsute or mainly glabrous. Leaflets (3-)5(-7), lateral petiolules 0-1 mm, terminal petiolules 3-17 mm; blades ovate, obovate, or elliptic, not falcate, 4-26 × 1-14 cm, margins finely to coarsely serrate, with tufts of hairs in axils of proximal veins of serrations, often weathering to only a few in fall, apex acute to acuminate; surfaces abaxially hirsute with unicellular and 2-4-rayed fasciculate hairs, occasionally restricted to midrib and major veins or essentially without hairs, with few to many large peltate scales and small round, irregular, and 4-lobed peltate scales. Staminate catkins pedunculate, to 13 cm, stalks and bracts without hairs; anthers hirsute. Fruits brown to reddish brown, spheric to depressed-spheric, not compressed, 2.5-4 × 2.5-4 cm; husks rough, 4-15 mm thick, dehiscing to base, sutures smooth; nuts tan, ovoid, obovoid, or ellipsoid, compressed, 4-angled, rugulose; shells thick. Seeds sweet (Flora of North America, http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500320, accessed Jan. 18, 2013).

Perhaps useful for some, but a translation may be needed for most people:

"Leaves: Alternate, pinnately compound, 8-14 inches long, 5 leaflets (rarely 7) 4-6" long, ½ -2 ½" wide, elliptic to oblong-lanceolate, acuminate, serrate and densely ciliate, pubescent and glandular below when young, finally glabrous and deep yellow-green.



Buds: Imbricate, terminal—1/2 to 1" long, broadly ovate, rather blunt-pointed, brown, with 2 to 4 visible, overlapping, pubescent, loose fitting scales.

Stem: Stout, somewhat downy or smooth and shining, reddish-brown to light gray; lenticels—numerous, pale, conspicuous, longitudinally elongated. [Both images, Robert Vidéki, Doronicum Kft., Bugwood.org]

Bark: On old trunks, shagging characteristically into long flat plates which are free at the base or both ends. The eponymous characteristic of the tree.

Fruit is nearly round, 1 to 1 ½" diameter, shell angled, thick (1/4 to 3/8" diameter), splitting at base. The seed is edible and quite sweet (see Dirr, 213). Split into four quarters when ripe, revealing the inner sweet nut.

1. Paul Wray, Iowa State University, bugwood.org

2. © Ophis (http://www.flickr.com/photos/ophis/4029768748/)

3. Fox Haven Journal

4, Hilton Pond Center for Piedmont Natural History

Flowers: Monoecious (male and female flowers on the same tree). The male or staminate catkins are three-branched and hang from the previous year's twigs. The female or pistillate flowers occur at the terminus of the current season's growth. Mid-spring.

Male flower catkins. (Courtesy Purdue University)

Female Flowers (Courtesy Vanderbilt University)

Guy Sternberg makes an important point when he writes that the emerging leaflets are, "very striking when they first emerge from the expanding pastel buds in spring. Many people mistake these tuliplike leaf buds for blossoms, and they are indeed much superior to the tree's actual flowers in ornamental value" (106).

©Gary Fewless, Coffrin Center for Biodiversity, University of Wisconsin-Greenbay

Staminate Flower
SHAGBARK HICKORY
Carya ovata (Mill.) K. Koch.

WALNUT FAMILY JUGLANDACEAE

The staminate catkins of the Hickory are peculiar in being forked. The branches are long and the flowers numerous.

Because of the relative absence of fusions it is much easier to understand the parts of this flower and their relations one to the other, than in the case of the pistillate structure of the Hickory. The plate represents a face view of the flower, in contrast with the side view of the staminate flower of the Butternut shown in a preceding plate. The stamens are attached to a calyx, the two blunt lobes of which project on either side above the anthers. The pointed bract, seen protruding between the lobes of the calyx, is attached to that structure only in its basal portion.

After blooming, the flower does not fall from the tree alone; it is the whole staminate catkin that is shed. This seems to be the habit of catkin bearing trees generally.

[114]

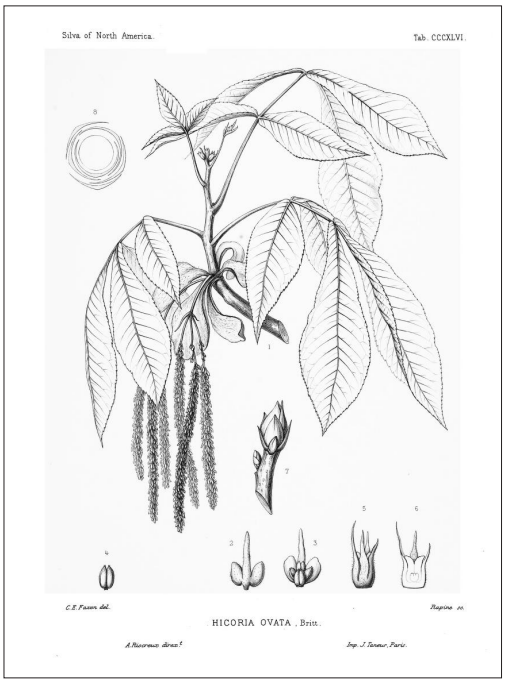
Pistillate Flower
SHAGBARK HICKORY
Carya ovata (Mill.) K. Koch.

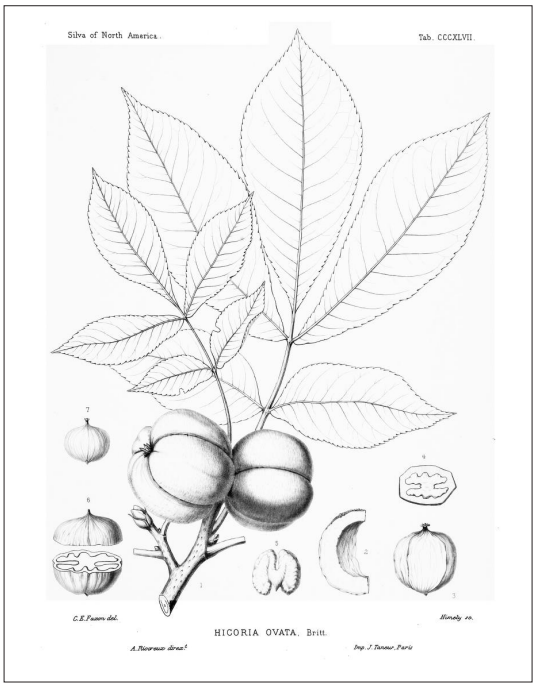
WALNUT FAMILY JUGLANDACEAE

This flower is one of several which constitute a cluster at the tip of the new season's shoot. Through the ground-glass of the camera it looks like a green urn with a lobed rim, and piled high with cracked ice. The flower consists of an ovary surmounted by the watery-translucent stigmas. The structure enclosing the ovary has, by some, been interpreted as a calyx with four free lobes. By others, it is believed to be an involucre composed of four bracts, or modified leaves, more or less fused with one another along the lateral ridges. Whatever the correct interpretation, the structure becomes the husk of the nut. It differs from the husk of the Walnut in being hard and in splitting, when ripe, into four valves, which in this species of Hickory, fall away freely from the nut.

[118]

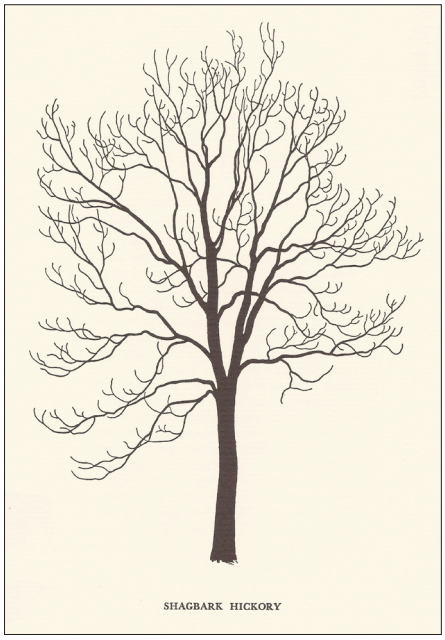
from *Tree Flowers of Forest, Park, and Street*, Walter E. Rogers and Olga A. Smith, 1935.





