

Maps: A Visual Tool in the STEM Undergraduate Experience

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New Perspectives in Science Education

Florence, Italy

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Map by Gwen Meux, from *The Life of Lewis Carroll* (Victoria Through The Looking Glass) by Florence Becker Lennon, Third Revised Edition, 1972

Barb Losoff guiding students through *The Physicians' Anatomical Aid*, 1888



“The forests everywhere contain a great variety of wild animals, especially of the deer kind, and other quadrupeds that are indigenous to this part of North America.” From *Narratives from New Netherland, 1609 – 1664*, edited by J. Franklin Jameson, 1909, p. 56.



Map of the Indian Tribes of North America about 1600 A.D. along the Atlantic; & about 1800 A.D., 1836, by Albert Gallatin, from the David Rumsey Map Collection



Elijah Burritt's *Geography of the Heavens Atlas*, 1846



Margaret Bryan's *Compendious System of Astronomy*, 2nd edition, 1799



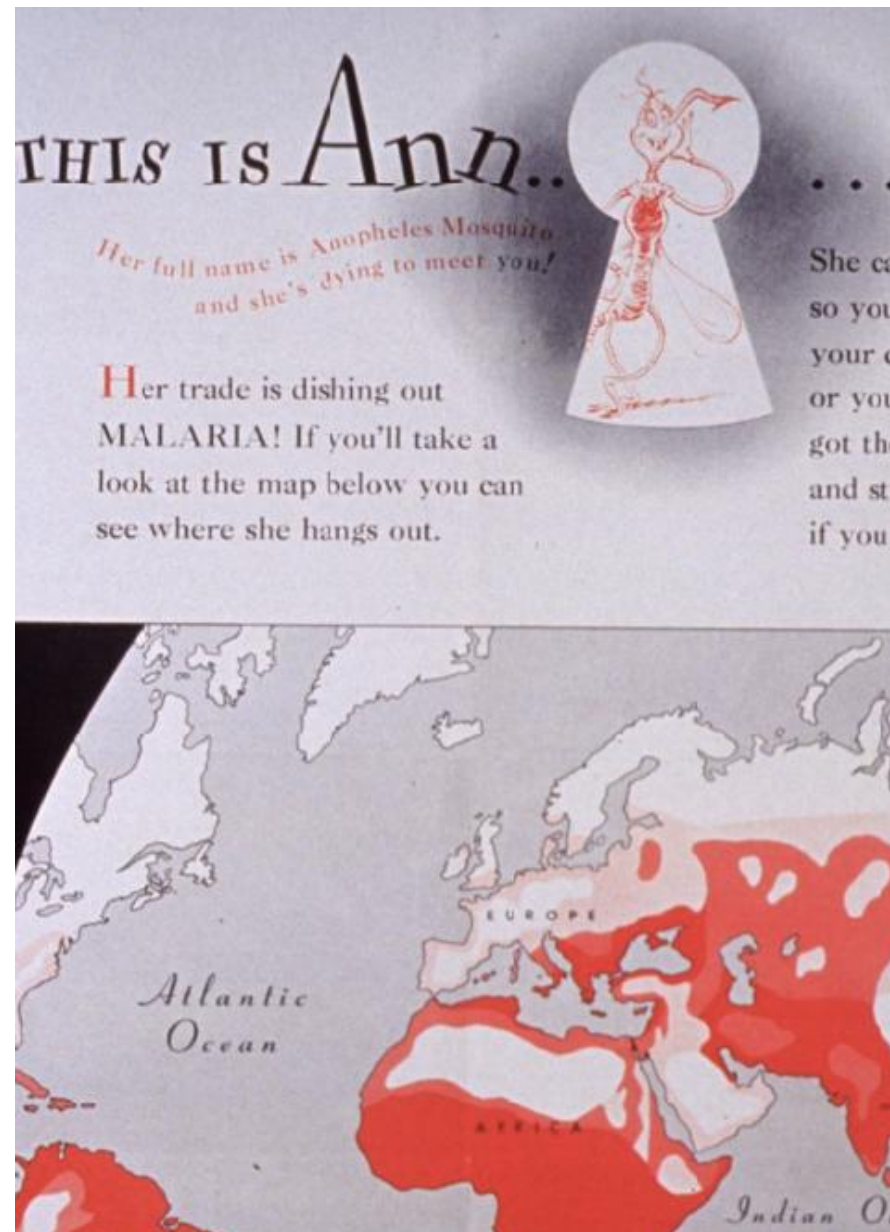


MOSQUITOES IN THE PHILIPPINE ISLANDS

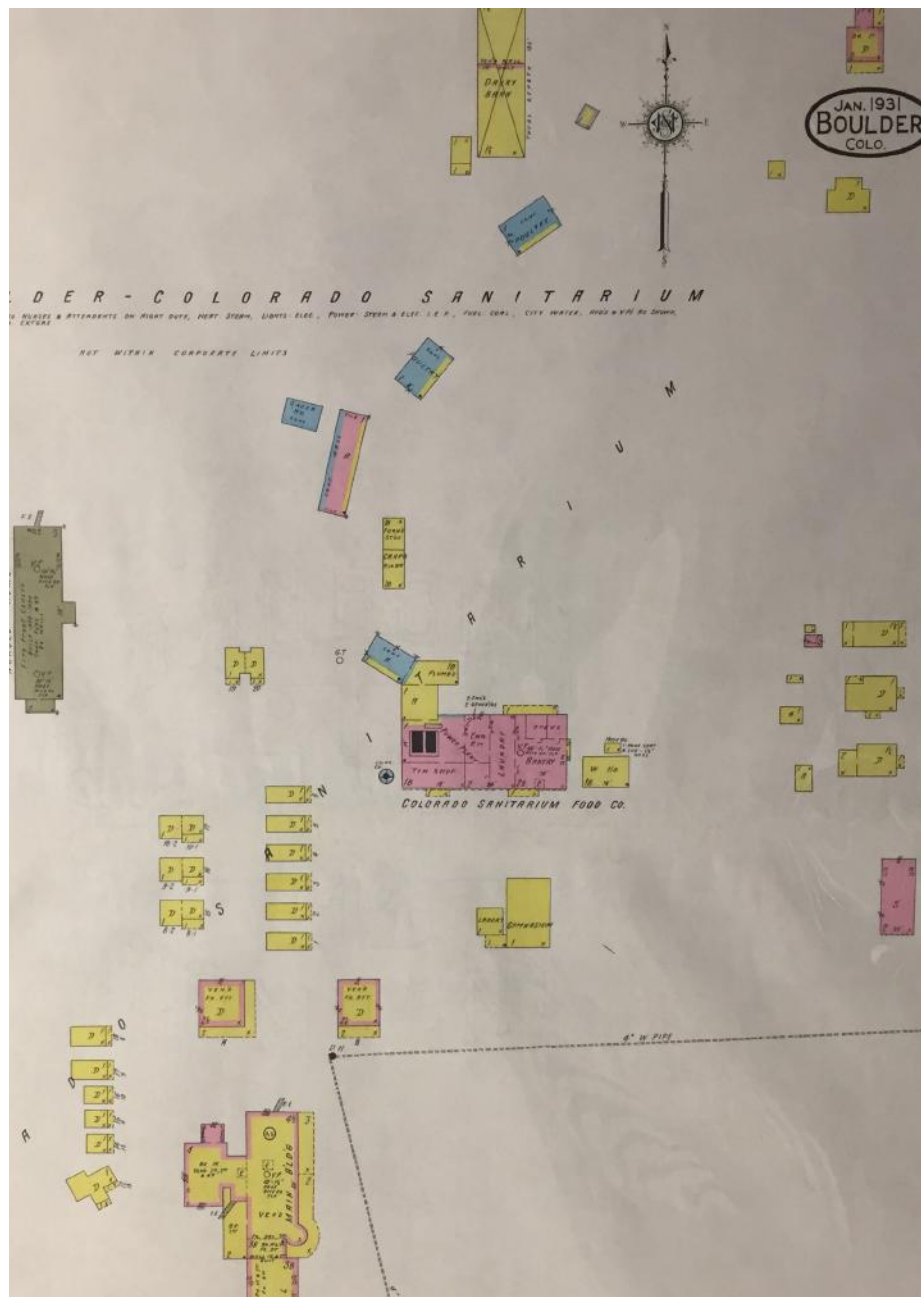
Twenty-nine species of *Anopheles* mosquitoes have been recognized in the Philippines, but on the basis of accumulated evidence only four species can be incriminated in the transmission of malaria. The most active transmitter, *Anopheles minimus flavirostris*, is a stream breeder, definitely preferring clean, fresh, flowing, and slightly shady water with bamboo shoots or roots present. Consequently, malaria is a disease of the foothills and is not seen in the lowlands or rice fields and does not appear above elevations of 2,000 feet. Not until this fact was fully appreciated was any progress made in malaria control. These mosquitoes are more prominent in transitional seasons. Where there are pronounced wet and dry seasons, malaria will appear in two waves each year at the change of the seasons. Where such seasons are not pronounced, malaria is perennial. It has been suggested that the prevalence of malaria in the foothills has been partly responsible for the maintenance of ethnological distinctions between the hill people and those from the plains. Mosquitoes of the *Aedes* group are the common household pest of the Philippines. Two species are found, *Aedes aegypti* and *Aedes albopictus*, both active in the transmission of dengue fever and both effective yellow fever vectors, though this disease is not present. At least one species of *Culex*, *C. fatigans*, is present and instrumental in the spread of infections with *Wuchereria*, though it is possible that some species of anophelines may also aid in its dissemination.

