

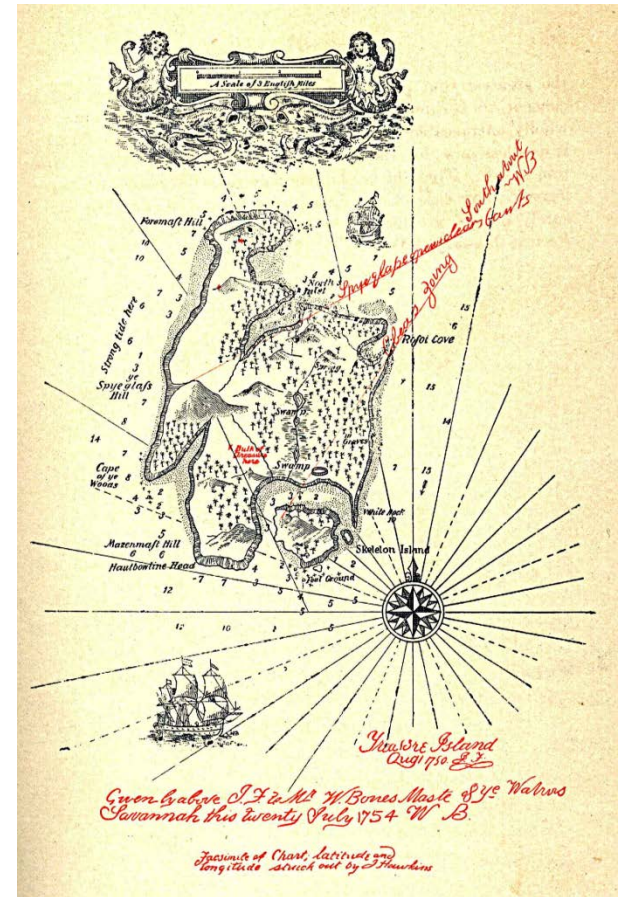


Geog 126: Maps in Science and Society

Mapping the Pacific: The South
Sea Bubble and Terra Australis



The Myth of Treasure Island



Islands to Ptolemy

Map of the British Isles and Oceanus Germanicus (the North Sea) 1490



Ultima Thule

THE WORLD
according to
DICÆARCHUS
B.C. 300



Islands and Exploration

- Islands within the Mediterranean known since Ptolemy's time (but, Thule, etc)
- 0 deg longitude placed at Canary Islands (then forgotten)
- Early expansion from Spain and Portugal involved "discovering" islands
- Vivaldi brothers of Genoa in 1291 set out for India, died, but inspired voyages
- Canaries island Lanzarote named for Genoan Lancelotto Malocello by 1339
- In one month (April) in 1342, four voyages licensed from Majorca to the Canary Islands "cogs"
- Islands quickly become the launch platform for discovery

Catalonia



Mediterranean Islands



Kingdom of Majorca (1276-1343)

- James I, the Conqueror, king of Aragon and count of Barcelona, founded the Kingdom of Majorca in 1276
- Perpignan became the capital of the mainland territories of the new state
- Conquered Sardinia and Corsica
- 1344 Peter IV of Aragon annexed the Kingdom
- Majorca traded both with Europe and the Moors, led to interest in Africa
- Beginning of missionaries



Catalan Kingdom of Majorca (1276-1343)



Catalan Atlas

- Attributed to Abraham Cresques, a Catalonian Jew of Majorca who was mapmaker to King Peter of Aragon.
- Commissioned by Charles V of France, whose envoy requested a set of world maps from King Peter, as Catalan maps were held in high esteem.
- “State of the art” of geographic knowledge at the end of 14th century
- Details from Marco Polo's narratives of Asia
- End of mapmaking conventions of the Middle Ages.



Catalan Atlas 1375



Jacme Ferrer: The River of Gold

“ The ship appears to be a galley, the ship type commonly found in the Mediterranean trade. The banner on the ship reflects the gold and red colors of the kingdom of Aragon, which included the areas of Majorca and Catalonia. The text accompanying the image of the ship states that Jacme Ferrer's ship set sail on St. Laurence Day, the 10th August 1346, bound for the Rio d'Oro. Little is known of this voyage. It was one of several documented voyages of the time that failed to return to port. The ship evidently reached Cape Bojalar (**Bojador**) but its ultimate fate remained a mystery.”



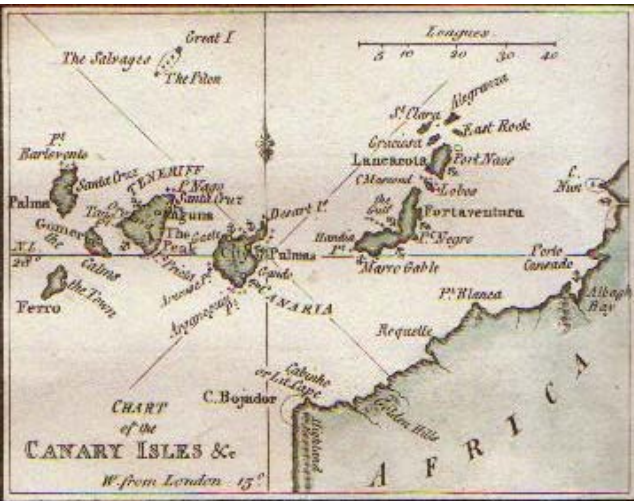
Fact and Legend in the Catalan Atlas of 1375

by Doris Dwyer (1997) Newberry Library

The Canary Islands

The image is a screenshot of a web browser displaying Google Maps. The browser's address bar shows the URL `google.com/maps/@28.0329947,-13.5387941,7.5z`. The map itself shows the Canary Islands in the Atlantic Ocean, with labels for Santa Cruz de Tenerife, Puerto de la Cruz, Costa Adeje, Las Palmas de Gran Canaria, Telde, Maspalomas, Costa Calma, Puerto del Carmen, and Costa Teguise. To the east, the Moroccan coast is visible, with labels for Tiznit, Mirleft, Sidi Ifri, Guelmim, Tantan, Assa, Zag, Al Mahbes, Samara, Bir Lehlou, and Tifanti. A dashed line indicates the Tropic of Capricorn. A red location pin is placed on the Atlantic coast of Africa, labeled "Cape Bojador". The Google logo is visible at the bottom center of the map. The browser's taskbar at the bottom shows various application icons and the system clock indicating 9:48 AM on 2/18/2020.

Canary Islands



- Dyes from lichen and “dragon’s blood” tree
- Possibly pre-Berber residents of Mahgreb
- “The Canaries were important not chiefly, at first, for their own sake, but because the winds and currents led there from Iberia. They were of value as a staging post for explorers engaged in a remoter quest: the search for the sources of the Sahara gold trade.” (Fernandez-Armesto)

Gran Canaria

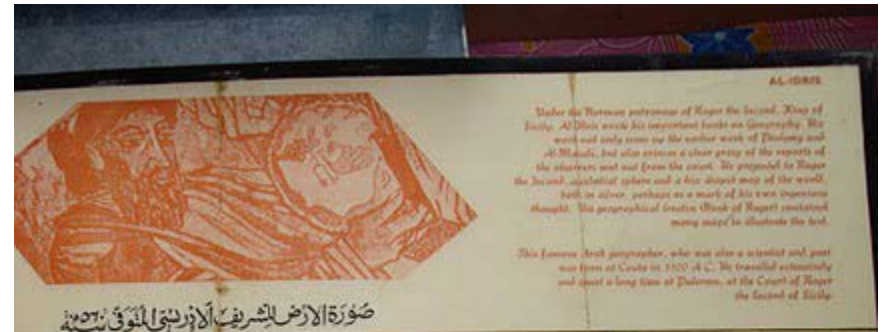
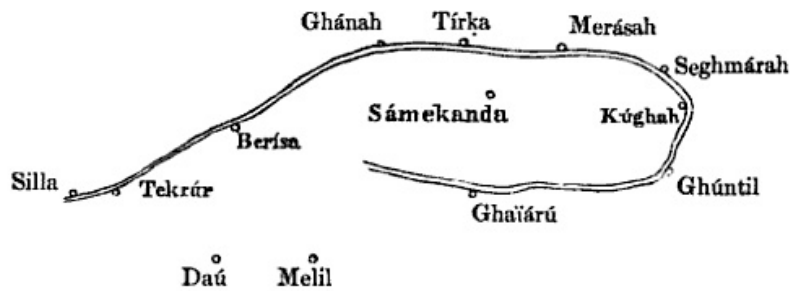
- Possibly Gran Canaria was already populated at around 500 B.C
- Gran Canaria's natives, known as Guanches, originally came from North Africa and were descendants of the Berbers
- Stone tools and primitive pottery
- Early 14th Century, 30,000 Guanches on the island of Gran Canaria
- Throughout the 14th century the Italians, Portuguese and Catalans sent their ships to the islands to bring back slaves and furs to their countries.
- 15th century the rapid conquest of the islands began
- On Gran Canaria, the Guanches fiercely resisted the Spanish invasion (another revolt in 1778-1783)
- 1483 Pedro de Vera completed the conquest that Juan Réjon had started five years earlier
- Guanches were killed or committed suicide rather than surrender to the Spanish
- Survivors were forced into slavery and converted to Christianity

Enter Portugal and Spain

- Royal interest after 1345
- Luis de la Cerda given permission to conquer “Principality of Fortunia” (Canaries plus Jalita)
- Alfonso XI of Castile asserts rights
- By 1380s, Canaries and some of the Azores appear on maps
- 1393 Fernan Peraza “how those islands were easy to conquer”
- Ships sailed west to catch the westerlies for the return trip
- Gadifer de la Salle 1402 maps source of wonder “River of Gold”
- By 1430s Portuguese way stations with sheep and crops in Azores
- Spanish conquest and funding move to Seville and Castile

Western Nile (Senegal-Niger River) according to Muhammad al-Idrisi (1154)

The River according to El Idrisi.



Surrender of the Guanches Kings



Alonso Fernández de Lugo presenting the captured Guanche kings of Tenerife to Ferdinand and Isabella.