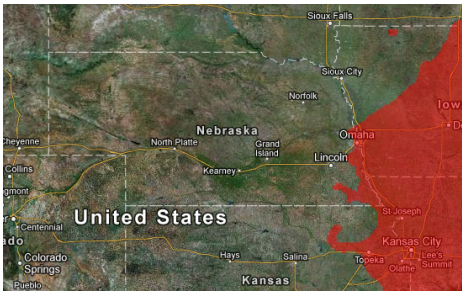
From Sargent's *Silva*

The shagbark hickory is a large tree reaching 60 to 80' or more in height. The tree usually develops a straight, cylindrical trunk with an oblong crown of ascending and descending branches.



The form of shagbark hickory when grown in the open. Olga A. Smith, *Tree Flowers of Forest, Park, and Street*.

Shagbark hickory is found throughout most of the Eastern United States from southeastern Nebraska and southeastern Minnesota through southern Ontario and southern Quebec to southern Maine, southward to Georgia, Alabama, Mississippi, Louisiana, and eastern Texas, and disjunctly in the mountains of northeastern Mexico. It is largely absent from the southeastern and Gulf coastal plains and lower Mississippi Delta areas (http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/carya/ovata.htm).



The horticulturists and landscape architects tell us:

Like most deciduous trees of the eastern United States climax forests, shagbark hickory will tolerate some shade from surrounding trees when young, but then prefers full sun. While it typically grows in moist, deep, rich, well-drained soils, shagbark has extremely good drought tolerance and can grow happily in dry, upland soils. We also learn that shagbark hickory puts on an absurdly long taproot in only its first year of growth—as much as two to three feet, with only a few inches growth above ground—making it difficult to transplant even when very young. It has no disease and insects worth worrying about. A large mulched area maintained out to the dripline is best, not just for the health of the tree but because the nuts and husks may be inconvenient for the modern homeowner's turf preferences. It is a fairly slow-growing tree. In a good year the fall color of the shagbark can be a glorious clear, bright yellow.

♦

The poets, this:

from Shagbark Hickory

by Carl Sandburg

In the moonlight under a shag-bark hickory tree
Watching the yellow shadows melt in hoof-pools,
Listening to the yes and the no of a woman's hands,
I kept my guess why the night was glad.

The night was lit with a woman's eyes.
The night was crossed with a woman's hands,
The night kept humming an undersong.

and Samuel S. Vargo:

Shagbark Hickory trees line the hollow
Like old men sitting around telling lies

Finally, from The Silence of Many Trees

by Temple Cone

Sometimes a tree strikes your face with the memory of loss.
Hickory bark keeps the furrows of the parched fields you left.
The sycamore leaves turning away in the wind are your father's hands.

♦

The arborphile, this:

Perhaps no one has written about trees as eloquently as Harvard-educated botanist, naturalist, and author Donald Culross Peattie, a man whose works have been described as being "distinguished by a poetic and philosophical cast of mind and are scientifically scrupulous." Regarding the shagbark hickory, Peattie tells us, "To everyone with a feeling for things American, and for American history, the Shagbark seems like a symbol of the pioneer age, with its hard sinewy limbs and rude, shaggy coat, like the pioneer himself in fringed deerskin hunting shirt. And the roaring heat of its fires, the tang of its nuts—that wild manna that every autumn it once cast lavishly before our feet—stand for the days of forest abundance" (*A Natural History of Trees*, 135).

And the father of what we now simply call "nature writing," Henry David Thoreau, writes

> "Some trees, as small hickories, appear to have dropped their leaves instantaneously, as a soldier grounds arms at a signal; and those of the hickory, being bright yellow still, though withered, reflect a blaze of light from the ground where they lie. Down they have come from all sides, at the first touch of autumn's wand, making a sound like rain." (*Excursions, and Poems*, 265)

♦

The zoologist explains

how *Carya ovata* fits into the web of life by feeding numerous mammals in the fall. Among those that benefit from its sweet nuts are squirrels, chipmunks, black bears, rabbits, mice, and foxes. We tend to think of insects feeding on plants as a bad thing, but the leaves of shagbark hickory are vital food for the larvae of the Regal Moth (the fierce looking five-inch Hickory Horned Devil, at right), the stunning Luna Moth, and the Polyphemus Moth.

Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org - See more at: http://www.forestryimages.org/browse/detail.

The ethnobotanist tells us that

every tribe that lived in the growing range of *Carya ovata* made use of the many things it has to offer. Additionally, complex and far-reaching trade routes brought hickory nuts to tribes well beyond the tree's natural borders.

"Figure 9. Native Americans of the Archaic Period were hunters and gatherers, and their settlements reflect an adaptation to the abundant natural resources of the Tennessee region. Sites varied in function from base settlements to transient hunting or collecting camps. A base camp is shown here. In the foreground, women are processing hickory nuts. Plant foods were supplemented by such animals as the white tail deer, turkeys, bears, and smaller game like rabbits." Painting by Greg Harlin. © Frank H. McClung Museum, The University of Tennessee, Knoxville.
Reprinted from: "Prehistoric American Indians in Tennessee," Jefferson Chapman, PhD, Frank H. McClung Museum, The University of Tennessee, Knoxville

University of Michigan professor of anthropology Daniel Moerman has created a comprehensive database of plant use among Native tribes. The following examples of *Carya ovata* use are drawn from his work (see http://herb.umd.umich.edu/).

TRIBE		PART	USE
Chippewa	D	Shoots	Analgesic Fresh, small shoots steamed as inhalant for headache.
Chippewa	D	Shoots	Small shoots placed on hot stones as herbal steam for headache.
Delaware	D	Bark	Gynecological Aid; compound infusion taken for “diseases peculiar to women.”
Delaware	D	Bark	Tonic; compound infusion of bark taken for “general debility.”
Iroquois	D	Bark	Anthelmintic; compound decoction with white from inside bark taken by adults for worms.
Iroquois	D	Bark	Antirheumatic (external); decoction of bark applied as a poultice for arthritis.
Iroquois	D	Bark	Antirheumatic (internal); decoction of bark taken for arthritis.
Iroquois	D	Nut meat	Dermatological Aid; nut meat oil formerly used for the hair, either alone or mixed with bear grease.
Iroquois	O	Nut meat	Insecticide; nut meat oil mixed with bear grease and used as a preventive for mosquitoes.
Iroquois	F	Nut meat	Baby Food; fresh nut meats crushed, boiled and oil used as a baby food.
Iroquois	F	Nut meat	Beverage; fresh nut meats crushed, boiled and liquid used as a drink.
Iroquois	F	Nut meat	Bread & Cake; fresh nut meats crushed and mixed with bread.
Iroquois	F	Nuts	Bread & Cake; nuts crushed, mixed with cornmeal and beans or berries and made into bread.
Iroquois	F	Nut meat	Pie & Pudding; fresh nut meats crushed and mixed with corn pudding.
Iroquois	F	Nuts	Sauce & Relish; nuts pounded, boiled, resulting oil seasoned with salt and used as gravy.
Iroquois	F	Nut meat	Crushed & added to corn soup. Crushed/boiling and oil used in cornbread and pudding.
Iroquois	F	Nut meat	Oil added to the mush used by the False Face Societies. Crushed and added to hominy.
Dakota	F	Nuts	Nuts used to make soup.
Dakota	F	Sap	Sweetener; sap used to make sugar.
Dakota	F	Chips	Sweetener; hickory chips boiled to make sugar.
Dakota/Lakota	F	Nuts	Nuts eaten plain or with honey.
Meskwaki	F	Nuts	Winter Use Food; nuts stored for winter use.
Ojibwa	F	Nuts	Edible nuts were appreciated.
Omaha	F	Nuts	Nuts used to make soup.
Omaha	F	Sap	Sweetener; sap used to make sugar.
Omaha	F	Chips	Sweetener; hickory chips boiled to make sugar.
Omaha	F	Nuts	Nuts eaten plain or with honey.
Pawnee	F	Nuts	Nuts used to make soup.
Pawnee	F	Sap	Sweetener; sap used to make sugar.
Pawnee	F	Chips	Sweetener; hickory chips boiled to make sugar.
Pawnee	F	Nuts	Nuts eaten plain or with honey.
Ponca	F	Nuts	Nuts used to make soup.
Ponca	F	Sap	Sweetener; sap used to make sugar.
Ponca	F	Chips	Sweetener; hickory chips boiled to make sugar.
Ponca	F	Nuts	Nuts eaten plain or with honey.
Potawatomi	F	Nuts	Gathered for winter use.
Winnebago	F	Nuts	Used to make soup.
Winnebago	F	Sap	Sweetener, used ot make sugar.
Winnebago	F	Chips	Sweetener, hickory chips used to make sugar.
Winnebago	F	Nuts	Eaten plain or with honey.
Omaha		Fiber	Snow gear; hickory used to make snowshoe rims.
Ojibway		Wood	Hunting and fishing items; bows.
Potawatomi		Wood	Hunting an dfishing items; bows and arrows.