GERMAN PRISONER-OF-WAR HOSPITAL OPENED

A hospital for German prisoners of war, staffed by German doctors, has been opened at Okmulgee, Oklahoma, inaugurating the Medical Department's policy of establishing separate prisoner-of-war hospitals staffed with doctors and medical corpsmen of the prisoners' own nationality. This is in accord with Article 14 of the Geneva Convention of 1929. The German doctors assigned to duty at the hospital have been examined thoroughly, both as to credentials and ability. Properly accredited German sanitary personnel, as well as German prisoners of war, will also be used to provide the enlisted staff for the installation. Only the chiefs of the medical services at this hospital are American Army doctors. Adequate guard facilities are provided as well as the usual stockade fence around the area. Heretofore, prisoner-of-war casualties have been hospitalized in



This is Ann--: she drinks blood!, illustrated by Dr. Seuss,
Special Service Division, Army Service Forces, War Dept.,
1943



Sanborn Fire Insurance Map, Boulder, Colorado, 1931

Boulder Sanitarium, Boulder, Colorado, ca.1920

...seeing the atlas (the one
with the sea monsters) ...
helped me think of the
idea of making maps of
the past views of the
universe

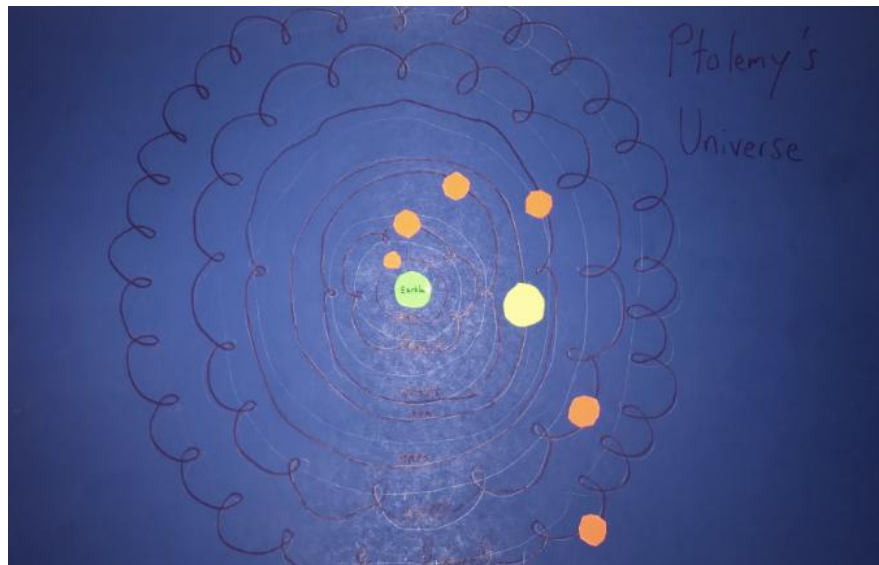
--Cameron Schimmoller,
Electrical Engineering
Major