The role of mythology

- ***Tirant lo Blanch***
- A romance written by the Valencian knight Joanat Martorell published in Valencia in 1490
- "Tirant the White" name of the main character
- Among the best known medieval works of literature in Catalan
- Played an important role in the evolution of the Western novel through its influence on Miguel de Cervantes



Los cinco libros del esforçado e invencible cauallero Tirante el blanco de roca salada: Cauallero de la Baserrotera. El qual por su alta caualleria alcãço a ser príncipe e cezar del imperio de grecia.



Don Quixote: The Quest

The Ingenious Gentleman Don Quixote of La Mancha

written by Miguel de
Cervantes.

Published in two volumes a
decade apart, in 1605 and
1615

Considered the most
influential work of literature
from the Spanish Golden Age
and the entire Spanish literary
canon

Satire on revival of chivalry

EL INGENIOSO
HIDALGO DON QUI-
XOTE DE LA MANCHA

Compuesto por Miguel de Cervantes
Saavedra.

DIRIGIDO AL DUQUE DE BEJAR,
Marques de Gibralfcon, Conde de Barcelona, y Bana-
res, Vizconde de la Puebla de Alcozer, Señor de
las villas de Capilla, Curiel, y
Burgillos.

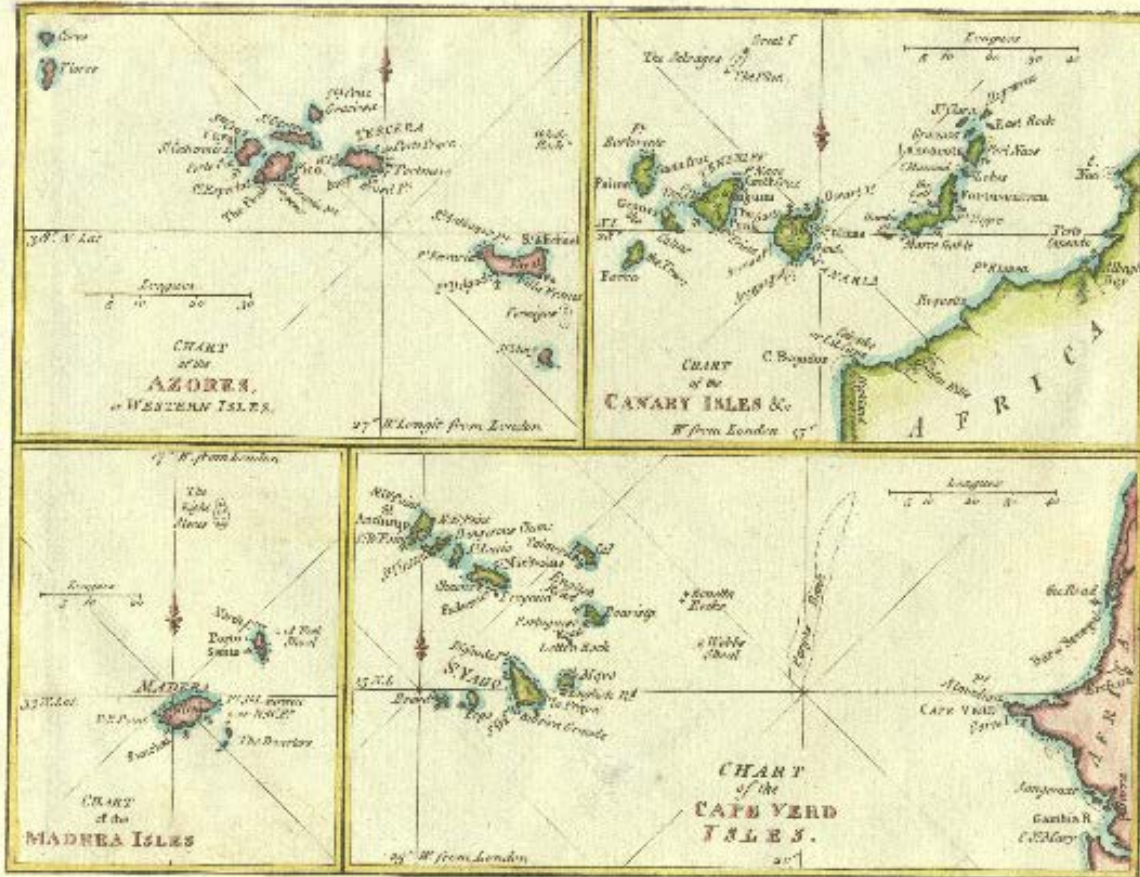
Ano,



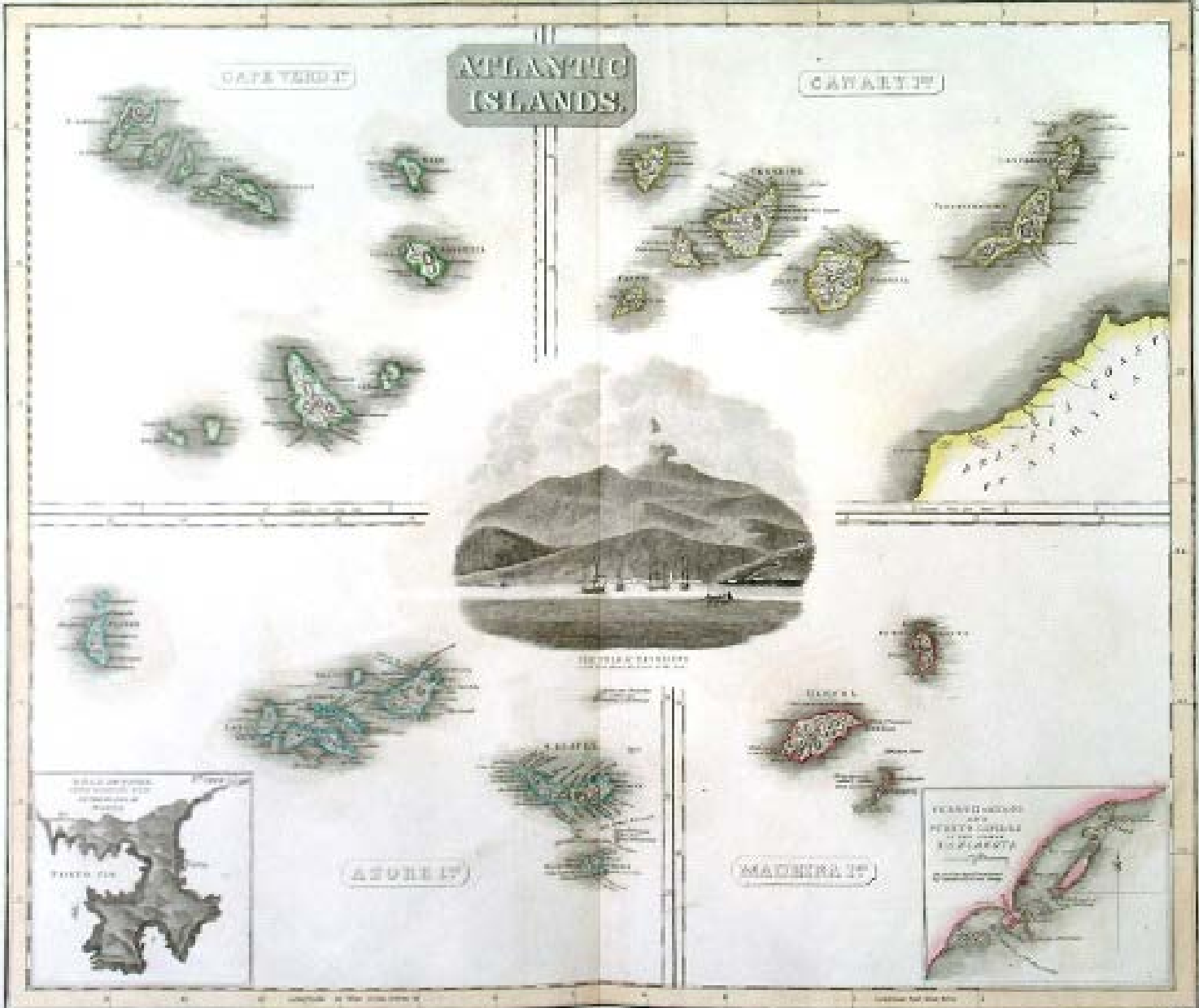
1605.

Con priuilegio de Castilla, Aragon, y Portugal.
EN MADRID, Por Iuan de la Cuesta.
Vendese en casa de Francisco de Robles, librero del Rey nro señor.