The culinary world tells us
that hickory is one of the best woods for smoking meat to impart a rich, slightly sweet flavor. It is especially well-paired with ham and can been used for both hot and cold smoking techniques. It is also a favorite for traditional barbeque. Experts caution that hickory is a powerful smoking wood and should be used sparingly or mixed with another wood to temper the flavor. Today you can buy bottled hickory smoke flavoring and even hickory smoke flavored Spam.

In her indispensable *Wild Seasons: Gathering and Cooking Wild Plants of the Great Plains*, botanist, food folklorist, and Lincoln native Kay Young writes that the time to harvest hickory nuts is early to mid autumn and that "There is something about hiking through the trees and searching for the nuts that adds to the pleasure of eating the foods made from them" (244). Young explains:

> The flavor of a hickory nut soon after it falls is not the same as after it has had time to cure. When ready to eat, the nutmeats should be crisp and flavorful—uncured nutmeats are pliable and lack flavor. To cure, shake the nuts out onto a screen or into a large open box. Hickory nuts may be stored in the shell in a cool, dry place or cracked and then stored in a refrigerator or freezer . . . . in tightly covered containers. Because the shells are very hard, the nuts are best cracked with a hammer or nut-craking machine; an ordinary nutcracker is not adequate.
>
> Hickory nuts are versitile and taste wonderful in anything to which they are added. Theirs is a unique mellow flavor unlike any other, and some recipes, such as persimmon pudding, are simply not the same when made with other nutmeats. They are good baked with squash or yams or added to salads, but perhaps hickory nuts are most loved for their use in cakes.

Young provides three hickory nut cake recipes: "Mother's Favorite," Hickory-carrot, and Hickory-apple. I have had the privilege (and pleasure) of eating Kay Young's cakes and can attest to the quality of her recipes.

A not-quite-lost tradition from our nation's rich cooking history is shagbark hickory syrup. Interestingly, and perhaps fittingly, shagbark syrup doesn't come from tapping the tree as we do to get maple syrup; it's made from the bark. In recent years shagbark syrup has been making a comeback and has been used by chefs from Julia Child to Wolfgang Puck and is sold by such high-scale food purveyors as Dean and Deluca. While not sweet like maple syrup, its complex flavor is apparently quite striking and has been called "Americana in a bottle."

♦

The nutritionist
explains why animals, including humans, seek out and benefit from eating shagbark hickory nuts. One ounce of nuts (approximately nine nuts) provides the following nutritional components:

calories: 186
protein: 3.6 g
carbohydrates: 5.2 g
fat: 18.2 g
fiber: 1.8 g
Shagbark nuts are known for their high levels of:
magnesium: 49 mg (310-420 mg RDA)
thiamine (B1) .25 mg (RDA 1.4 mg)

♦

The forester, the lumberman, and carpenter say this:
Hickory is one of the hardest and strongest woods of any tree growing in the United States. It is denser, stiffer, and harder than white oak or hard or sugar maple. In the past the wood was used for wheels and spokes for wagons and even early automobiles. In the first decade of the 20th century it was not unusual to find cars made with hickory wood frames. Today you can find it used for ladders, floors, sporting goods, and tool handles. While some woods equal hickory in a single property, such as hardness or stiffness, no single commercially available wood can match it in the combination of hardness, bending strength, stiffness, and shock resistance. It also has an extremely high thermal energy content when burned, which it does slowly and evenly. In a Nebraska Forest Service list of BTUs of various woods, shagbark hickory comes in fourth with around 27 million BTU per cord (Nebraska Fuelwood Specifications at http://nfs.unl.edu/documents/ruralforestry/fuelwoodspecs.pdf).

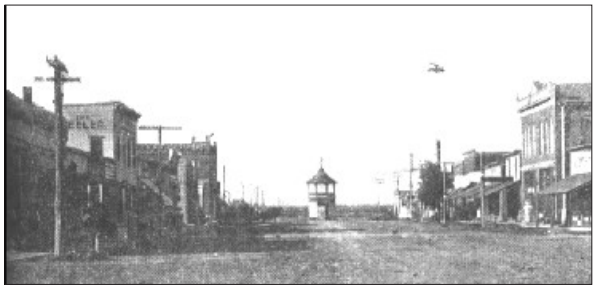
THE MAN:
Cyril Bish

The Man: Cyril Bish

Cyril Bish, remembered as the "Godfather of Nebraska Nut Growing," was born on July 20, 1921 and raised on a farm near Giltner, Nebraska. He was the fourth of six children born to Ervin and Florence (Wagner) Bish who worked the productive soil close to the Platte River in central Nebraska. Happy Hollow, the rural one-room school which Cyril attended in his early years, had a schoolyard lined with black walnut trees. We know there were walnuts at the Bish family farmstead as well because Troy Pabst of the Nebraska Forest Service remembers Cyril telling him, "of his early quest for black walnut knowledge, while cracking black walnuts with his dog at his side, taking notice of the differences in certain black walnut trees located on the farm where he grew up" (NeNGA *Newsletter* 33(1) April 2006, 6). Those early experiences sparked something that would lay dormant for many years but which, fortunately for us, was never forgotten.

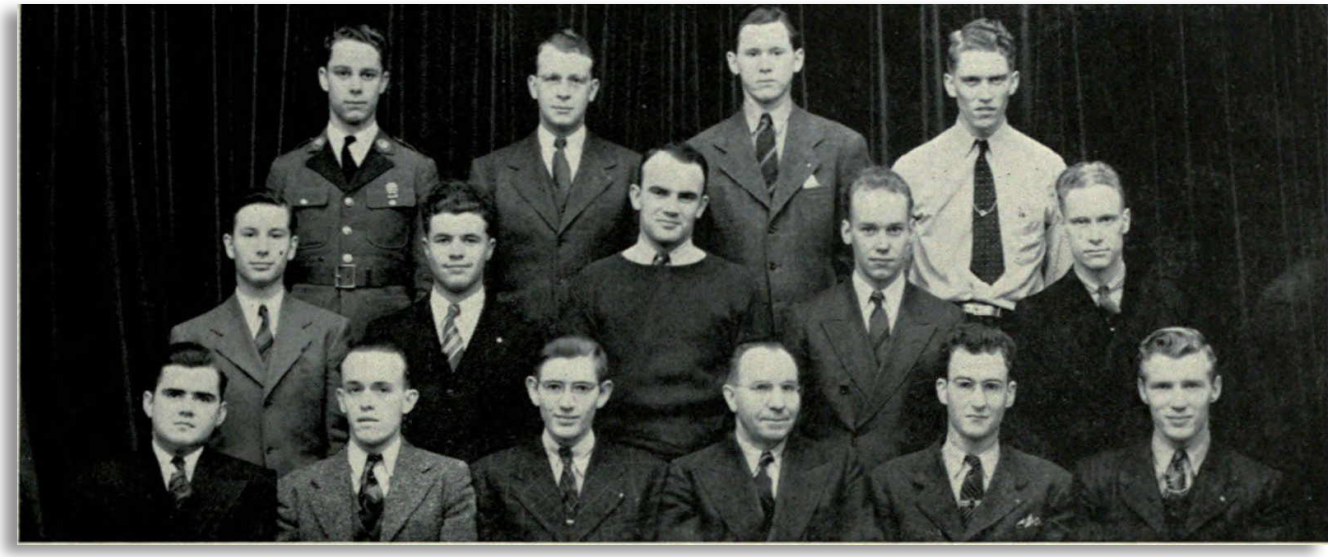
Cyril's parents, Florence (Wagner) and Ervin Bish

Graduating from Giltner High School in 1938, Cyril continued his education at the University of Nebraska where he earned his B.S. in Vocational Agriculture.



