

UNITED STATES DEPARTMENT OF THE INTERIOR
 HERITAGE CONSERVATION AND RECREATION SERVICE

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NATIONAL REGISTER OF HISTORIC PLACES INVENTORY-NOMINATION FORM

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
 TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC Langstroth Cottage

AND/OR COMMON same

2 LOCATION

STREET & NUMBER 303 Patterson Avenue (SR 27)

CITY, TOWN Oxford VICINITY OF 8th
 STATE Ohio CODE 039 COUNTY Butler CODE 017
— NOT FOR PUBLICATION CONGRESSIONAL DISTRICT

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input checked="" type="checkbox"/> BUILDING(S)	<input checked="" type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input checked="" type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

4 OWNER OF PROPERTY

NAME Miami University

STREET & NUMBER
 CITY, TOWN Oxford VICINITY OF STATE Ohio

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
 STREET & NUMBER
 CITY, TOWN STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE National Register of Historic Places
 DATE 1976 FEDERAL STATE COUNTY LOCAL
 DEPOSITORY FOR SURVEY RECORDS
 CITY, TOWN STATE

7 DESCRIPTION

CONDITION

EXCELLENT
 GOOD
 FAIR

DETERIORATED
 RUINS
 UNEXPOSED

CHECK ONE

UNALTERED
 ALTERED

CHECK ONE

ORIGINAL SITE
 MOVED DATE _____

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

L. L. Langstroth lived in the "Langstroth Cottage" in Oxford, Ohio from 1858 until 1887, seven years prior to his death. The house was a gift from his brother-in-law. Langstroth's twenty-nine year occupancy of this house, where he wrote his famous "The Hive and the Honeybee," was his longest residence in a single location. His other homes, especially his home in Philadelphia, where he made the discoveries in apiculture associated with his name, either have not been identified or are no longer extant. Langstroth's long association with the Oxford cottage, that has not been significantly altered, endows the house with a strength of historic association that meets the criteria for designation as a National Historic Landmark.

The integrity of the cottage is whole. The following architectural description of the building is taken from the National Register of Historic Places nomination form for the property. The Ohio State Historic Preservation Office prepared the nomination. There have been no alterations since the nomination was prepared.

"The Langstroth Cottage is a brick, two-and-a-half story, gable roofed building. The facade is three bays wide with the entry on the left. Windows are plain, 6/6 with plain stone lintels and sills. Brick pilasters are at the corners of the building and a brick molding outlines the gable. There is a six light fan window in the gable. A one story, gable roofed, porch of wood is across the lower level. The porch and raised stoop are later additions.

The basement is partially above ground, is brick, and 2/2 pane windows. Plain, 6/6 windows are also found on the sides and rear of the building. Brick pilasters also frame the rear corners of the structure and a brick molding runs along the roofline, in place of a cornice, beneath the overhanging eaves. There is centrally placed, interior/exterior, chimney on the west side of the house. There is a one-story frame addition to the rear of the house.

The exterior is severly simple, the brick pilasters and molding giving the structure a panaled facade. The interior has been described as light and airy, distinguished by a curved stairway and hand-carved cherry railing. Originally there were four fireplaces."

The property once included the house and eight acres of land where Dr. Langstroth did his apiculture research. He planted a "honey garden" and linden trees for bee forages. Several residences (pre-1933) have been built on the land.

The Langstroth Cottage has been little altered since the time when it was Langstroth's home. The cottage meets the integrity criterion of the National Historic Landmarks Program.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input checked="" type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input checked="" type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input checked="" type="checkbox"/> INVENTION		

SPECIFIC DATES 1858-1887

BUILDER/ARCHITECT unknown

STATEMENT OF SIGNIFICANCE

Apiculture, the art of caring for and manipulating colonies of honeybees, is one of mankind's oldest forms of animal husbandry. Although beekeeping's roots reach into antiquity, it was not until the mid-19th century that significant changes were made in the way apiarists tend the creatures that produce one of nature's sweetest substances. In 1851 Lorenzo Lorraine Langstroth, an American Congregational minister and teacher, discovered the principle of the "bee space" and invented the moveable frame beehive. These discoveries were significant in the history of science and invention in the U.S. and, more indirectly, were importantly related to the history of agriculture. Langstroth's accomplishments, which revolutionized the methods of beekeeping, constituted the single most important innovation in the history of apiculture.

History

Life

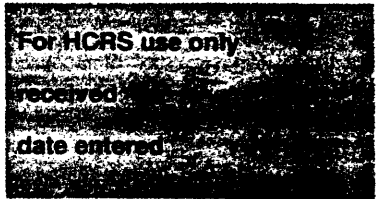
Lorenzo Lorraine Langstroth was born in Philadelphia, Pennsylvania on December 25, 1810. Langstroth received his elementary and secondary education at a Philadelphia preparatory school. After attending the University of Pennsylvania he in 1829 entered Yale. A good student, Langstroth graduated in 1831 with a Phi Beta Kappa key. While at Yale his interests turned to theology and upon graduating he entered the Yale Divinity School. At the same time he supported himself by tutoring mathematics.