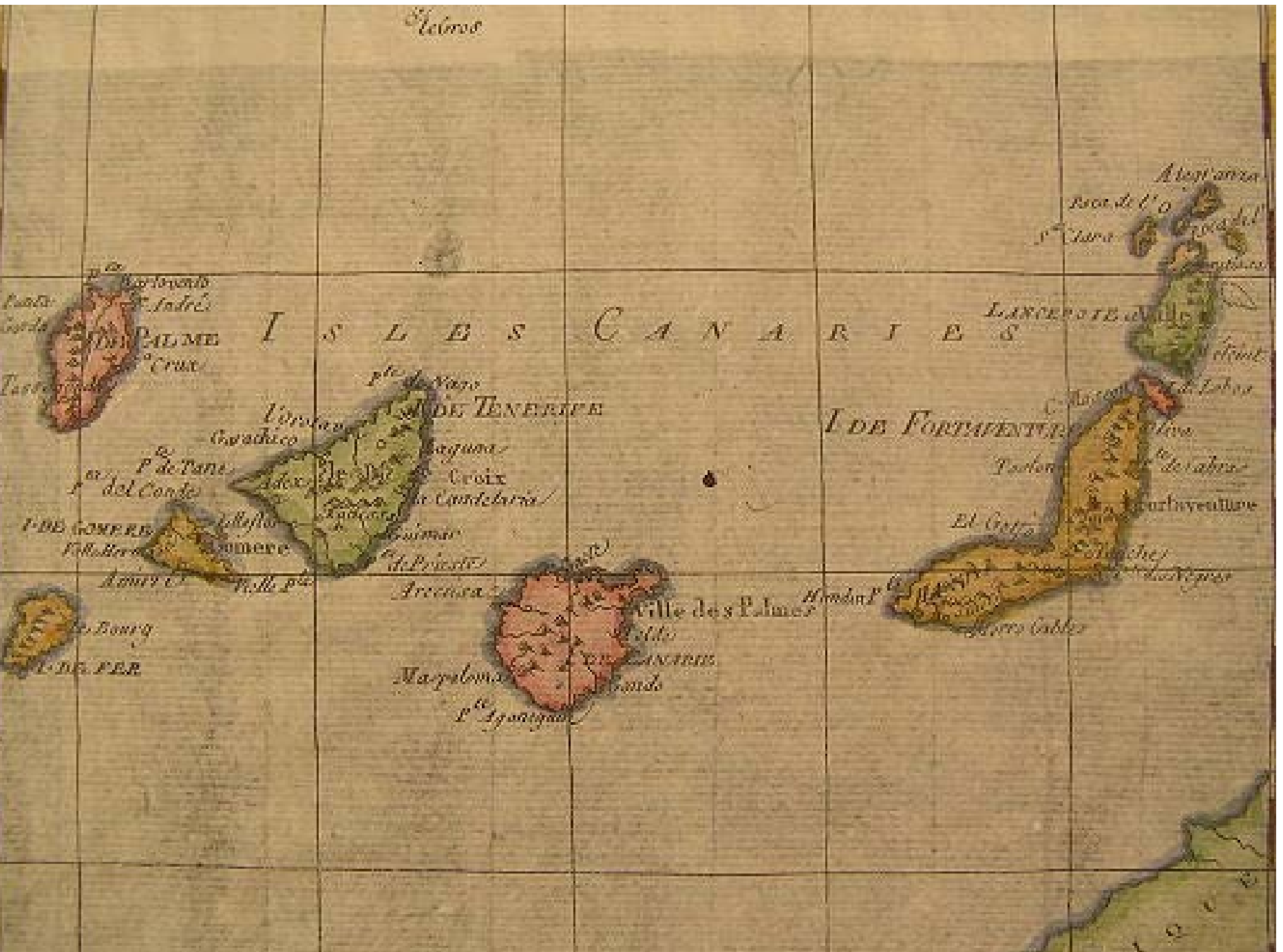
Islands



Thomson 1814



Islas



P^{te} de l'Or
 P^{te} de la Cruz
 P^{te} de la Palma
 P^{te} de la Gomera
 P^{te} de la Hierro

ILE DE L'OR
 ILE DE LA PALME
 ILE DE LA GOMERE
 ILE DE LA HIERRO

I S L A S C A N A R I A S
 ILE DE TENERIFE
 ILE DE LA PALME
 ILE DE LA GOMERE
 ILE DE LA HIERRO

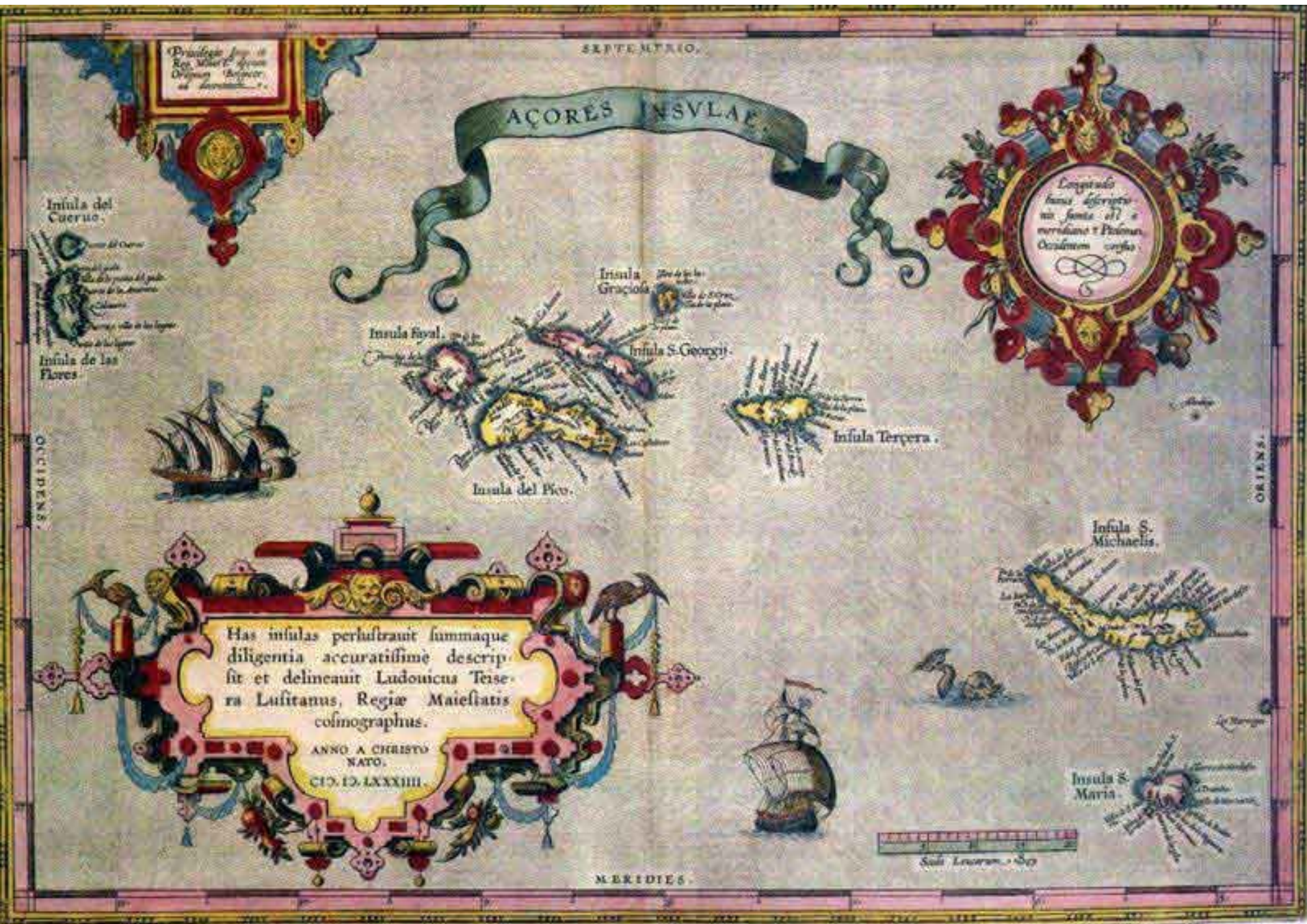
Ville de Tenerife
 Ville des Palmes
 Ville de Fer
 Ville de l'Or
 Ville de la Palme

ILE DE LANZAROTE
 ILE DE FUERTEVENTURA
 ILE DE LA PALMA
 ILE DE LA GOMERE
 ILE DE LA HIERRO

P^{te} de l'Or
 P^{te} de la Cruz
 P^{te} de la Palma
 P^{te} de la Gomera
 P^{te} de la Hierro

Atlantique
 ILE DE FER

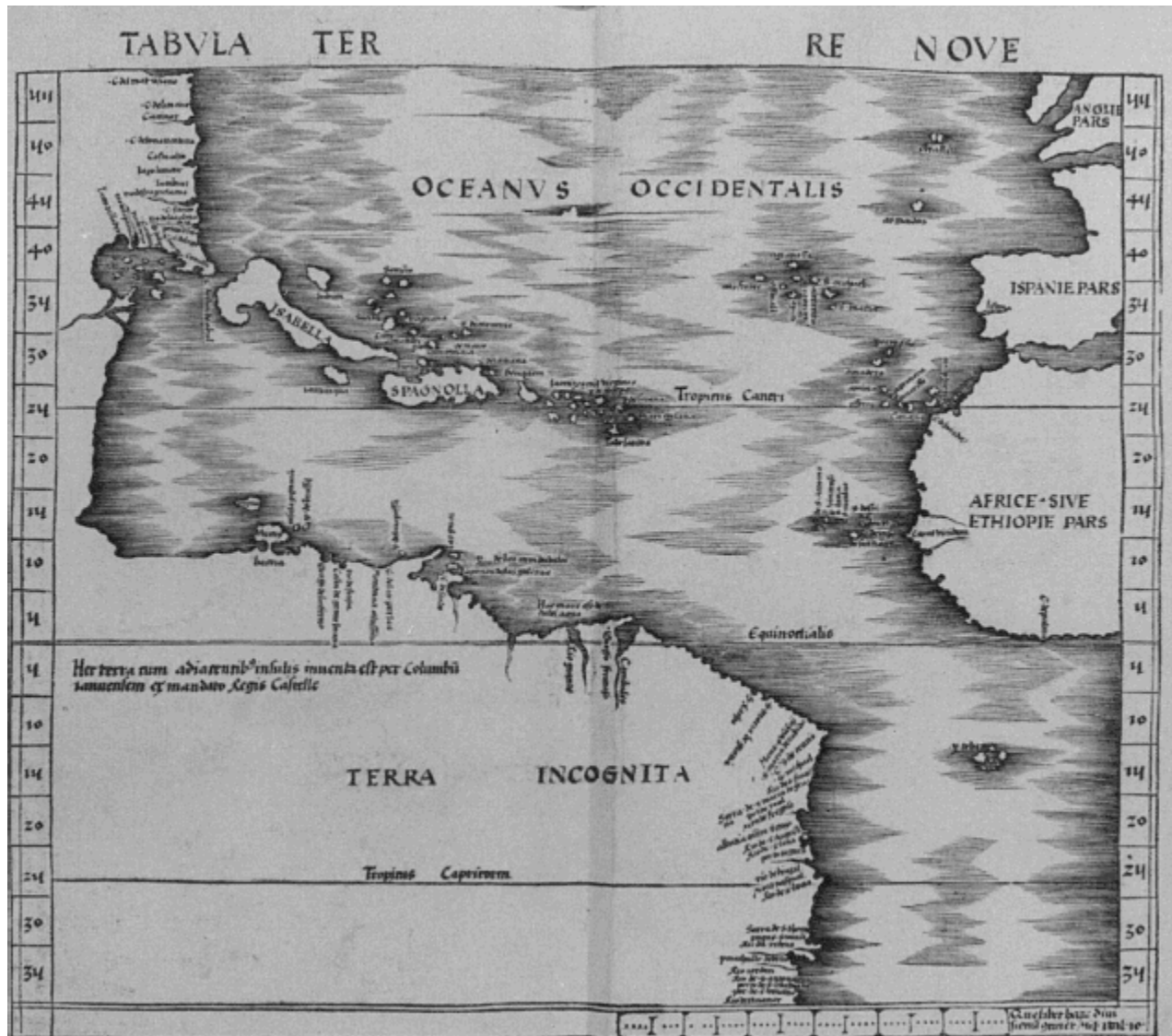
Luís Teixeira map of the Azores (c. 1584).