Giltner, Nebraska

Cyril Bish, senior class photograph,
University of Nebraska , 1943



Bish, second from right, middle row, with the University of Nebraska Poultry Science Club, 1942

After graduating in 1943, he entered Marine training at Paris Island, SC, and then went on to Officer Training School at Quantico, VA, receiving a commission as 2nd lieutenant. In the fall of 1944 Cyril returned to Nebraska and married LaVerne J. Turner and took up farming life. It was not long until he was approached to fill a vacancy as Hamilton County Agricultural Extension Agent. So began a career of 35 years in Extension service in Hamilton, Adams, and Lancaster counties. Through this work Cyril touched many lives; he was a natural teacher and was an ideal choice to assist local farmers, judge at county fairs, and lead 4-H groups. During his years as Extension Agent, 4-H grew from 750 members to 3,600. His excellence was recognized in the many awards he won including the National County Agricultural Achievement Award in 1958 and the prestigious USDA Superior Service Award—the highest honor a county agent could receive—in 1963. In the 1960s Cyril made time to return to the university and earn his masters degree in Agricultural Economics and for 25 years he served on the panel of the popular educational television show *Backyard Farmer*.

LaVerne and Cyril Bish, 3rd and 4th from left.

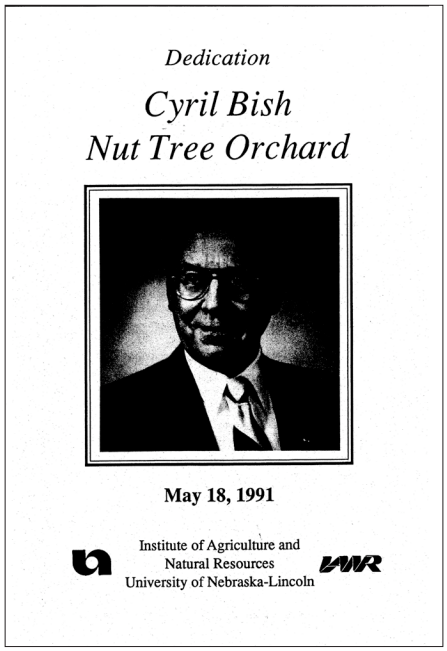
The Ervin and Florence (Wagner) Bish family. Back Row: Cyril, Alvin, Eldon, William, Front Row: Pauline, Florence, Ervin, and Bonnie Ruth Bish.

One of Cyril's greatest and most lasting contributions was as an educator, especially with countless 4-H members. (Shown here holding leaf samples, courtesy UNL Archives and Special Collections.)

Howard Ottoson, Director of the Agricultural Experiment Station [?], Cyril Bish, Bob Klies, Assistant Director

When Cyril retired in 1979 he embarked on a second career as a tree nut researcher, evaluator, advocate, and all-around aficionado. Active in the Northern Nut Growers Association (NNGA), he was chair of their evaluation committee for 26 years and helped to develop criteria for nut evaluations, notably black walnut cultivar rating. Cyril worked to bring the NNGA conference to Lincoln in August 1983. They toured East Campus and did some work to locate nut trees in the city. Cyril served as the organization's president in 1985. Cyril was also instrumental in the work of the Nebraska Nut Growers Association (NeNGA), serving three one-year terms as its president. One of his lasting achievements with that organization was the creation of Heartland Nuts N' More, a cooporative retailer of nut products from Nebraska growers.

Collaborative work with UN-L horticulture professor William Gutafson led to the trialing and subsequent recommendations of the best nut tree cultivars to grow in Nebraska's climate. Though he focused on large-kernelled black walnuts, Cyril also worked with pecans, hickories, and hazelnuts. NeNGA's annual nut evaluations were a serious matter and thanks to Cyril's dedication, they were the largest of any state in the country.



Dedication

Cyril Bish
Nut Tree Orchard

May 18, 1991

Institute of Agriculture and
Natural Resources
University of Nebraska-Lincoln

Program Hosts:

Department of Horticulture
Southeast Research and Extension Center
Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln
and the
Nebraska Nut Growers Association

Dedication of

Cyril Bish Nut Tree Orchard

Northern Pecan Research Orchard
4638 Holdrege St.
University of Nebraska-Lincoln

Dr. Irv Omtvedt, Presiding
2:00 p.m.

Opening Remarks	Dr. Irv Omtvedt Vice Chancellor, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln
Board of Regents Remarks	Rosemary M. Skrupa University of Nebraska Board of Regents
Presidential Remarks	Martin A. Massengale President University of Nebraska
Chancellor Remarks	John W. Goebel Interim Chancellor University of Nebraska-Lincoln
Significance of the Orchard	Ted Rethmeier Nebraska Nut Growers Association Lincoln, NE
Presentation	Paul E. Read Head, Department of Horticulture University of Nebraska-Lincoln
Response	Cyril Bish Professor Emeritus University of Nebraska-Lincoln

Guided Tours of Northern Nut Tree Orchard

Refreshments

Courtesy Lincoln Journal Star

Cyril—with his friends, in 1990.

His tireless advocacy of tree nuts earned him well-deserved recognition. In 1989 he received the Northern Nut Grower Merit Award and, the following year, the Nebraska Statewide Arboretum presented him with its annual Tree Planter Award. A lasting tribute was granted him in 1991 when the university's Horticultural Research Nut Tree Orchard was named in his honor. Cyril had been instrumental, along with Bill Gustafson, in the establishment and development of the orchard and donated countless hours and many trees to the research facility. In 1990, Cyril told the *Lincoln Journal* that "the UNL orchard contains some of the finest varieties and culitvars of nut trees in the country, which will provide a strong genetic base for future plantings."

From its beginnings in the 1970s, Cyril was involved with the Nebraska Statewide Arboretum (NSA), helping its development, serving on committees, and contributing to their plant propagation program, as well as serving at least one term on the NSA Council. At the end of this term, he was among the first named to an Honorary Council in gratitude for his services and contributions. One particular NSA site held a special place for Cyril: the Earl G. Maxwell Arboretum on the University of Nebraska-Lincoln's East Campus. He was a long-time member of the Friends of Maxwell Arboretum (FOMA) and served as the group's president from 1991 to 1995. Over the years, Cyril planted or donated numerous trees and shrubs to the arboretum, including *Asimina triloba* 'Sunflower', *Syringa vulgaris* 'Violetta', *Carya ovata* 'Weschcke', and, of course, the *Carya ovata* 'Holden' which is the subject of our exploration here. Cyril also helped to organize and install a planting of oaks along the interstate just outside of Lincoln to honor Earl G. Maxwell.

In the February 1982 (v. 5, no. 1) edition of the NSA publication, "The Seed," Cyril, identified as NSA's Nut Species Consultant, published an article entitled "Improved Varieties of the Shagbark Hickory." He lists seven cultivars and gives some brief information about each one. Interestingly, Cyril does not include the 'Holden' on this list.

Cyril's curiosity about trees and his hunger for knowledge led him to participate in three plant exploration and acquisition trips to China with Gustafson, the late Harlan Hamernik of Bluebird Nursery and Wild Plums, and others. He was always on the lookout for new plants, especially nut trees. These trips resulted in the exhange of seeds and other plant material (there are now countless Nebraska nut trees growing in China) and in the publication of *Plant Exploration and Germplasm Collection of Cold Hardy Woody Plants for Nebraska From the People's Republic of China* by Bish Gustafson, and graduate student Todd Morrissey (1989).