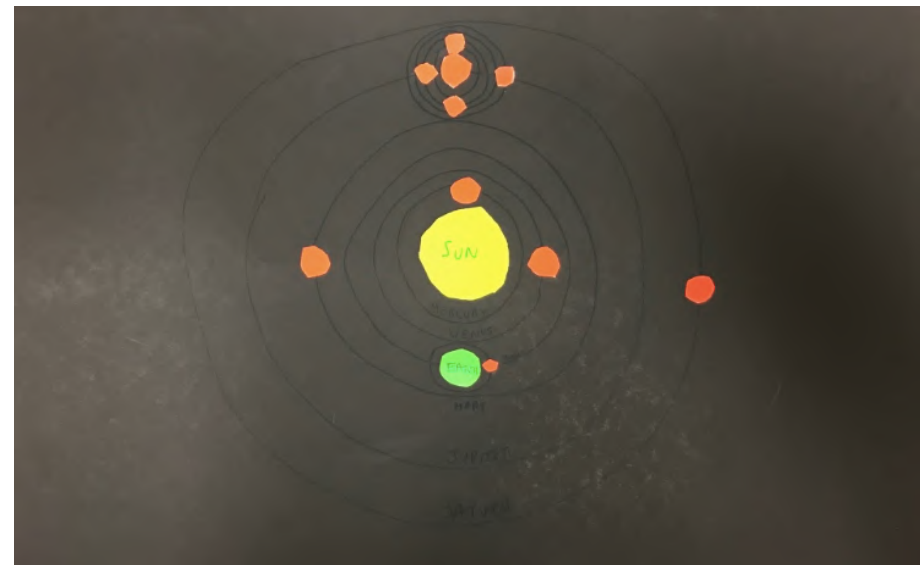
Aristotle's Universe



Dante's Universe

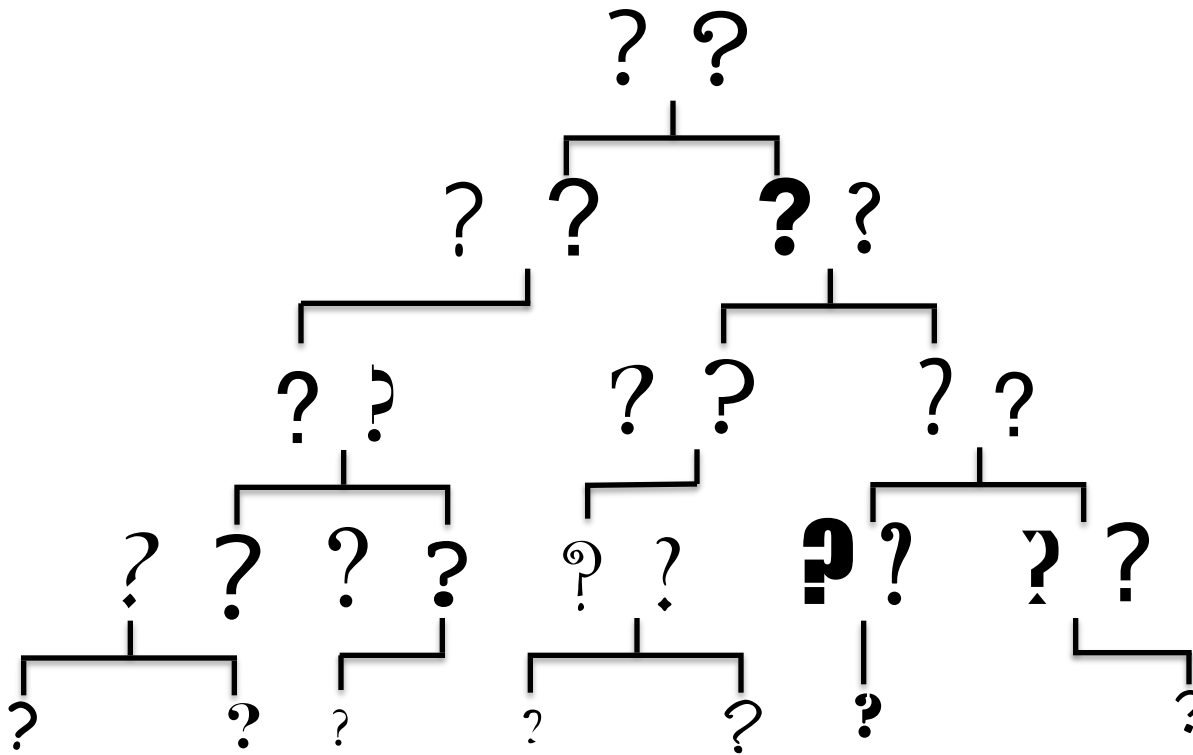