Another Myth: The Great Southern Continent



Ptolemy: Terra Incognita



Monstrous Races



In the fifth century BC, the Greek physician Ctesias wrote of dog headed people in India

Atomi (Apple-Smellers) - People without mouths and hairy bodies, although they usually wear garments made from tree leaves. They cannot eat, but instead live by smell, particularly apples. A bad smell will cause death.

Blemmyae - People who have neither heads nor necks, but have faces upon their chests beneath their shoulders.

Brahman (Bragmanni) - Wise people who live in caves or the forest. They are unclothed and live the extreme, moralistic life of an ascetic.

Cyclopes - Giants with only one eye. Although the most famous occurred in Homer's Odyssey, one-eyed giants were reputed to be found in India as well.



Anubis and Brahmin Caste





Map of the world, showing Terra Australis Incognita, from the La Trobe Library copy of *Mundus Alter et Idem* (Utrecht, 1643).



Munda 1676.

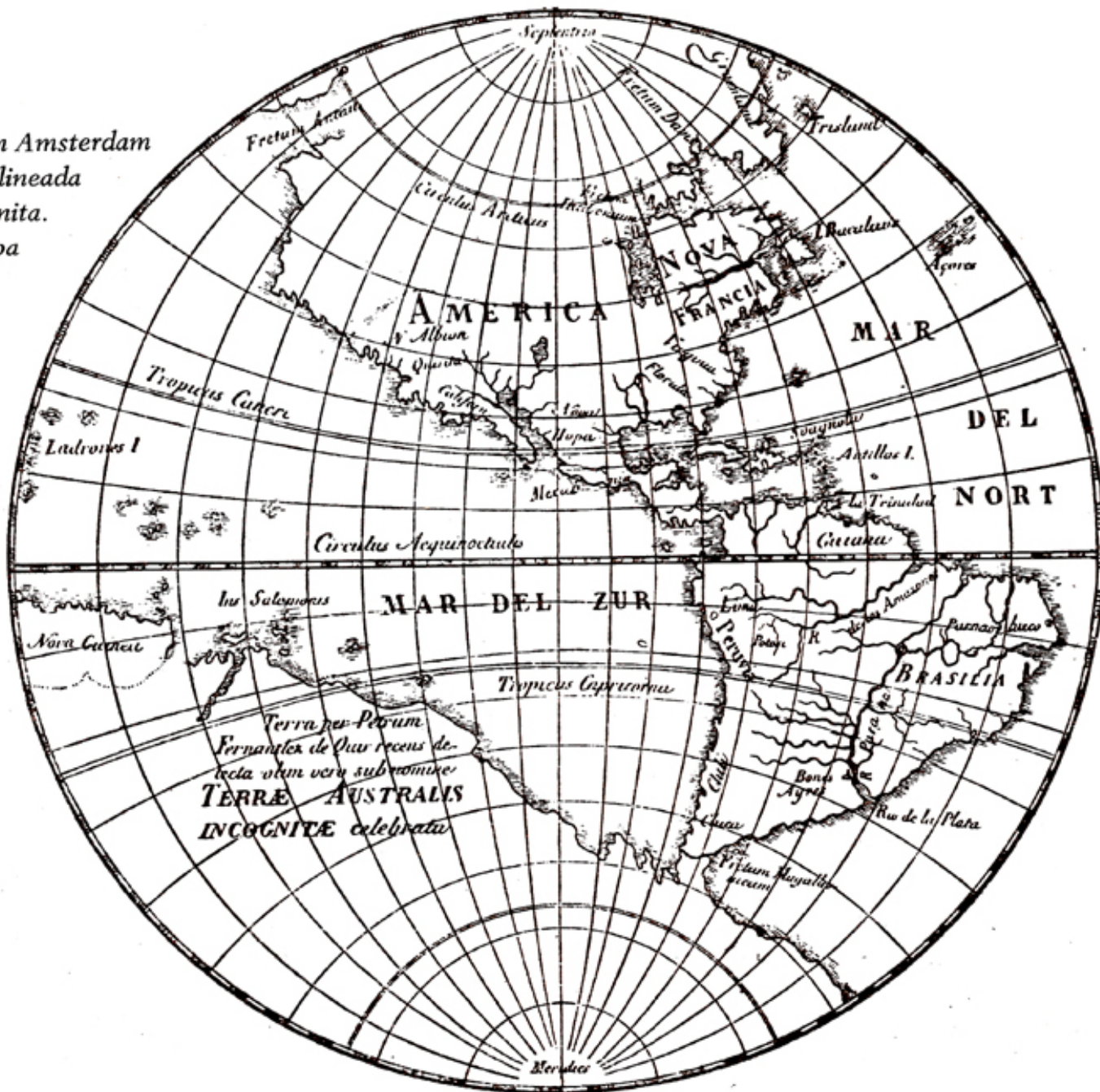
Amstelredami
 J. V. de Witt
 del. sculp.



Theatrum Orbis Terrarum. Antwerp: 1608



Hemisferio publicado en Amsterdam
 en 1612, en que está delineada
 la Terra Australis Incognita.
 Una inscripción del mapa
 atribuye a Pedro
 Fernández de Quiros
 haber avistado el
 continente austral



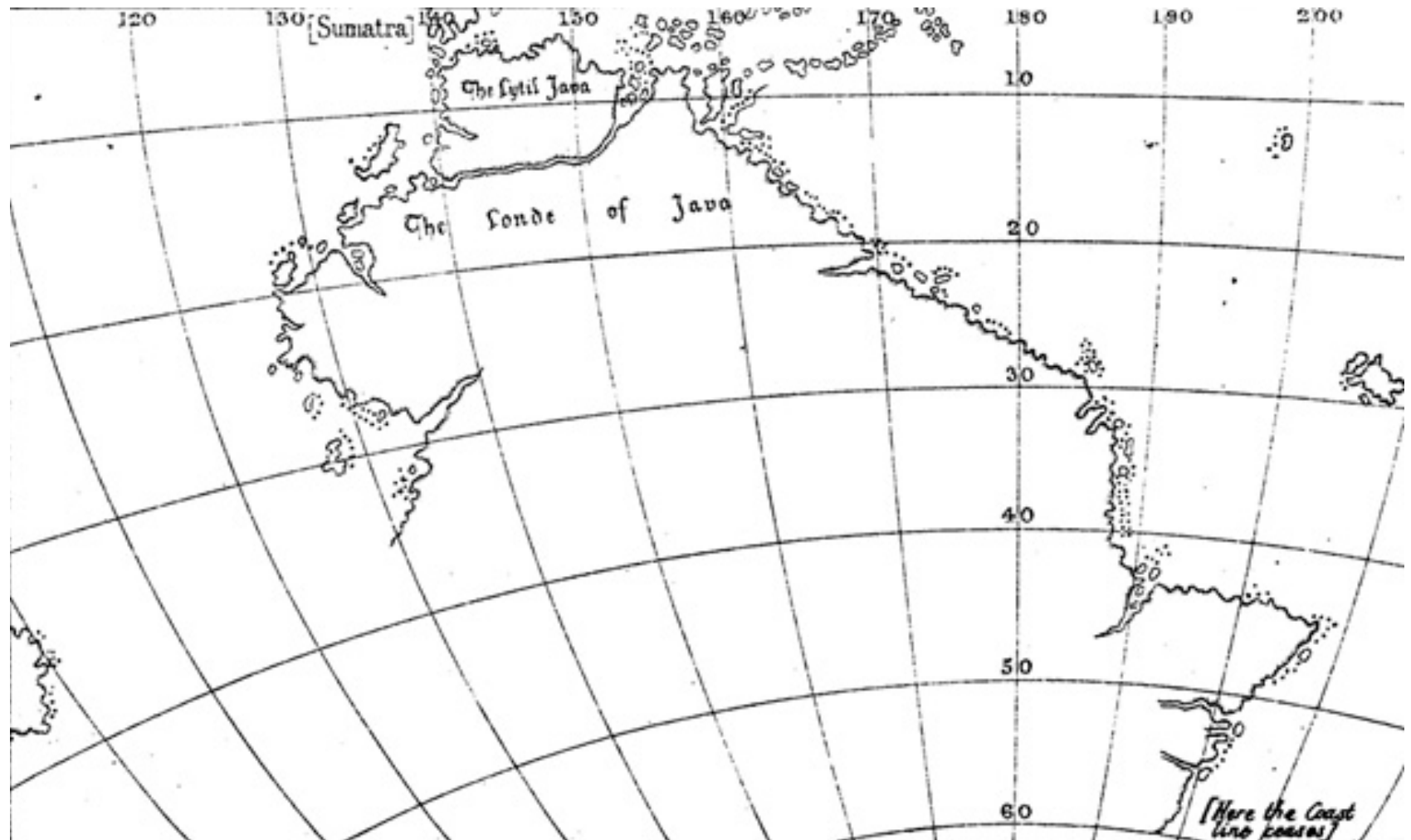
Bevius 1618

82 DESCRIPTIO TERRE SVBAVSTRALIS.



T 163 Berlin 1618

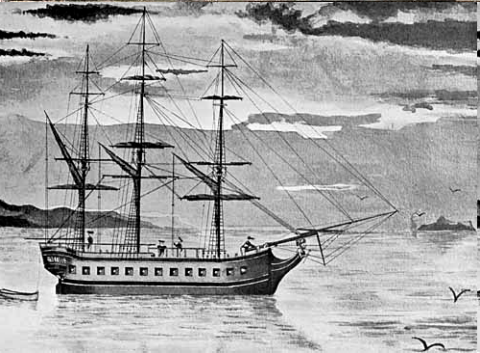
Australia begins...