Cyril's active participation in the local Kiwanis club and church activities speaks to his involvement in life, his connections to people not just trees. A quiet, unassuming man, he never-the-less accomplished significant things, affected countless people especially the children in his early days leading 4-H groups.

♦

Cyril Bish's death on March 23, 2006 was a great loss not just to the Nebraska nut-growing community, but to the entire state. He touched so many people and lived his life with such a good heart that there was an outpouring of both admiration and affection when he passed. Greg Miller of the Empire Chestnut Company wrote

> I would like to say that, like so many others, I have been greatly encouraged by and inspired by Cyril's tireless efforts. He comes across as a down-to-earth, sensible kind of guy. While the idea of commercial nut production in Nebraska or anywhere in the Midwest might seem crazy to most folks, Cyril Bish made it seem doable, practical. If Cyril thinks it's okay, it must be okay. He was the respected captain of the ship that we all boarded.

At Cyril's memorial service, his longtime friend and fellow nut lover Stan Matzke told those gathered that Cyril was "a walking encyclopedia of plants and nut trees. He was always a teacher. . . . Cyril's philosophy: 'You don't worry about the time–you just keep planting."

The April 2006 NeNGA Newsletter was dedicated entirely to that organization's great friend and it included numerous testimonials to Cyril's impact on nut growing, research, and evaluation both locally and in the national organization NNGA. But because Cyril lived his life focused on helping and educating other people, there are also testimonials regarding his role as a teacher, friend, and inspration. Dr. Scott Josiah, Nebraska Sate Forester and Director of the Nebraska Forest Service wrote

> While I have only known Cyril for the past six or so years, he quickly became a good friend and trusted advisor. It goes without saying that Cyril had a huge impact on nut growing in Nebraska and across the U.S. He was such a force and influence—the activities of anyone who gets involved in nutgrowing in Nebraska and the Midwest will almost certainly be touched in some way, probably a powerful way, by Cyril's work. His breadth of knowledge on nuts was only eclipsed by the enormous amount of detail he had acquired and somehow retained over a lifetime.
> Anyone who attended NNGA meetings with Cyril realized immediately just how well respected he was nationally. And the status of the NeNGA as one of the premier nut growing organizations in the country is a testament to Cyril's influence and leadership. His insistence on scientific rigor in nut evaluation, his thorough selection work for nut and wood quality, his wisdom, common sense and his guiding hand in establishing the research trials and scion wood distribution programs laid a rock-solid foundation for the development of a new industry in Nebraska, culminating in Heartland Nuts N' More. I think Cyril was partcularly pleased that HNN'M was formed—in a powerful and real sense it is a validation of his life's work.
>
> Cyril is going to be sorely missed. But his contributions and his passion will live on in the tens of thousands of nut trees growing across the state, in the emerging cultivar nut industry in Nebraska, and of course in our hearts and minds. Maybe someone will someday submit for evaluation a black walnut that cracks out cleanly in halves, with a 50% kernel-to-nut ratio, and Cyril will smile.

When Cyril died in 2006, we lost one of those special souls who contribute so much and enrich our lives. It is only fitting that we honored Cyril by dedicating in his name the 'Holden' Shagbark Hickory which he gave to the Maxwell Arboretum.

♦

Cyril's long-time friend and fellow nut tree enthusiast, Stan Matzke, likes to tell this story:

They were in Auburn recruiting nutgrowers and someone asked Cyril how long it would take for a black walnut tree to produce nuts.

"About eight years," Cyril replied.

The man said, "I'll be fifty-eight by then!"

Cyril smiled. "How old will you be if you don't plant the tree?"

THE 'HOLDEN' CULTIVAR

The 'Holden' Cultivar

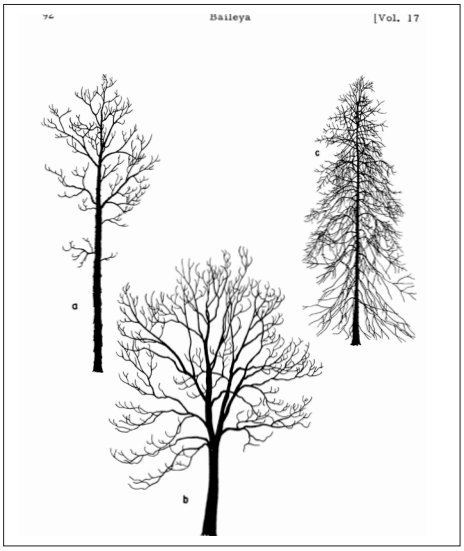
What is the 'Holden' cultivar and how did Cyril hear of it? "Discovery" of what would come to be called the 'Holden' cultivar of shagbark hickory is attributed to William A. Strong, landscape architect at the Holden Arboretum in Kirtland, Ohio, in 1966. Just how Mr. Strong became acquainted with the shagbark hickory located on the property of the widow Mrs. Joseph Roberts and her daughter Patricia at Main and Baldwin streets in nearby Hudson is unknown, but he told Homer L. Jacobs, a consulting arborist at the arboretum, about it. Jacobs, in turn, wrote to Peter A. Hyypio, Extension Botanist at the L.H. Bailey Hortorium at Cornell University in Ithaca, New York, telling him about an "outstanding form of a shagbark hickory" and stating that, "There is no evidence that this is anything but a chance seedling tree; there is no indication that it is a grafted tree"

The ortet (original source tree) of the 'Holden' shagbark hickory still stands at 12 Baldwin Street, Hudson, Ohio.

1950, the foliage at the right of the image is probably the 'Holden' ortet.

In his 1970 article introducing the 'Holden', Hyypio first discusses the usual form of shagbark hickories, both forest-grown and those in the open. He then contrasts those forms with the tree in Hudson:

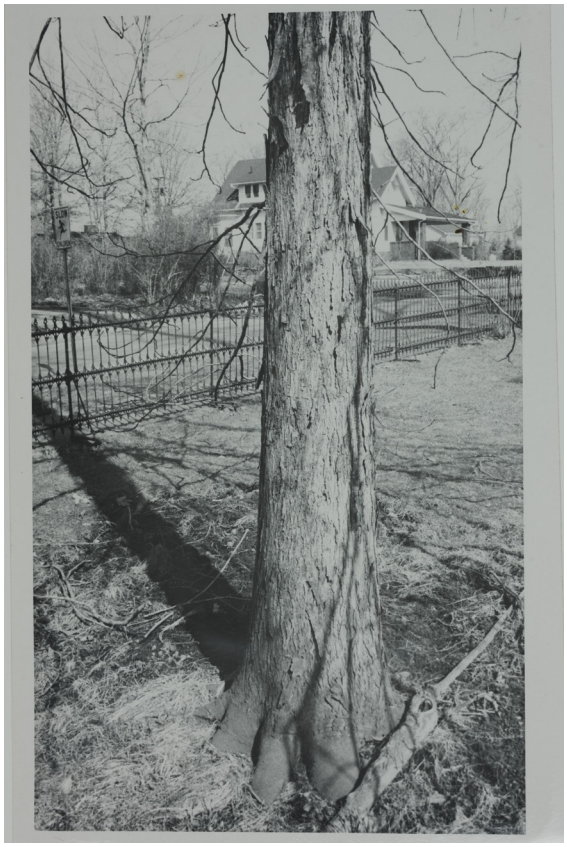
> The tree stands about 60 feet high and has a diameter at breast-height of 12 ½ inches. The main stem is undivided and from it numerous, rather slender lateral branches arise and grow upward at a rather wide angle. As the limbs lengthen they begin to arc and droop; at their tips almost all the twigs turn upward. The lowermost branches originate about eight or ten feet above the ground and are especially pendant, their tips almost reaching the ground and forming the base of a crown which is about 15 feet in diameter. This unusual branching is an exaggeration of the juvenile form in shagbark hickory. It gives the tree a tall slender conical form of cascading foliage in the summer. In winter silhouette the contrast between the trunk and branches is spectacular (93).