Ptolemy's Universe



The Solar System

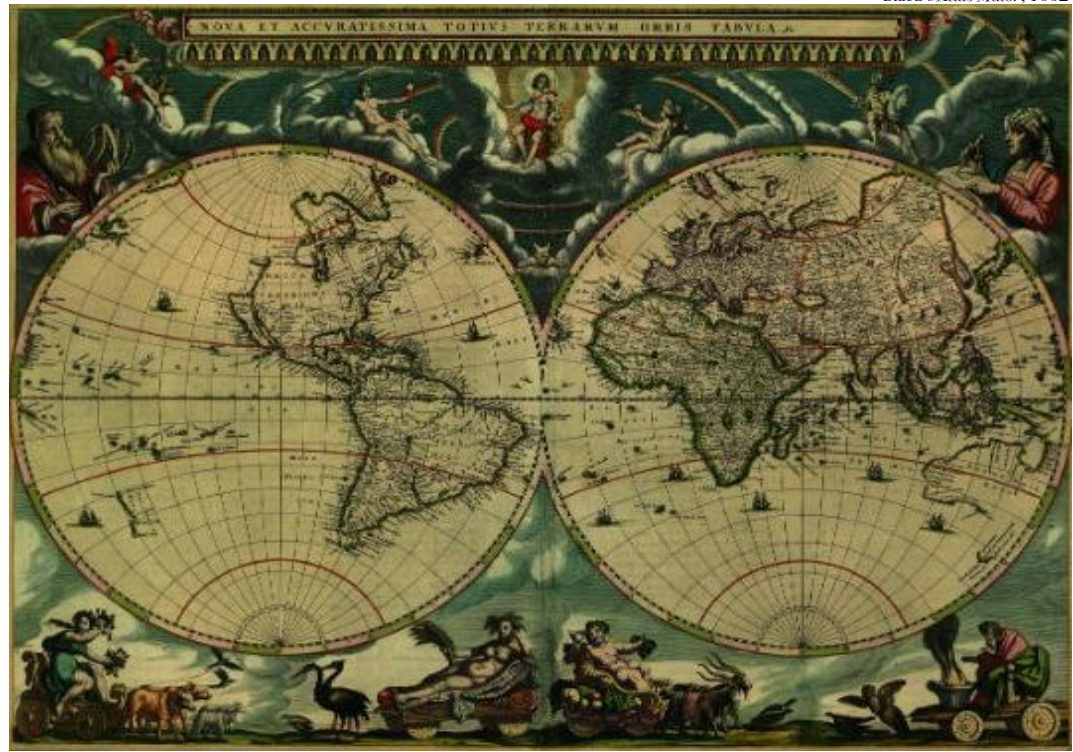
Paul Farber: science is “a lineage of questions”