In 1836 Langstroth, by then an ordained minister, answered a call to serve the congregation at South Church in Andover, Massachusetts. In the same year he married Anne M. Tucker, the daughter of the woman who administered the girls' school where Langstroth taught while at divinity school. Mrs. Langstroth lived to 1873 and was the mother of three children.

Langstroth's tenure at South Church was brief. In 1838 he suffered a mental breakdown, a crippling malady that plagued him throughout his life and that led to prolonged periods of inactivity. After a brief period of service as principal of a girls' academy in Andover, Langstroth moved to Greenfield, Massachusetts where he became principal of another school for girls. He held this position until 1844, when he again became ill. Langstroth then decided to move back to Philadelphia and open a school. Philadelphia remained his home

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until 1852, when once again depression overcame him. This breakdown forced Langstroth to leave his family and live with his sister for the next six years.

In 1858 Langstroth gathered his family and moved to Oxford, Ohio where his brother-in-law had given him a comfortable brick cottage and eight acres of land. Langstroth lived in Oxford from 1858 until 1887. This home, today known simply as Langstroth's Cottage, was the famous apiarists longest continual residence. Here he continued to raise bees, preach, and teach. In 1887 Langstroth moved to Dayton to live with a daughter. He died in Dayton on October 6, 1895.

Work

Langstroth's long fascination with the honeybee began in the 1840's while he was living in Andover, Massachusetts. His interest in bees developed as a hobby and was not the result of formal education or even, it seems, a youthful fascination with nature. Soon he became a self-taught expert. Langstroth's dedication to the honeybee illustrated both the theory and practice of 18th and early 19th century science and invention in the United States.

American science and invention in the antebellum period and until approximately the middle of the 19th century exhibited three major characteristics. First, the dominant research interest, which accounted for the bulk of the scientific work, was natural history as opposed to physical science. Men of science, often doctors and men of the cloth, worked in the Linnean tradition as they busily observed, identified, described, and classified the flora and fauna of the United States. In observing the behavior of the honeybee Langstroth joined this tradition. Second, science was dominated by an interest in the practical as opposed to the theoretical. Solutions to problems that would have a direct economic benefit led many to seek out new technologies and processes. Langstroth sought to invent a better way of raising bees and increasing their production. Lastly, there was a marked absence of specialization and amateurs, those who earned their living elsewhere, dominated the field. Professionalism did not develop until well into the 19th century.¹ Langstroth's work with the honeybee never provided sufficient income to support himself and his family. He earned his living as minister and teacher. By the time he moved to Philadelphia in 1858, he had adopted the scientific methodology of the times. He had started raising honeybees and observing their behavior in a disciplined and systematic fashion. He had made himself a natural scientist.

In Philadelphia Langstroth established an apiary, first in an upstairs room and later in the nearby country. It was here in 1851 that he made the fundamental discoveries that forever changed apiculture.

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Man first domesticated honeybees in ancient antiquity by establishing colonies in cylinders of bark, straw, mud, or other materials. Hives of this type were used for hundreds of years, and can still be found in many parts of the world. In Europe the dome shaped, woven straw "skep" became the standard hive. In America a section of hollow log, known as a bee gum, was widely used. This type of hive was gradually replaced by a box hive and it was box hive that Langstroth set out to improve. Although improvements were made in all these hives, that increased the quantity of honey that could be extracted from them, they all retained a common negative feature that greatly limited the productivity of the tireless winged inhabitants. In constructing their homes bees employ a wax-like substance to build combs in which they store honey and raise their young. They use an adhesive substance called "bee glue" to attach the combs to the frames of a hive and to the hive's sides. When it came time for the beekeeper to remove the combs from the hive to collect the honey, he was literally forced to rip the combs from the sides of the hive. In the process he killed many bees, at times even the queen, and lost much valuable honey. The problem, on which many European and American apiarists had long worked, was to find a way to prevent the bees from gluing the combs to the hive. Langstroth solved it. As he recalled his discoveries:

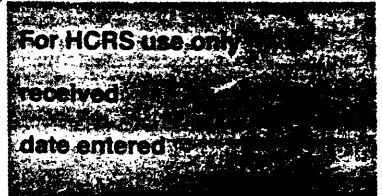
Pondering, as I had so often done before, how I could get rid of the disagreeable necessity of cutting the attachments of the combs from the walls of the hives...the almost self-evident idea of using the same bee space as in the shallow chambers came into my mind, and in a moment the suspended, moveable frames, kept at a suitable distance from each other and the case containing them, came into being.²

Langstroth's invention consisted of the discovery of the bee space (approximately five-sixteenths of an inch) which bees keep open without filling with comb or glue. He applied this bee space principle in the construction of a moveable frame hive. In the hive Langstroth suspended the frames five-sixteenths of an inch apart and an equal distance from the hive's walls. As the bees would not fill these spaces, the frames were not fastened by combs or bee glue. They were fully moveable and could be easily removed from the hive.