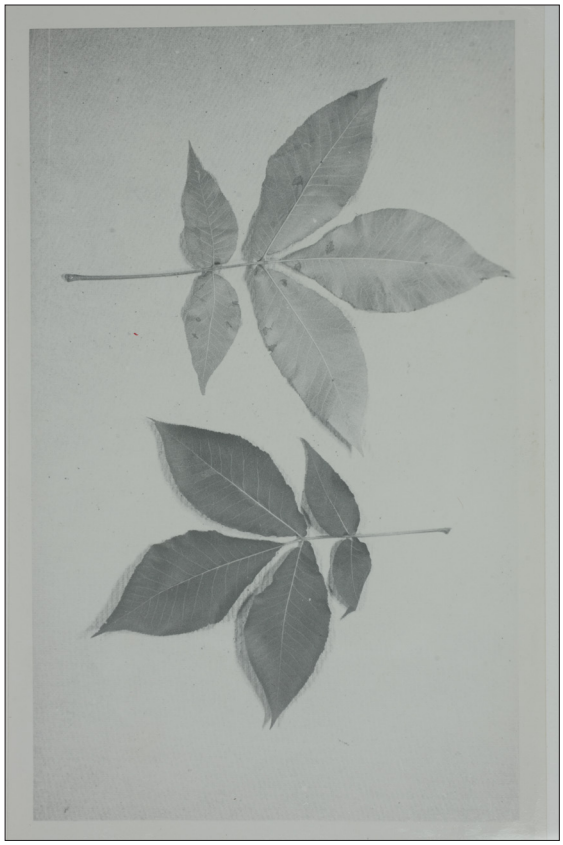
"Silhouettes of different branching forms of the shagbark hickory; a. a tree that has grown up in the forest; b. a tree that has grown up in the open; c. the cultivar 'Holden'." Reprinted from Hyypio, 1970.

Hyypio goes on to describe the fruits as "rather small" and writes that the "shell is thin, cracks easily and the kernel can be removed without any difficulty. I have found its flavor to be agreeable" (96). He states that he knows of no shagbark variety selected solely for its form; yet he finds this tree so exceptional that at the request of Homer Jacobs, he registers it with the Arnold Arboretum in 1970 as *Carya ovata* 'Holden' "in recognition of the Holden Arboretum and its contributions to arboriculture in America" (96). See the November 15, 1970 issue (volume 30, number 6, 251) of *Arnoldia*, for the Arnold Arboretum's listing of the 'Holden' plant registration. Peter Hyypio deposited type specimens at the Bailey Hortorium as well as at the Arnold Arboretum. He records that Homer Jacobs had begun to graft a number of 'Holden' scions onto the straight *Carya ovata* and that "he expects to propagate more of them in the future and these will be made available to arboretums and other botanical institutions and individuals" (96). It appears that it was one of these grafted trees–probably one from 1977– that Bish acquired some ten years later. I have not been able to locate any 'Holden' cultivar planted in a botanic garden other than the Holden Arboretum itself.

Hyypio closes his article with words I wish to echo: please respect the owners of the property and send any requests for propagating material to the Holden Arboretum. I have revealed the address of the tree's location with the knowledge that anyone determined to find it could do so with enough determination on the Internet just as I did.



Homer Jacob's photographs from the 1960s attempt to show the viewer the drooping branches with upturned tips that characterize the 'Holden'.
(Used by permission, L.H. Bailey Horotorium, Dept. of Plant Biology, Cornell University.)



These images are of the original herbarium sheets held by the L.H. Bailey Horatorium at Cornell University in Ithaca, New York. (Used by permission, L.H. Bailey Horotorium, Dept. of Plant Biology, Cornell University.)

The 'Holden' ortet in Hudson, Ohio in summer foliage (left) and in winter aspect (right). Photographs by Homer Jacobs, Holden Arboretum. (Used by permission, L.H. Bailey Horotorium, Dept. of Plant Biology, Cornell University.)

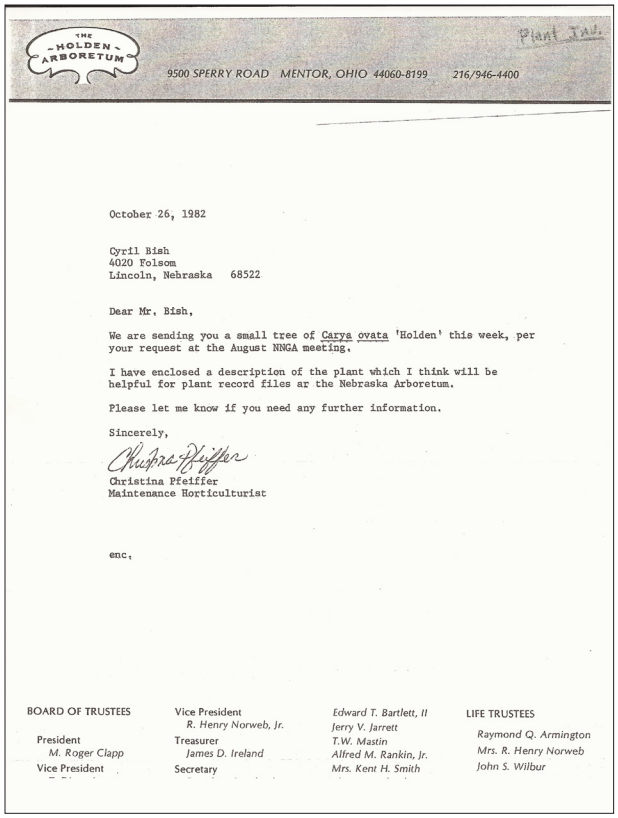
According to Charles Tubsing, Plant Collections Curator, the Holden Arboretum has

> 8 specimens of 'Holden' planted here. They were propagated by Homer Jacobs in 1967, 1974 and 1977. The tallest specimen, from the 1967 accession, is 62' tall. Five of the trees range from 38 to 47 feet in height, and the remaining two are somewhat stunted. The tree most accessible to visitors here is located in our hedge display. It is 43' tall and 30' in crown spread at the widest point.
>
> Scions were distributed in the early 1970s, after the cultivar was published, but no record of to whom they went made it into our plant records database. Ken Mudge at Cornell mentioned that there is a tree labelled as 'Holden' at Cornell, but I believe he indicated that it is a shellbark. If so, then it is not correctly identified.
>
> I know of no other holding of this cultivar at another arboretum. It is not listed at the Arnold, Dawes or Morton arboreta. 'Holden' is not listed in the nursery catalog database Plant Infomation Online http://plantinfo.umn.edu/ . Considering that this cultivar was introduced for its growth form, and not for superior nut characteristics, that is not surprising.
>
> There have been no efforts to pollinate or hybridize this cultivar of which I am aware. (Personal communication.)

The same 'Holden' ortet, summer 2012. Photograph taken for the author by Tom Munn, Public Works Superintendent, City of Hudson, Ohio.

According to Superintendent Tom Munn, the 'Holden' ortet had a 24" DBH in th esummer of 2012 .

Fruit on the 'Holden' ortet, summer 2012. Photograph by Tom Munn.



THE HOLDEN ARBORETUM

9500 SPERRY ROAD MENTOR, OHIO 44060-8199 216/946-4400

Plant Inf.

October 26, 1982

Cyril Bish
4020 Folsom
Lincoln, Nebraska 68522

Dear Mr. Bish,

We are sending you a small tree of Carya ovata 'Holden' this week, per your request at the August NNGA meeting.

I have enclosed a description of the plant which I think will be helpful for plant record files ar the Nebraska Arboretum.

Please let me know if you need any further information.

