

## Timeline for Core Biology: Plant Sciences' Discoveries†

### 500 B.C. – 1800A.D.

- **320 BC - Theophrastus founds botany.**
- ?? - Jan Baptist van Helmont performs his famous tree plant experiment in which he shows that the substance of a plant derives from water and air, the first description of photosynthesis.
- 1663 - Robert Hooke sees cells in cork using a microscope.
- 1673 - Anton Leeuwenhoek describes microscopic life.
- **1682 – Nehemiah Grew establishes plant physiology.**
- 1683 - Anton van Leeuwenhoek observes bacteria.
- **1694 - German botanist Rudolph Camerarius conclusively demonstrates the sexuality of flowering plants and sets the stage for the first agricultural revolution.**
- **1735 – Carlos Linnaeus begins the modern description of life**
- 1771 - Joseph Priestley demonstrates that plants produce a gas that animals and flames consume. Those two gases are carbon dioxide and oxygen.

### 1800A.D. to Present

- 1800 - The term biology in its modern sense is coined by Karl Friedrich Burdach
- 1802 – The Term biology is used independently by Gottfried Reinhold Treviranus and Jean Baptiste Lamarck.
- 1817 - Pierre-Joseph Pelletier and Joseph-Bienaim Caventou isolate chlorophyll.
- **1838 - Matthias Schleiden proposes that all plants are composed of cells.**
- **1866 - Gregor Mendel formulates his Laws of Inheritance.**
- 1869 - Friedrich Miescher discovers nucleic acids in the nuclei of cells.
- **1886- Scientists explain the nitrogen-fixing of the pea family**
- 1898 - Martinus Beijerinck uses filtering experiments to show that tobacco mosaic disease is caused by something smaller than a bacterium, which he names a virus.
- 1928 - Frederic Clements proposes the theory of plant succession.
- **1946 - American chemist Melvin Calvin explains photosynthesis.**
- **1969 - American ecologist Robert Whittaker proposes five kingdoms of life.**
- 1986 – E.O. Wilson coins the term biodiversity

† Bold indicates segments in Program Core Biology: Plant Sciences