


Lecture 30
Origins of Horticultural Science



- Formation of Scientific Societies (17th Century)
- Creation of agricultural & horticultural societies (18th Century)
- State supported agricultural research in the (19th Century)
- Two Important Societies
 - The Horticultural Society of London (later, Royal Horticultural Society); founded in 1804
 - Society for Horticultural Science (later, American Society for Horticultural Science); founded in 1903

Philip Miller (1691–1771)

Gardener of the Worshipful Company of Apothecaries at their Botanic Garden at Chelsea

Most important garden writer of 18th century


The Gardener's and Florists Dictionary or a *Complete System of Horticulture* (1724);

The Gardeners Dictionary containing the Methods of Cultivating and Improving the Kitchen Fruit and Flower Garden (1731)


Widely reprinted

The 16th edition of *The Gardeners Kalendar* (1775) was in George Washington's library; facsimile edition (1971) by the national Council of State Garden Clubs

Provides directions on a month to month basis as well as an introduction to the science of botany



Founding of the Royal Horticulture Society



John Wedgwood
Sir Joseph Banks
William Forsyth
Charles Francis Greville

Richard Antony Salisbury
James Dickson
W.T. Aiton

History of Horticulture: Lecture 30

Letter dated June 29, 1801, by John Wedgwood to William Forsyth, gardener to King George III:

I have been turning my attention to the formation of a Horticultural Society and have drawn up such heads as have appeared to me necessary for the first formation of the Society. It would be proper to add a preamble, just stating the ideas of the first founders of the Society, and intimating that we wish to clash with no society at present instituted whose plans are different from ours. By this means we shall give no offence to any party. By not binding ourselves to publish annually we shall not be obliged to expose ourselves to the world in an imperfect state by publishing papers not worth making public.



Exhibition Extraordinary in the Horticultural Room, a caricature of a meeting of the Horticultural Society in 1825 by George Cruikshank

Three Famous Horticultural Scientists



Thomas Andrew Knight (1759-1838)



John Lindley (1799-1865)



Liberty Hyde Bailey (1858-1954)

Thomas Andrew Knight (1759–1838)



Founder and President of the London Horticultural Society from 1811–1838
18th century naturalist to devote himself to horticultural science, having interests in botany as well as practical horticulture.
Both an observer and an experimentalist

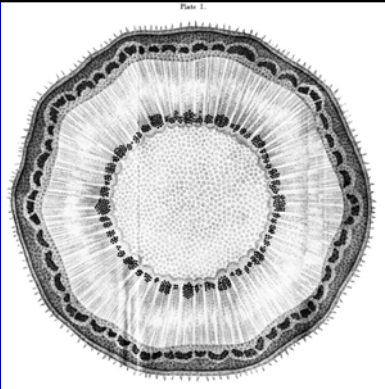
Wide ranging interests

Botanical:

Plant physiology, structural biology, studies ascent and descent of sap, gravitational biology, nature of the cambium, movement of tendrils, genetics, effect of pollen on characters in the pea (he described dominance and segregation but failed to make the brilliant leap of Mendel), investigated effects of electricity on plants


Horticultural:

Controlled environment agriculture, greenhouse construction and vegetable forcing, pest control, plant breeding, plant nutrition and fertilization, culture of fruits and vegetables, Studies wide variety of plants




Knight's Horticultural Papers, Plate I

John Lindley (1799–1865)



Professor of Botany,
University of London
Editor, *Botanical Register*
Author, *Theory of Horticulture*
(1840) and 2nd edition,
*The Theory and Practice of
Horticulture* (1855)
Mainspring of London
Horticultural Society for 40
years
Orchid Taxonomy considered the
Father of Modern Orchidology
Editor of *Gardener's Chronicle*

Liberty Hyde Bailey (1858–1954)



Successful scientist, teacher, and
administrator; poet and
philosopher who profoundly
affected teaching, research, and
extension in horticulture
Born in 1858 in South Haven,
Michigan
Studied in Michigan State
College and Harvard
Became Professor at Michigan
State College

Recruited by Cornell in 1882 as Professor of
Practical and Experimental Horticulture
Dean of College of Agriculture at Cornell in 1903
Retired in 1913 and then lived another 40 years
where he made his great contributions to
horticulture and taxonomy
Prolific author, over 160 volumes
Most famous was *Cyclopeida of Horticulture*
Hortus, Hortus Second, Hortus Third
First President of the American Society for
Horticultural Science

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First Meeting of ASHS, 1903



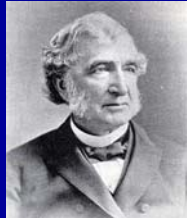
Morrill Act

Signed by Lincoln in 1862

Established Land Grant Colleges

Hatch Act 1887

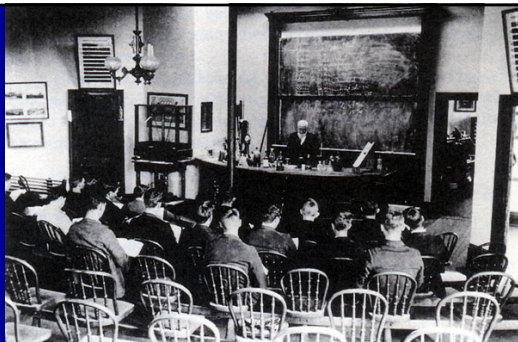
Established Agricultural Experiment Stations



Justin Smith Morrill

Abraham Lincoln

William H. Hatch



**A professor and students of agricultural chemistry
in a laboratory lecture, Michigan State College
(later Michigan State University) 1892**

History of Horticulture: Lecture 30



Harvey Wiley (in dark jacket), the eccentric Purdue University professor who became chief of the USDA Bureau of Chemistry, organized research in 1906 at Purdue that led to passage of the Meat Inspection Act and the Federal Food and Drugs Act