Al-Idrisi's World Map, 1154



Blacu's Atlas Maior, 1662

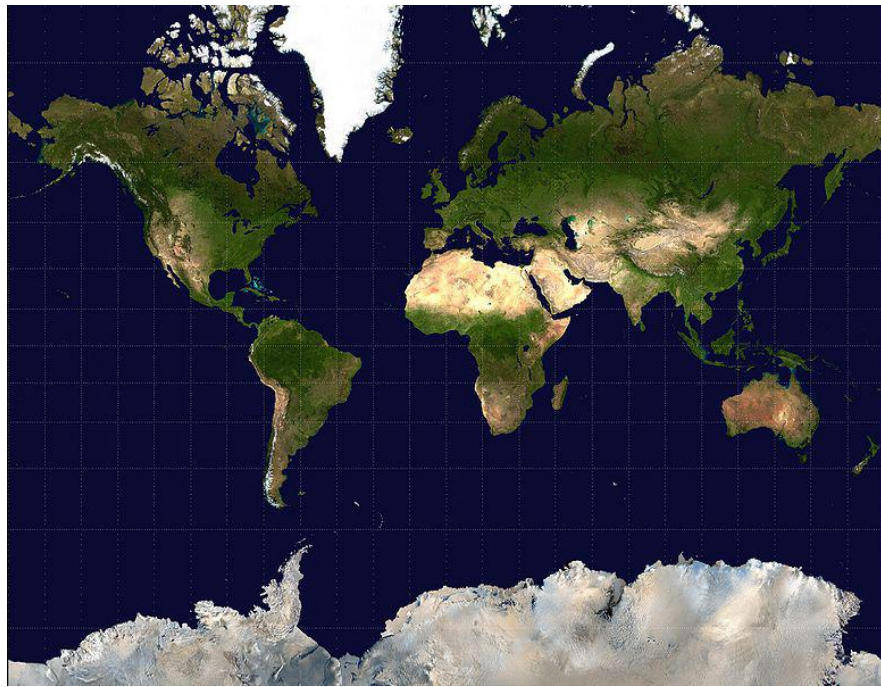


Waldseemüller's *Universalis Cosmographia*, 1507

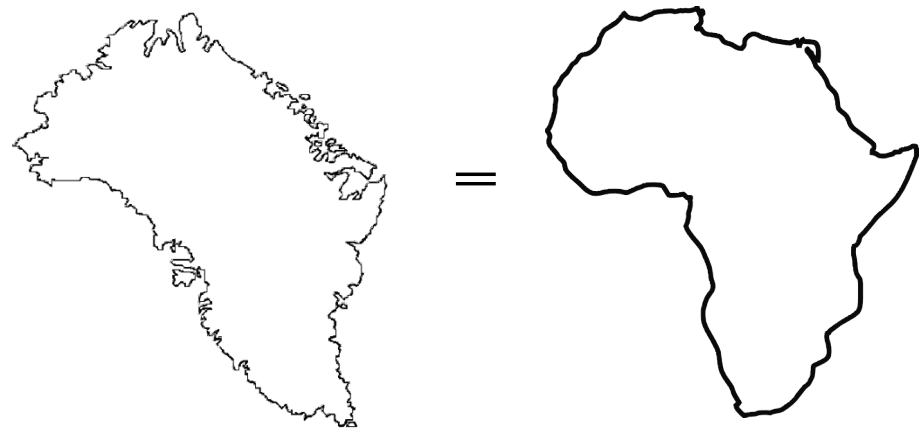


Ptolemy's *Geography*, 15th Century

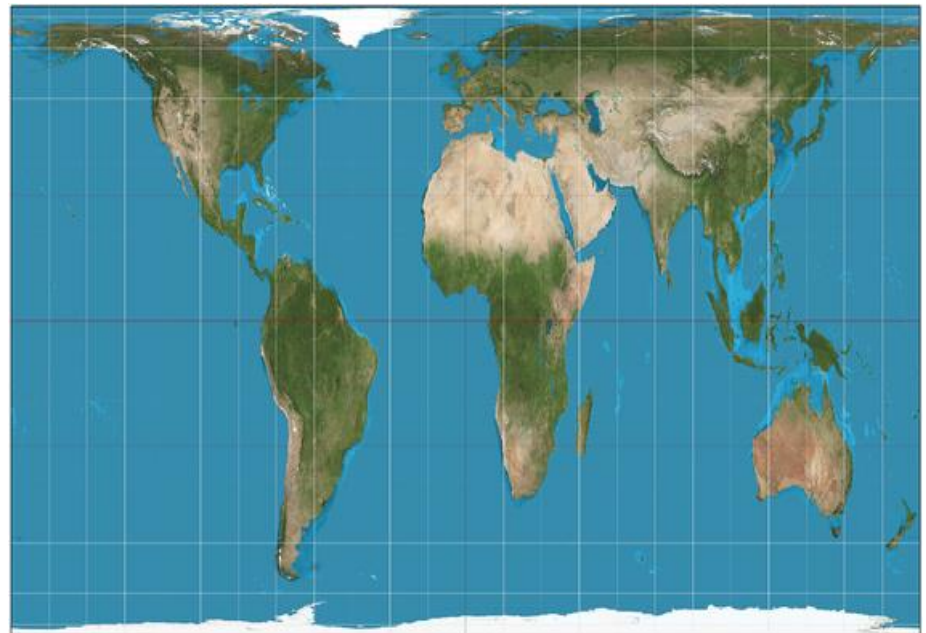