After Cook



James Cook



- Took command of the *Endeavour* in 1768 on its voyage to the islands of Tahiti, two voyages of discovery in 1772–75 and in 1776.
- Voyage in 1768 was to be the first of the great scientific expeditions
- Carry Royal Society observers to Tahiti to watch the transit of Venus across the Sun
- Objective also was to discover the southern continent, Terra Australis
- Found and mapped New Zealand, sighted the southeast coast of Australia on 19 April, 1770
- Continued up the east coast of Australia successfully navigating the Great Barrier Reef



Cook ctd.

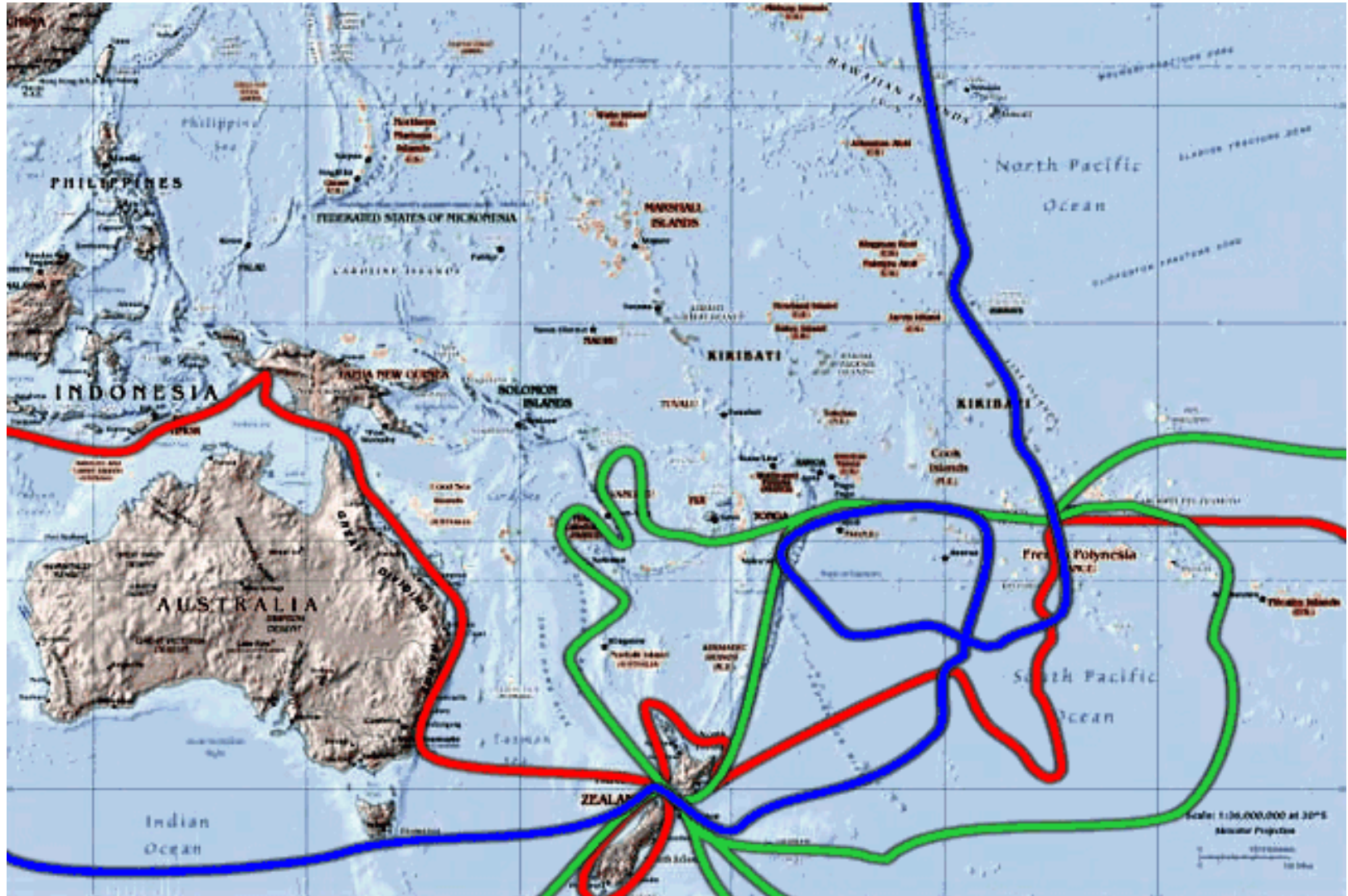


- Second expedition (1772–75) to the South Seas in the Resolution and the Adventure in which he circumnavigated the high latitudes and traveled as far south as latitude 72°.
- Discovered New Caledonia and the South Sandwich Islands, but found no trace of the ‘great southern continent’
- Second voyage used a chronometer as standard issue
- On his return he was made a fellow of the Royal Society, awarded Copley medal for his paper on scurvy and its prevention
- Cook's third voyage (1776), again in the Resolution
- Cook was attacked and killed by the natives on the beach of Kealakekua Bay

Ka'awaloa in 1779 by John Webber, artist aboard Cook's ship



Cook in the Pacific



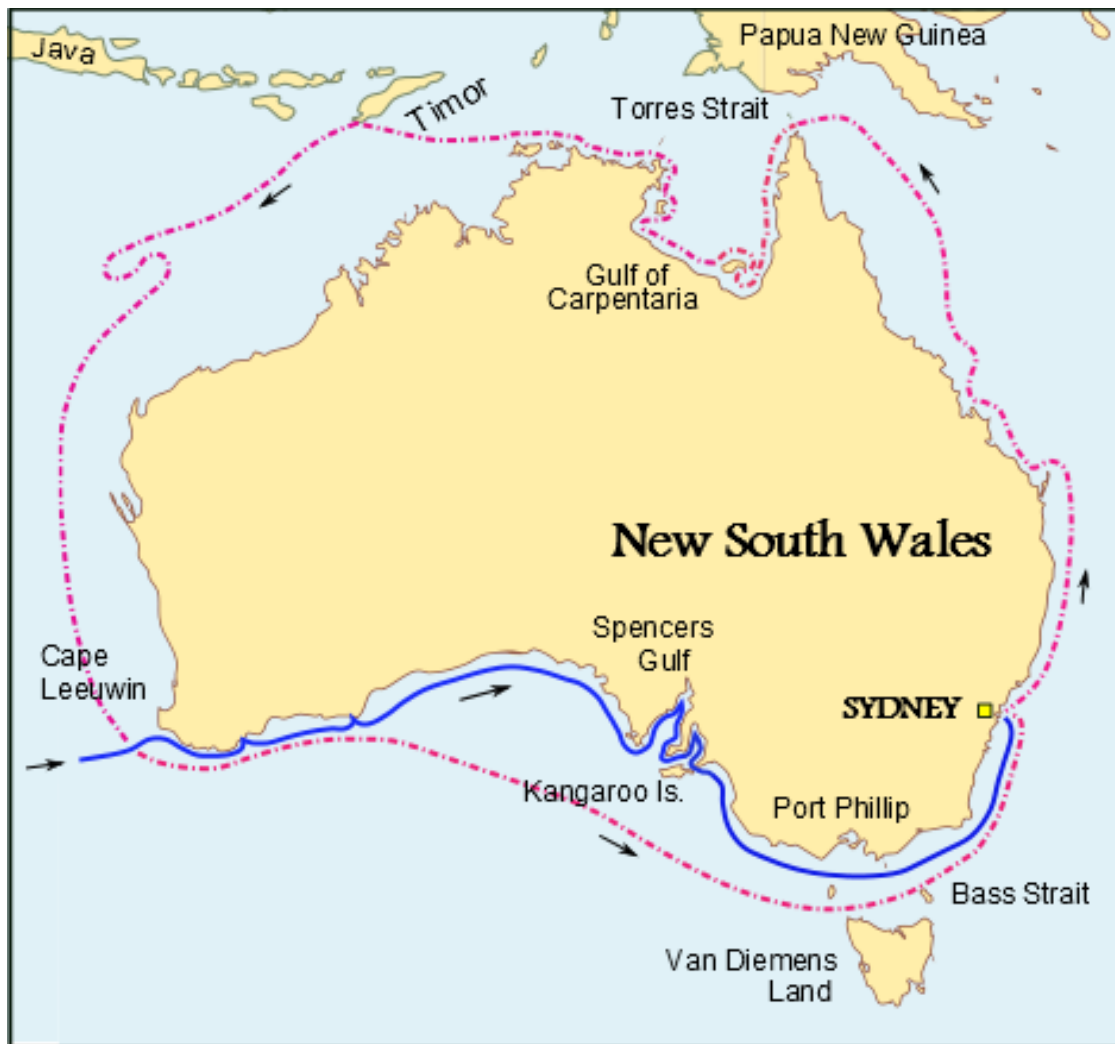
Flinders expedition 1802



Captain Matthew Flinders (16 March 1774 – 19 July 1814)

- English navigator and cartographer led the second circumnavigation of New Holland "Australia or Terra Australis" and identified it as a continent.
- Flinders made three voyages between 1791 and 1810 confirmed that Van Diemen's Land (now Tasmania) was an island.
- Third voyage circumnavigated Australia, accompanied by Aboriginal man Bungaree.
- Heading back to England in 1803, Flinders' vessel needed urgent repairs at Isle de France (Mauritius).
- Britain and France were at war, but Flinders thought the scientific nature of his work would ensure safe passage, but a suspicious governor kept him under arrest for more than six years.
- In captivity, he recorded his voyages and put forward his rationale for naming the new continent 'Australia'