In 1853 Langstroth published his classic work on apiculture titled, "The Hive and the Honeybee." The book, that went through countless editions and that was translated into all major languages, explained his discoveries and summarized his observations and experiences in apiculture. "This practical treatise made available to the world," a later day beekeeping expert writes, "Langstroth's fundamental discovery of the bee space and his invention of the top-opening, moveable frame-hive which made modern beekeeping possible. More than a century has passed since Langstroth's discovery, but our system of beekeeping still is based on his hive and methods."³ Indeed, some consider Langstroth's book, that contained chapters on all aspects of beekeeping, for example, what to do, if the queen bee is lost, and how to prevent predators from robbing the hive, as important a contribution to apiculture as his discoveries. "The Hive and the Honeybee" represented a major contribution to the knowledge of the honeybee.

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Langstroth's contributions to apiculture led to neither fame nor fortune. His book brought in small royalties, but it was published before the days of tight international copyright laws. His moveable frame-hive, that was quickly adopted both at home and abroad, should have resulted in a sizeable income, but Langstroth failed to obtain the necessary patent rights. When he died in 1895, few Americans noticed his passing. On the other hand his fellow apiarists eulogized him profusely. "Wherever one hears the best names of beekeepers spoken by the beekeeping world," wrote the editor of a German language beekeeping periodical, "he will never miss the name of Reverend L. L. Langstroth."⁴ A British apiarist stated, "We here in Europe have for a long time held Langstroth in the highest esteem; have appreciated his invention, and only a few years ago we - British beekeepers - did ourselves the pleasure of electing him an honorary member of the British Beekeepers' Association, as a recognition for the services which he had rendered to apiculture."⁵ And a Frenchman wrote, "I can assure you that, on this side of the Atlantic, the loss which the friends of the bee have just sustained will be no less keenly felt than in America; for Langstroth is considered everywhere in Europe as well as with you as one of the fathers of modern apiculture."⁶

This judgement, written in 1895, has stood the test of time. The 1972 edition of the beekeepers bible, A. J. Root's "The ABC and XYZ of Bee Culture," summarized Lorenzo Lorraine Langstroth's significance in the history of apiculture. "To construct a frame that will enclose a comb required no great act of invention," Mr. Root stated, "but to make a frame so it could be readily moved without crushing or irritating bees required the work of a genius, and that genius was Langstroth."⁷

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Footnotes

1. See George H. Daniels, American Science in the Age of Jackson (New York: 1968).
2. As quoted in, Roy A Grout, ed., The Hive and the Honey Bee, (Hamilton: Padant and Sons, 1963), p. 11.
3. Ibid., p. vii.
4. As quoted in, Florence Naile, America's Master of Bee Culture, The Life of L. L. Langstroth. (Ithaca: Cornell University Press, 1942), p. 187.
5. Ibid., p. 188.
6. Ibid.
7. A. I. Root, The ABC and XYZ of Bee Culture, (Medina, 1972), p. 315.

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Heinrich, Bernd. Bumblebee Economics. (Cambridge, Harvard University Press, 1979).

Jones, Bessie Z. The Golden Age of Science. (New York, 1966).

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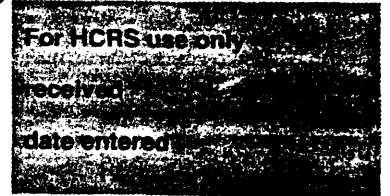
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Verbal Boundary Description

Beginning at a point at the curb line of Patterson Avenue, said point approximately 50' from the cottage's southwest corner at a 45 degree angle, proceed approximately 100' along the curb line in a northerly direction to a point, then proceed approximately 100' along the curb line in a northerly direction to a point, then proceed approximately 100' in an easterly direction to a point at the curb of the parking lot behind the cottage, then proceed in a southerly direction approximately 100' to a point, then proceed approximately 100' in a westerly direction to a point, which is the point of beginning. The boundary encompasses a square approximately 100' on the a side.

Boundary Justification

The boundary of the L. L. Langstroth Cottage has been drawn to include the cottage and the lot on which it sits. The original Langstroth property consisted of the house, probably outbuildings, eight acres planted in trees and flowers, and the apiary. The cottage is the only resource remaining from the Langstroth period. The original eight acres have been sub-divided to accomodate other improvements, among them the houses that flank the cottage on both sides.