Sincerely,

Christina Pfeiffer
Maintenance Horticulturist

enc,

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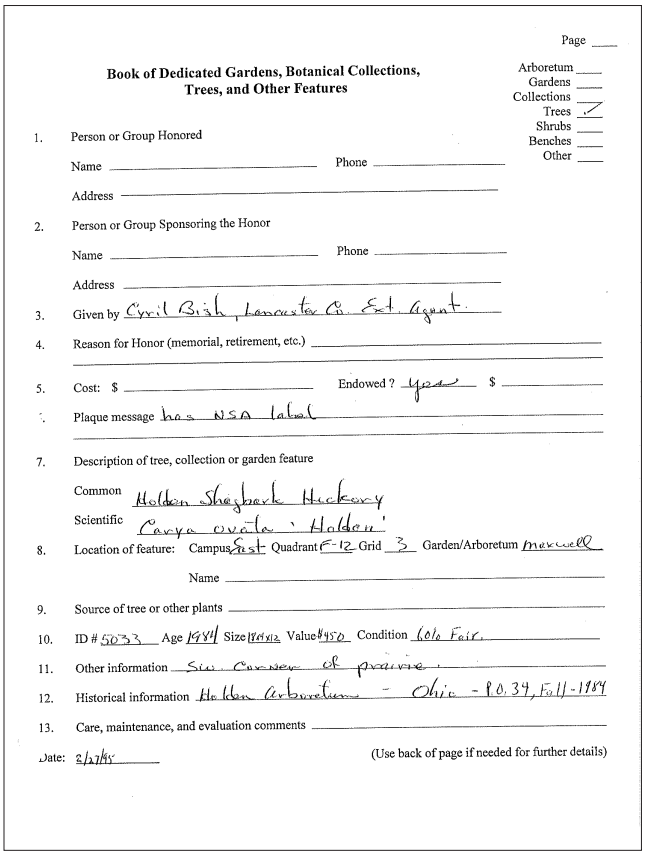
Cyril's letter from the Holden Arboretum notifying him that they are sending a 'Holden' sapling.



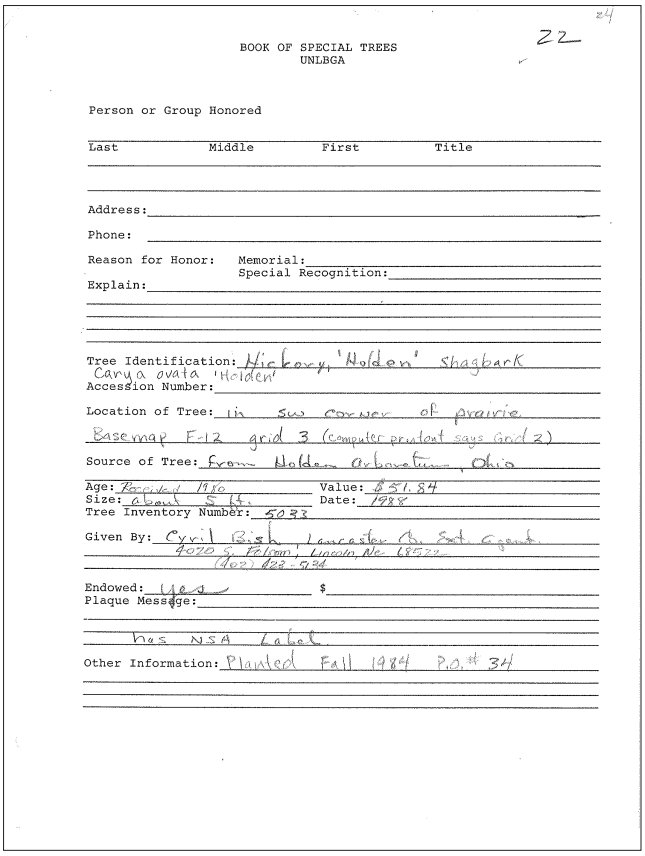
Page ____

Book of Dedicated Gardens, Botanical Collections, Trees, and Other Features

Arboretum ____
Gardens ____
Collections ____
Trees ✓
Shrubs ____
Benches ____
Other ____

1. Person or Group Honored
   Name _____ Phone _____
   Address _____
2. Person or Group Sponsoring the Honor
   Name _____ Phone _____
   Address _____
3. Given by Cyril Bish, Lancaster Co. Ext. Agent.
4. Reason for Honor (memorial, retirement, etc.) _____
5. Cost: $ _____ Endowed ? yes $ _____
6. Plaque message has NSA label
7. Description of tree, collection or garden feature
   Common Holden Shagbark Hickory
   Scientific Carya ovata 'Holden'
8. Location of feature: Campus East Quadrant F-12 Grid 3 Garden/Arboretum Mercuell
   Name _____
9. Source of tree or other plants _____
10. ID # 5033 Age 1984 Size 1"x1/2 Value $450 Condition Gd to Fair
11. Other information SW Corner of prairie
12. Historical information Holden Arboretum - Ohio - P.O. 34, Fall-1984
13. Care, maintenance, and evaluation comments _____

Date: 2/27/85 (Use back of page if needed for further details)



24

22

BOOK OF SPECIAL TREES
UNLBGA

Person or Group Honored

Last Middle First Title

Address:

Phone:

Reason for Honor: Memorial:
Special Recognition:

Explain:

Tree Identification: Hickory, 'Holden' Shagbark
Carya ovata 'Holden'
Accession Number:

Location of Tree: in SW corner of prairie
Basemap F-12 grid 3 (computer printout says Grid 2)

Source of Tree: from Holden Arboretum, Ohio

Age: Received 1980 Value: $51.84
Size: about 5 ft. Date: 1988
Tree Inventory Number: 5033

Given By: Cyril Bish, Lancaster Co. Ext. Agent.
4020 S. Folsom, Lincoln, Ne. 68522
(402) 423-5391

Endowed: yes $
Plaque Message:

has NSA label

Other Information: Planted Fall 1984 P.O.# 34

Records from UN–L's Landscape Services Department indicate that Cyril Bish's shagbark hickory was planted in the fall of 1984.

Cyril Bish's 'Holden' Shagbark Hickory

Cyril Bish's 'Holden' Shagbark Hickory

We don't know how or when Cyril Bish first became aware of the 'Holden' Shagbark. On August 4 1982 the NNGA took a field trip to the Holden Arboretum as part of its annual meeting. In a letter to Bish dated October 26 of that year Christina Pfeiffer, Maintenance Horticulturist at the Holden Arboretum, writes, "We are sending you a small tree of Carya ovata 'Holden' this week, per your request at the August NNGA meeting" (author's collection). It appears, however, that this was not the first 'Holden' that Cyril acquired and it is likely not the tree that ended up in Maxwell Arboretum. Whatever seedling Cyril donated, how or when it made its way to Maxwell Arboretum is not as straightforward as it may first appear. Records of the University of Nebraska-Lincoln's Landscape Services Department are a bit confusing.

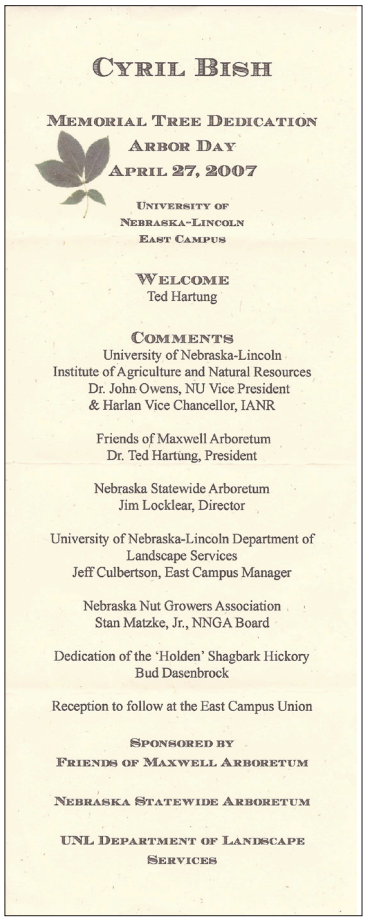
The minutes of the November 20, 1981 Friends of Maxwell Arboretum (FOMA) meeting list a shagbark hickory as having been donated by Cyril Bish. In December 1981, FOMA member D.E. Hutchinson, wrote Cyril, "What is the name of the hickory you are planting in the spring?" And a diary kept by the Landscape Supervisor of Maxwell Arboretum at the time tells us that a 'Holden' was "planted in spring 1982, given by Holden Arboretum through Cyril Bish." It is unclear if this is the same tree that minutes from the October 13, 1983 FOMA meeting record as "An upright hickory from the Holden Arboretum was planted." Further complicating things, a Maxwell Arboretum donor list, apparently from 1984, states "Holden Hickory C. Bish still in nursery." The 1987 arboretum Annual Report lists the Holden as having been planted in 1980-1981. And finally, a Landscape Services department work order numbered F84-34 records a shagbark hickory having been planted on November 15, 1984.