Voyages of Matthew Flinders

"Investigator"

1801-1802 —————
England - Sydney

1802 -1803 - - - - -
Circumnavigation



Antarctica discovered

- In 1820, several expeditions claimed to have been the first to have sighted Antarctica, with the very first being the Russian expedition led by Faddey Bellingshausen and Mikhail Lazarev.
- The first landing was probably just over a year later when American Captain John Davis, a sealer, set foot on the ice.
- American naval officer Charles Wilkes claimed (correctly) that Antarctica was a new continent based on his exploration in 1839–40
- James Clark Ross, in his expedition of 1839–43, hoped that he might be able to sail all the way to the South Pole

The Race to the Pole

- Robert Falcon Scott on the Discovery Expedition of 1901–04.
- Scott, accompanied by Ernest Shackleton and Edward Wilson set out with the aim of travelling as far south as possible
- 31 December 1902, reached $82^{\circ}16' S$
- Shackleton later returned to Antarctica as leader of the British Antarctic Expedition (Nimrod Expedition) in a bid to reach the Pole.
- On 9 January 1909, with three companions, he reached $88^{\circ}23' S$ – 112 statute miles from the Pole – before being forced to turn back



Beaten to the pole

- Pole reached by Norwegian Roald Amundsen and his party on December 14, 1911
- Scott had also returned to Antarctica with his second expedition, the Terra Nova Expedition, in a race against Amundsen to the Pole.
- Scott and four other men reached the South Pole on January 17, 1912, thirty-four days after Amundsen, found articles left there
- On the return trip, Scott and his four companions all died of starvation and extreme cold.



Amundsen



Scott 1910-13

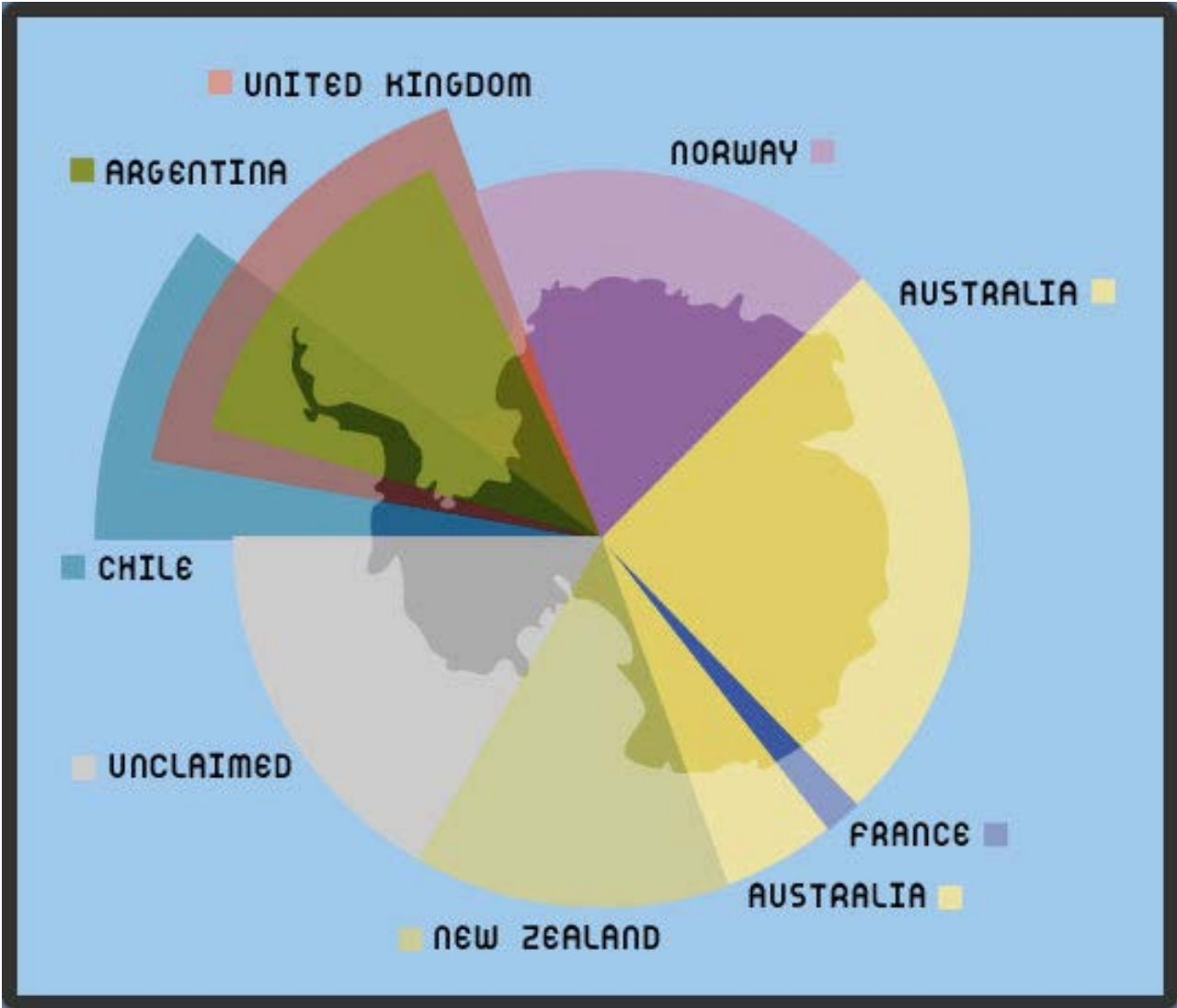


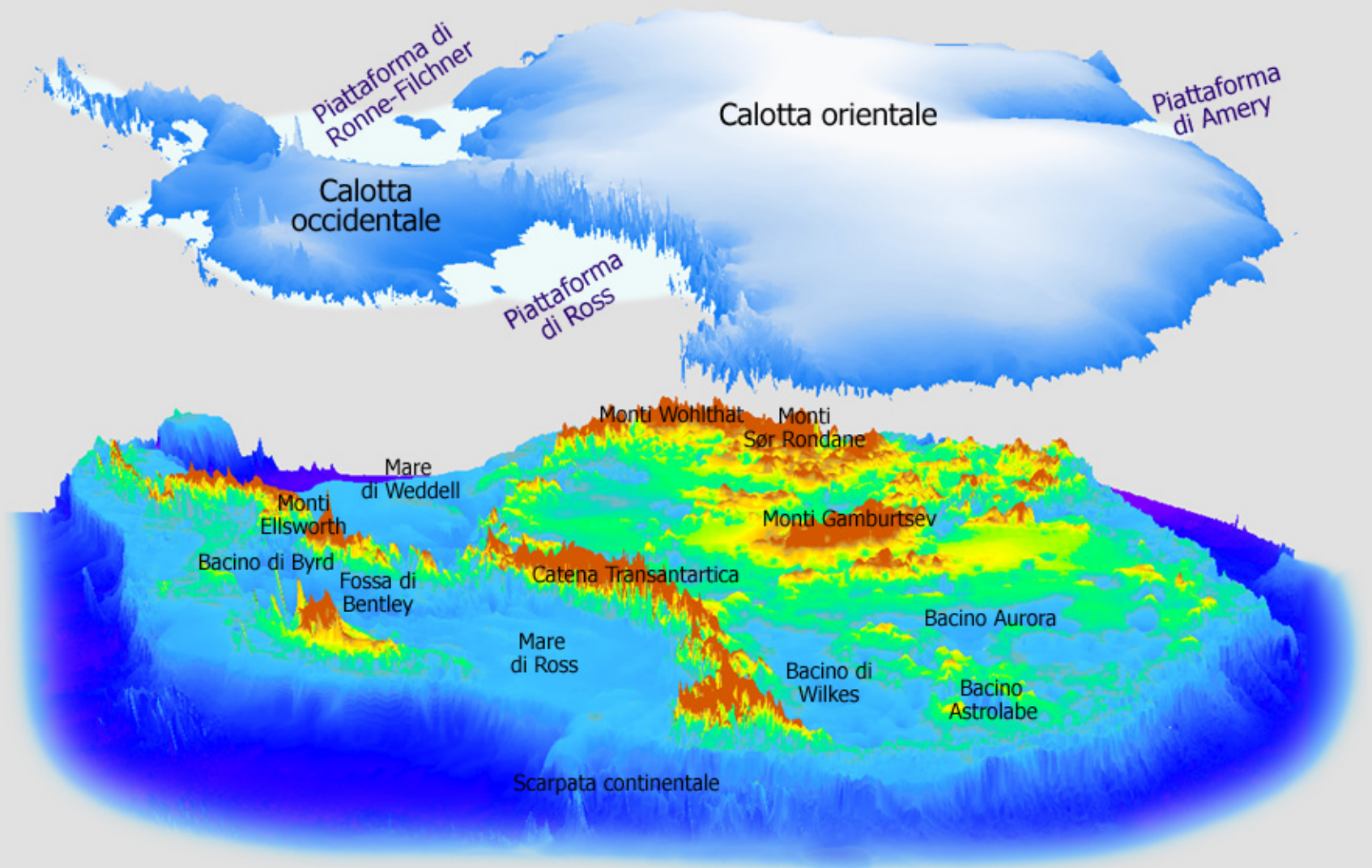
we shall stick it out
to the end but we
are getting weaker of
course and the end
cannot be far
It seems a pity but
I do not think I can
write more -