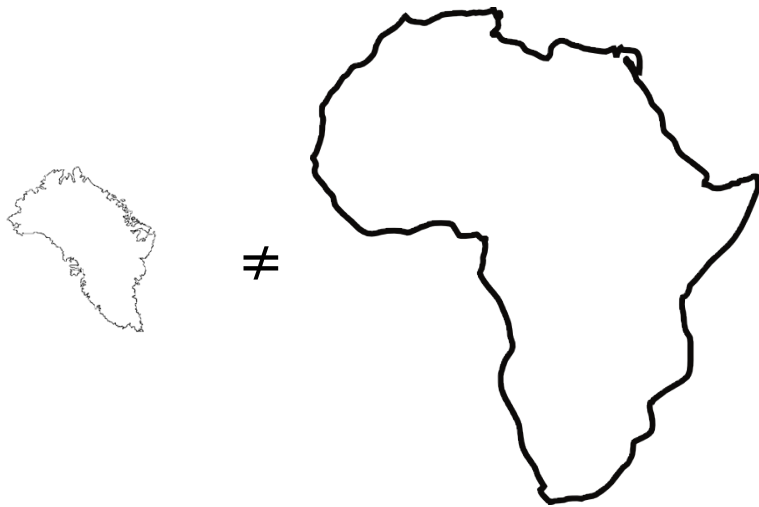




Mercator Projection



Gall-Peters Projection





Map by Henricus Martellus, ca. 1490

Christopher Columbus, as everyone knows, is honoured by posterity because he was the last to discover America.

--James Joyce