Biology 176
Professor Donald McFarlane

L2: Early Explorations

15th Century edition of Ptolemy’s “The Geographia”
The economically important Silk Road (red) and spice trade routes (blue) blocked by the Ottoman Empire ca. 1453 with the fall of the Byzantine Empire, spurring exploration motivated initially by the finding of a sea route around Africa.

Toscanelli’s view of the Atlantic influenced Columbus’s planning
Columbus arrives in the America's, 1492

The Banda Islands
Until the mid-19th century, the small islands of Banda Piera and Run were the world’s only source of nutmeg and mace.

Nutmeg.  
*Myristica fragrans*

Value in London, 1760,  
~ US$600
1615 – Dutch push English on to Run
1621 – Dutch massacre native population of Banda
1667 – English trade Run for New Amsterdam, Dutch destroy nutmeg trees on Run.
1810 – Dutch are removed by England in Napoleonic Wars. English transplant nutmeg to Ceylon

16th Century: The Dutch expansion

Batavia (Jakarta) ~ 1619 AD.
Ambon. (Portuguese, 1513; Dutch 1605.

Ternate; circa 1720

Clove;
Syzygium aromaticum
James Cook: 1<sup>st</sup> voyage 1768-1769

2<sup>nd</sup> Voyage 1772 with Forster

3<sup>rd</sup> voyage 1776.......Hawaii 1778

Joseph banks and the Florilegium (Cook’s Third Voyage)
Alexander von Humboldt ~ 1799 (results 1805-1832)

*Spheniscus humboldti* — Humboldt penguin

*Dosidicus gigas* — Humboldt squid

*Lilium humboldtii* — Humboldt’s lily

*Phragmipedium humboldtii* — an orchid

*Quercus humboldtii* — South American (Andean) oak

*Conepatus humboldtii* — Humboldt’s Hog-nosed skunk

*Annona humboldtii* — Neotropical tree or shrub

*Annona humboldtiana* — Neotropical tree or shrub

*Utricularia humboldtii* — a bladderwort

*Geranium humboldtii* — a cranesbill

*Sally humboldtiana* — a South-American willow

*Inia geoffrensis humboldtiana* — Amazon River Dolphin

Charles Darwin

Voyage: 1831-1836

[Map of Darwin's voyage around the world]
Alfred Russel Wallace; Brazil 1848-1852

Wallace: “Wallacea” 1854 - 1862
S.E. Asia to Ceylon (Sri Lanka)

South America to Malaya (Malaysia)

Tahiti to Caribbean

Voyage of Bounty to Tahiti and to location of the mutiny, 28 April 1789. Movements of Bounty after the mutiny, under Christian’s command. Course of Bligh’s open-boat journey to Coupang.
Coffee production in Costa Rica began in 1779. In 1843, a shipment was sent directly to the United Kingdom by William Le Lacheur Lyon, captain of the English ship, *The Monarch*, triggering a European coffee “boom”
Barro Colorado Island, Panama (STRI); 1923 - ?

Lake flooded 1914