The plaque that was installed at the tree for its dedication maintains that the tree was "given in 1980, planted in 1984." The record sheet in the department's Book of Special Trees also states that the tree was received in 1980, held in the nursery, and planted in the fall of 1984. What are we to make of all this (besides the need for accurate record keeping at our botanical gardens)? Did Cyril obtain more than one tree from the Holden Arboretum? Did one of the trees die and was it subsequently replaced? There is no record of either of these having occurred. Of course, it would be nice to have the answers to these questions, but in terms of both honoring Cyril Bish and the existence of the tree itself, it probably doesn't make a significant difference.

♦

A year after his death, on a rainy April day in 2007, a small group gathered under their umbrellas at the north end of the Earl G. Maxwell Arboretum to dedicate the *Carya ovata* 'Holden' in honor of a outstanding Nebraska plantsman, educator, and nut tree pioneer, Cyril Bish. The event was sponsored by the Friends of Maxwell Arboretum, the Nebraska Statewide Arboretum, and the Department of Landscape Services. The speakers included Dr. John

Owens, NU Vice President and IANR Vice Chancellor; Dr. Ted Hartung, President of FOMA; Jim Locklear, Director of the Nebraska Statewide Arboretum; Jeff Culbertson, East Campus Landscape Manager; Stan Matzke, Jr., Board Member, Nebraska Nut Growers Association; and Bud Dasenbrock, former Director of the Department of Landscape Services.



CYRIL BISH

MEMORIAL TREE DEDICATION
ARBOR DAY
APRIL 27, 2007

UNIVERSITY OF
NEBRASKA-LINCOLN
EAST CAMPUS

WELCOME
Ted Hartung

COMMENTS
University of Nebraska-Lincoln
Institute of Agriculture and Natural Resources
Dr. John Owens, NU Vice President
& Harlan Vice Chancellor, IANR

Friends of Maxwell Arboretum
Dr. Ted Hartung, President

Nebraska Statewide Arboretum
Jim Locklear, Director

University of Nebraska-Lincoln Department of
Landscape Services
Jeff Culbertson, East Campus Manager

Nebraska Nut Growers Association
Stan Matzke, Jr., NNGA Board

Dedication of the 'Holden' Shagbark Hickory
Bud Dasenbrock

Reception to follow at the East Campus Union

SPONSORED BY
FRIENDS OF MAXWELL ARBORETUM

NEBRASKA STATEWIDE ARBORETUM

UNL DEPARTMENT OF LANDSCAPE
SERVICES

Dasenbrock told the assembled guests, "I want to express my appreciation for all the support we received from Cyril in the many trees and shrubs he brought us for trial on UNL Campuses. He was a great supporter of Maxwell Arboretum!" And Vice Chancellor Owens proclaimed that "We are all richer today because of the 'other interests' Cyril Bish pursued after his retirement. . . . He had a wonderful and profound interest in trees. Nut trees."

Indeed, he did. And the *Carya ovata* 'Holden' in Maxwell Arboretum will stand as a as a testament to this for generations to come—a final gift from a generous man.

Bud Dasenbrock (right) and Ted Hartung (below) address the guests at the dedication of Cyril Bish's *Carya ovata* 'Holden'.
© Emily Levine

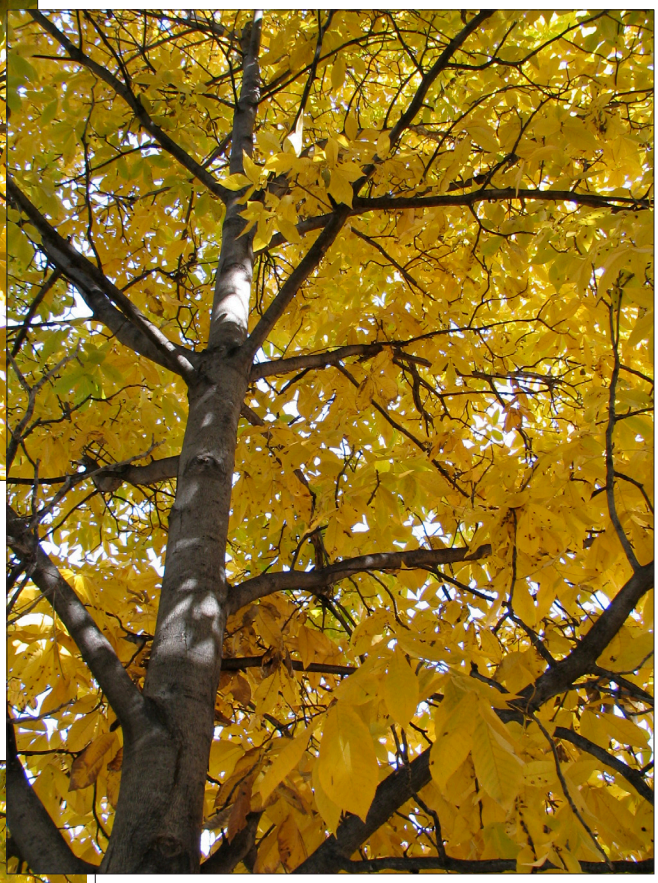
Jim Locklear and Bud Dasenbrock look on as John Owens speaks (left). Jeff Culbertson (below) talks about the 'Holden' cultivar.
© Emily Levine

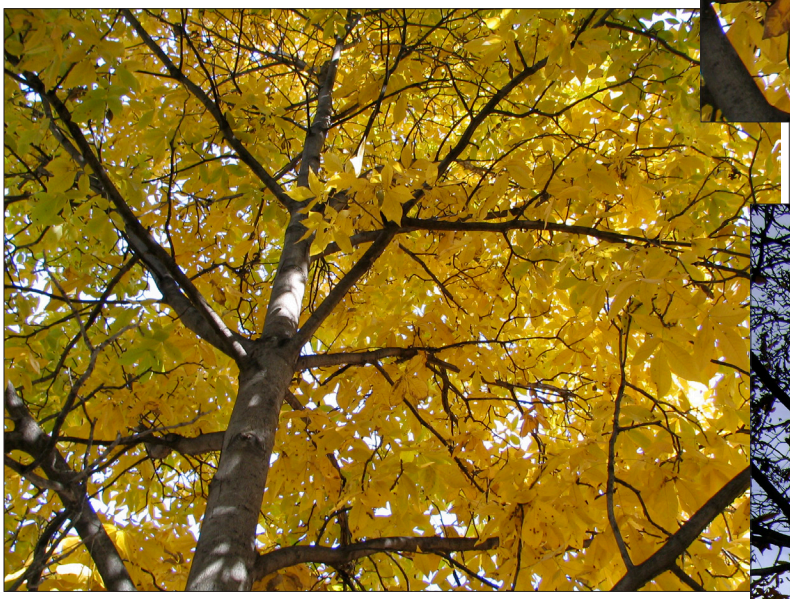
Here ends our tale of Cyril Bish's *Carya ovata* 'Holden.' But the tree and its continuing story will live for decades. Buds will swell and burst, leaves will emerge, catkins will droop and fertilize the female flowers below. Fruits will develop and hard-shelled nuts will grow. Squirrels will come, as they do every year, and then the snow. The stark silhoutte of the 'Holden' will stand watch over Maxwell Arboretum's prairie and await another spring.

And, yes, some day the tree will come to the end of its life. Perhaps someone will have planted one of its nuts and a new generation will rise. Either way, the tree itself — Cyril's tree — will return to the earth, enriching it for years and trees to come.

Cyril's wife visits his tree in Maxwell Arboretum. (Composite image courtesy of LaVerne Bish.)

Cyril's 'Holden' Shagbark Hickory Through the Year





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