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 Gardener’s 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 Forsey  Charles Francis Greville

Richard Anthony Salisbury  James Dickson  W.T. Alison
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)

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
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
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.