Robert

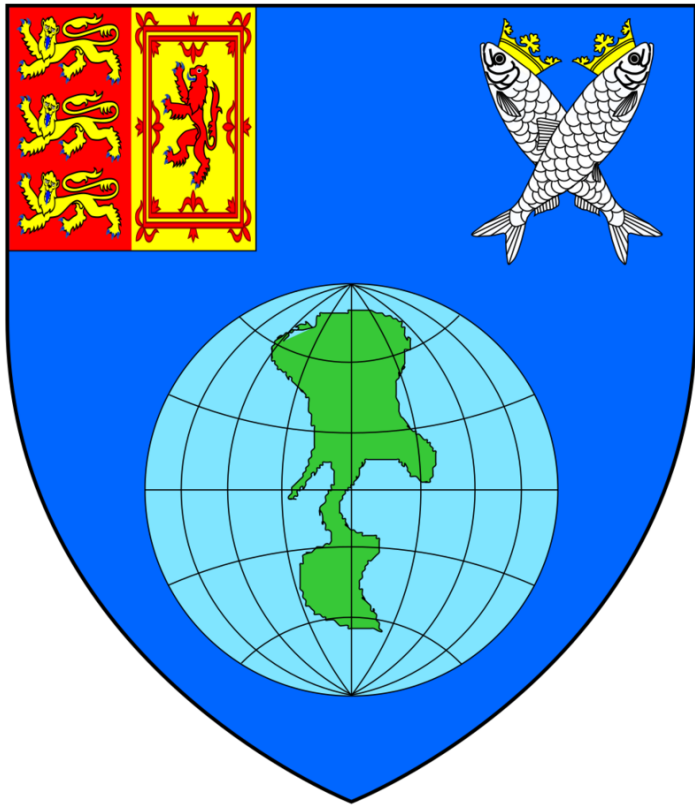
Last Sunday
For Gods sake look
after our people

Claims





The South Sea Bubble



Spain's control removed

- War of the Spanish Succession (1701–14)
- Started in 1711, when the war left Britain in debt by 10 million pounds
- Britain proposed a deal to a financial institution, the South Sea Company
- Britain's debt would be financed in return for 6% interest in exchange for exclusive trading rights in the South Seas
- Proximity to wealthy South American colonies attractive
- Slave trade involved

The South Sea Bubble

- Thought that the Mexicans and South Americans would eagerly trade their gold and jewels for British wool
- The South Sea Company issued stock to finance operations and gain investors
- Stock was rapidly consumed by the voracious appetite of the investors, enamored by the lavish corporate offices
- Became extremely fashionable to own South Sea Company shares
- Rumors that the South Sea Company had been granted full use of Latin American ports, by Spain (Actually, only allowed 3 ships per year)

South Sea House



The South Sea House in Threadneedle Street

July 1720: The Bubble Bursts

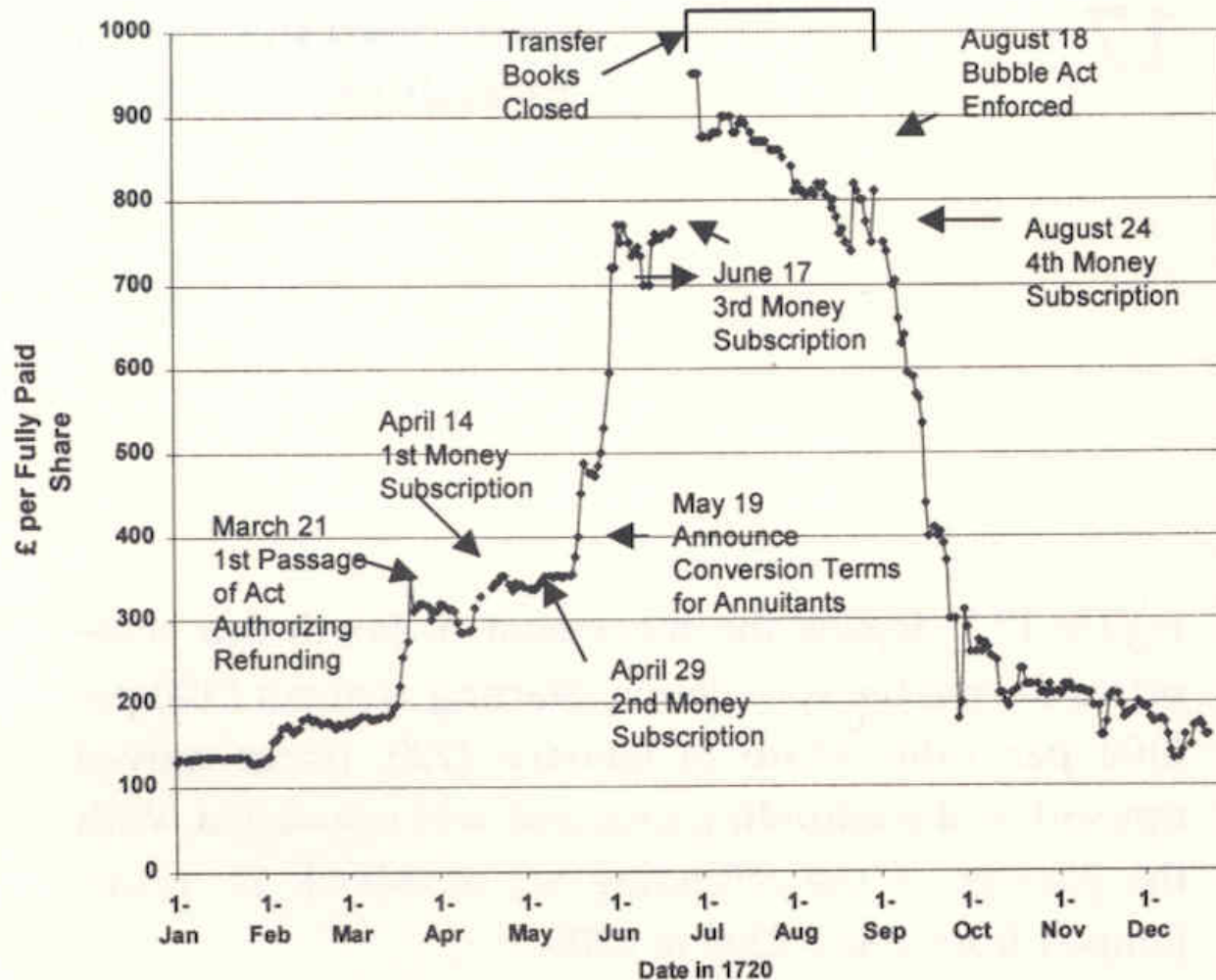


Figure 17.1

Daily South Sea Share Prices, 1720. Data courtesy of Larry Neal.

The Bubble Bursts

- Other companies proclaimed everything from building floating mansions to distilling sunshine from vegetables
- Isaac Newton, the scientist, had foreseen a coming stock market crash and sold his shares early with a profit of 7,000 pounds, but then bought in again
- In 1718, Britain and Spain went to war again, stopping all trade but investors kept buying
- Company decided to sell while other investors were still unaware that the company was profitless
- Panic selling Newton lost over 20,000 pounds of his fortune.
- Jonathan Swift, who also lost a fortune, was inspired to write *Gulliver's Travels* a satire about British society.
- The government worked to stabilize the banking industry
- The economy didn't fully recover until a century later

Hogarth's Print



See here y^e Causes why in London, ~
 So many Men are made Gundone ~
 That Oyle & honest Trading drop ~
 To Swarm about y^e Devils Shop ~
 Who cut out B^e Fortunes Golden Haunches ~

Tripping their Souls with Lotteries & Chances ~
 Sharing em from Blue Garters down ~
 To all Blue Aprons in the Town ~
 Here all Religions flock together ~
 Like Tame & Wild Fowl of a Feather ~

Leaving their stiffe Religious bustle, ~
 Kneel down to play spitch & Hussle (C) ~
 Thus when the Shepherds are at play, ~
 Their stocks must surely go astray, ~
 The woeful cause y^e in these Times ~

B^e Honour, & honesty, are Crimes ~
 That publicly are punish'd by ~
 G^o Self Interest, and W^o Vilany, ~
 So much for Monys magick power ~
 Guess at the Rest you find out more ~
 price 1 Shilling

BUBBLE CARDS



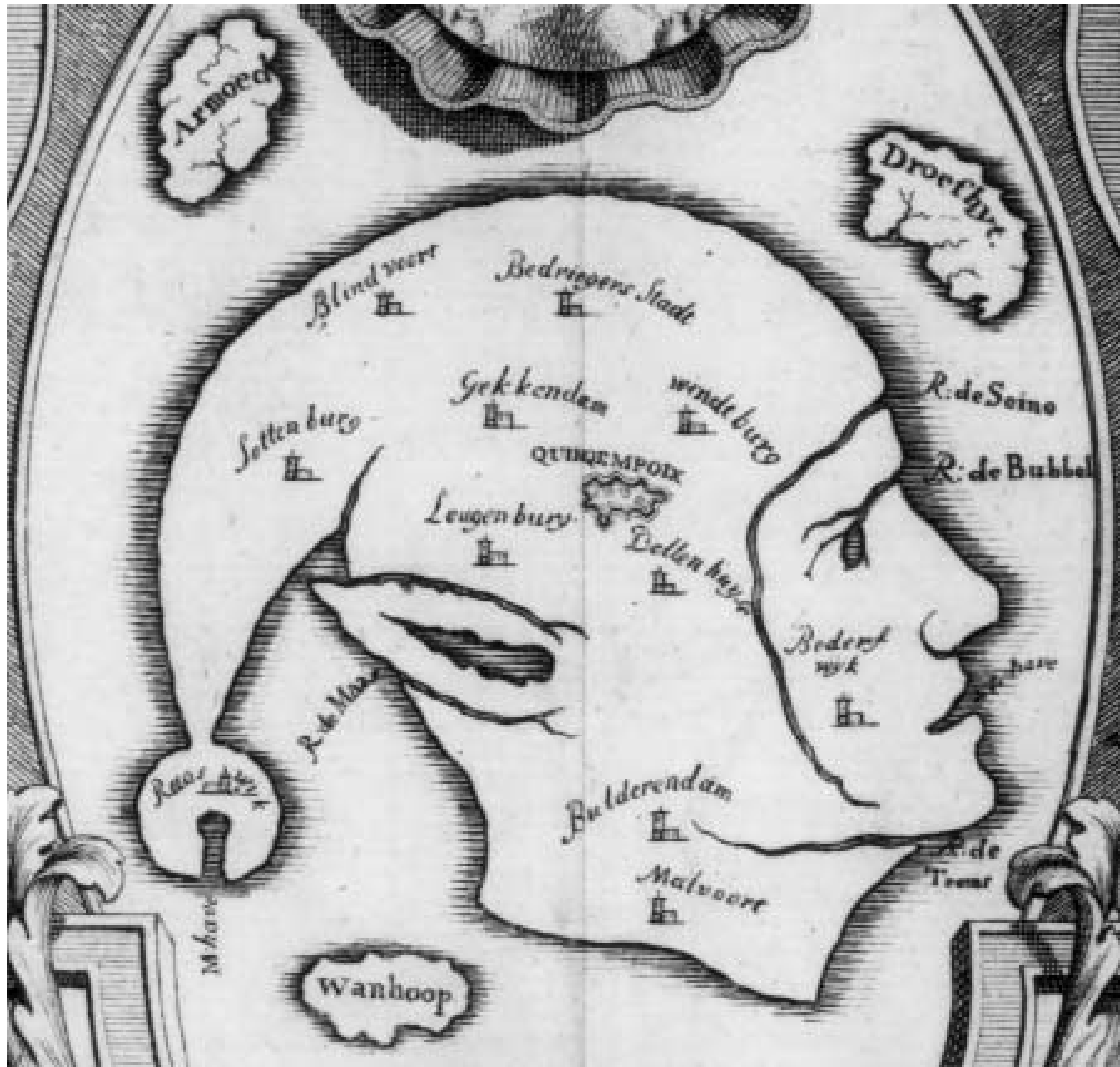
*The Headlong Fools Plunge into South Sea Water.
But the Sly Long-heads Wade with Caution after.
The First are Drowning but the Wise Last—
Venture no Deeper than the Knees or Waist.*

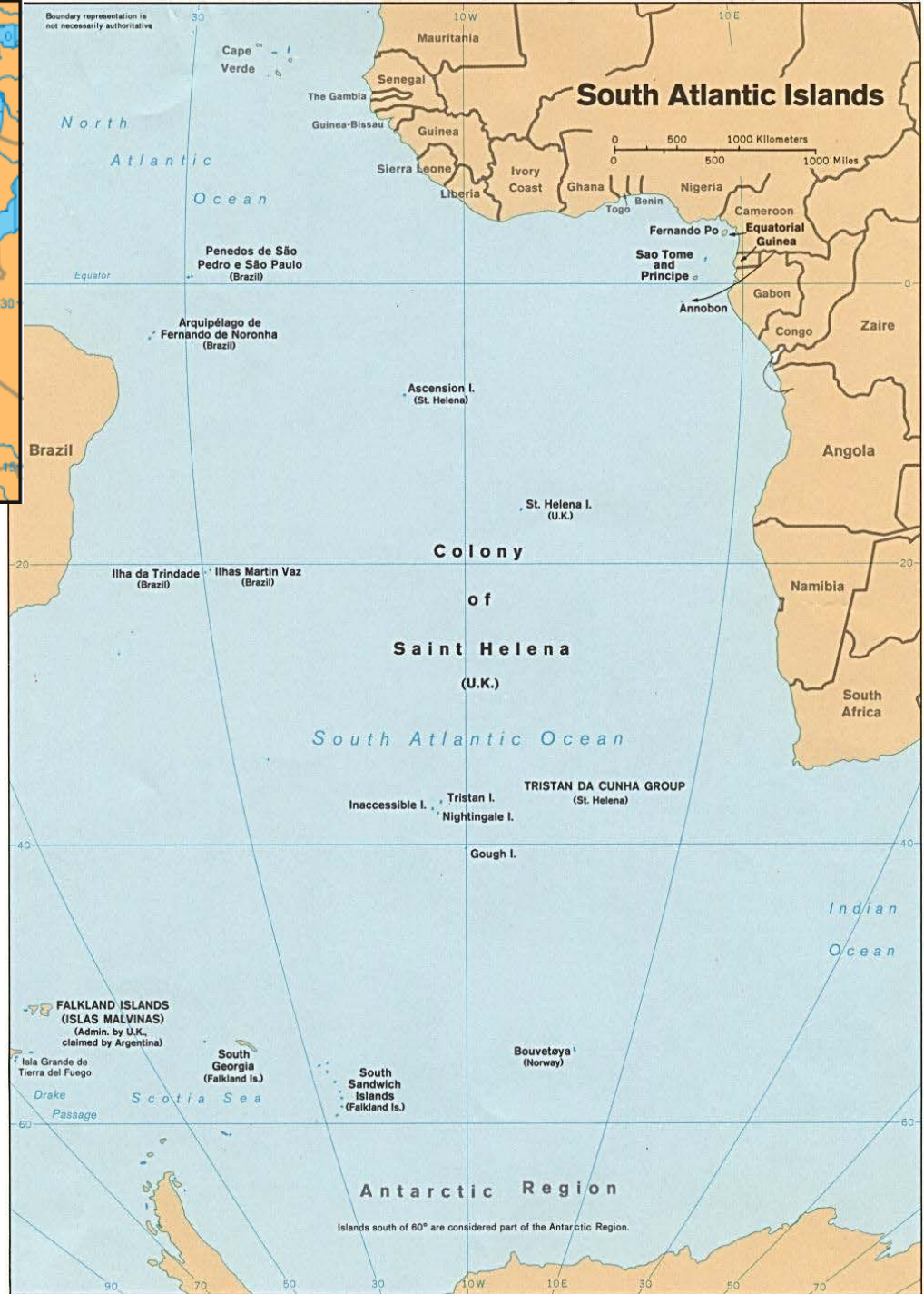
Bubble cards

The Compagnie de la Louisiane ou d'Occident was established in August 1717 by John Law, a Scottish financial genius. The Compagnie was granted control of Louisiana, and planned to exploit the resources of the region



'Het Groote Tafereel der Dwassheid ...' (The Great Mirror of Folly) 1720



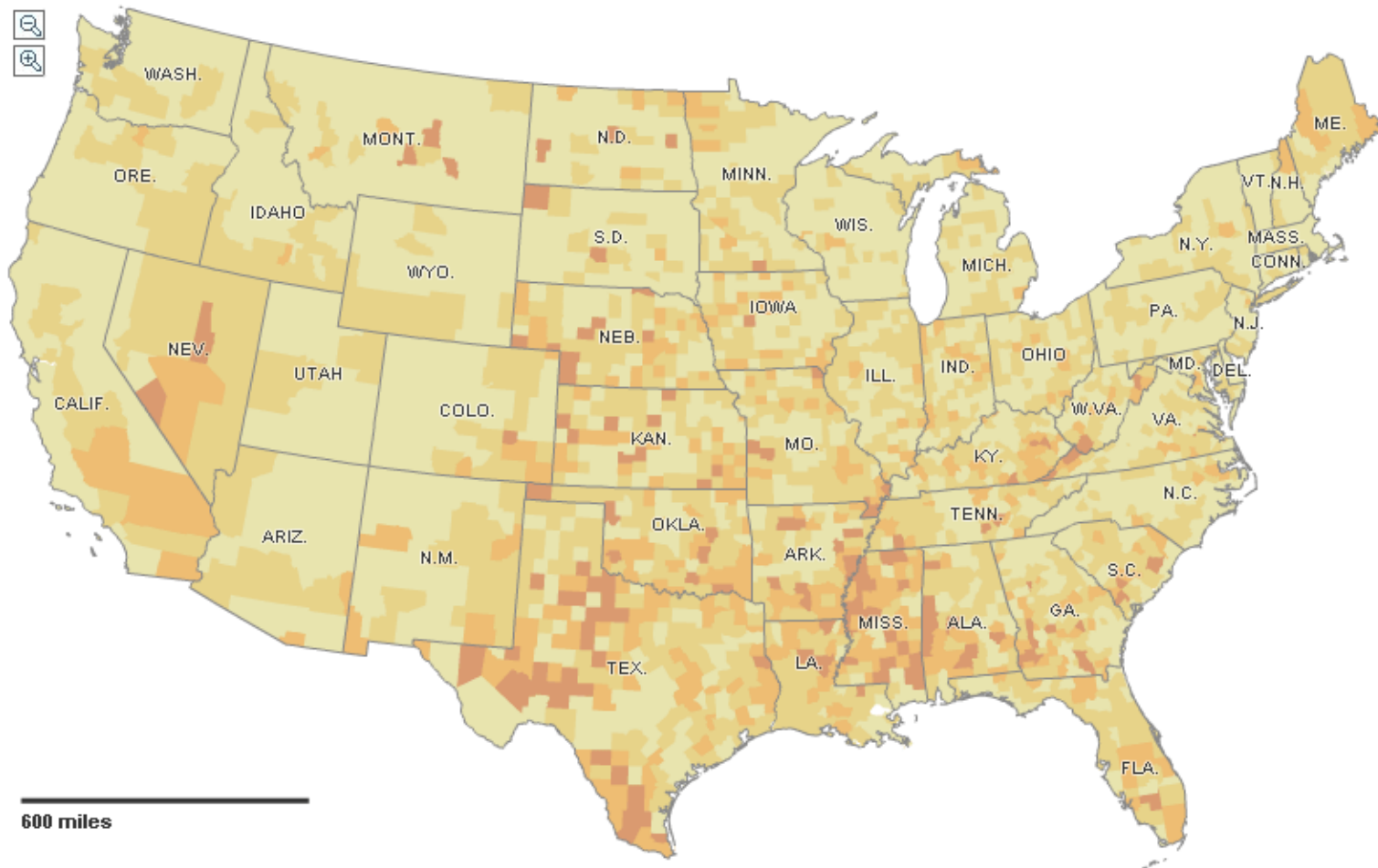


The 2008 Housing Bubble

Where are the Subprime Mortgages in U.S.

Subprime mortgages
as a percentage of all
mortgages

- less than 30 percent
- 30 to 40 percent
- 40 to 50 percent
- more than 50 percent



And End to the Age of Discovery

- By about 1850 world map pretty much complete
- Railroads and national surveys removing effect of distance and ignorance
- Gold rush lessons: Trade more important but bubble prone
- Deception, errors and intrigue remain
- Perceptions of foreign lands remain mixed
- Political and economic competition continues into the age of empires