

Maps and Cartography

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Maps Tutorial:
The Elements of a Map



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The Map: A Geographer's Most Important Tool

- Maps are important in geography because they show how different features are related.
- Maps are used by various types of people and professions for many different purposes.
- ***All maps, however, share the same common elements.***



The Elements of a Map

- Title
- Legend
- Scale
- Directional Indicator
- Inset Maps

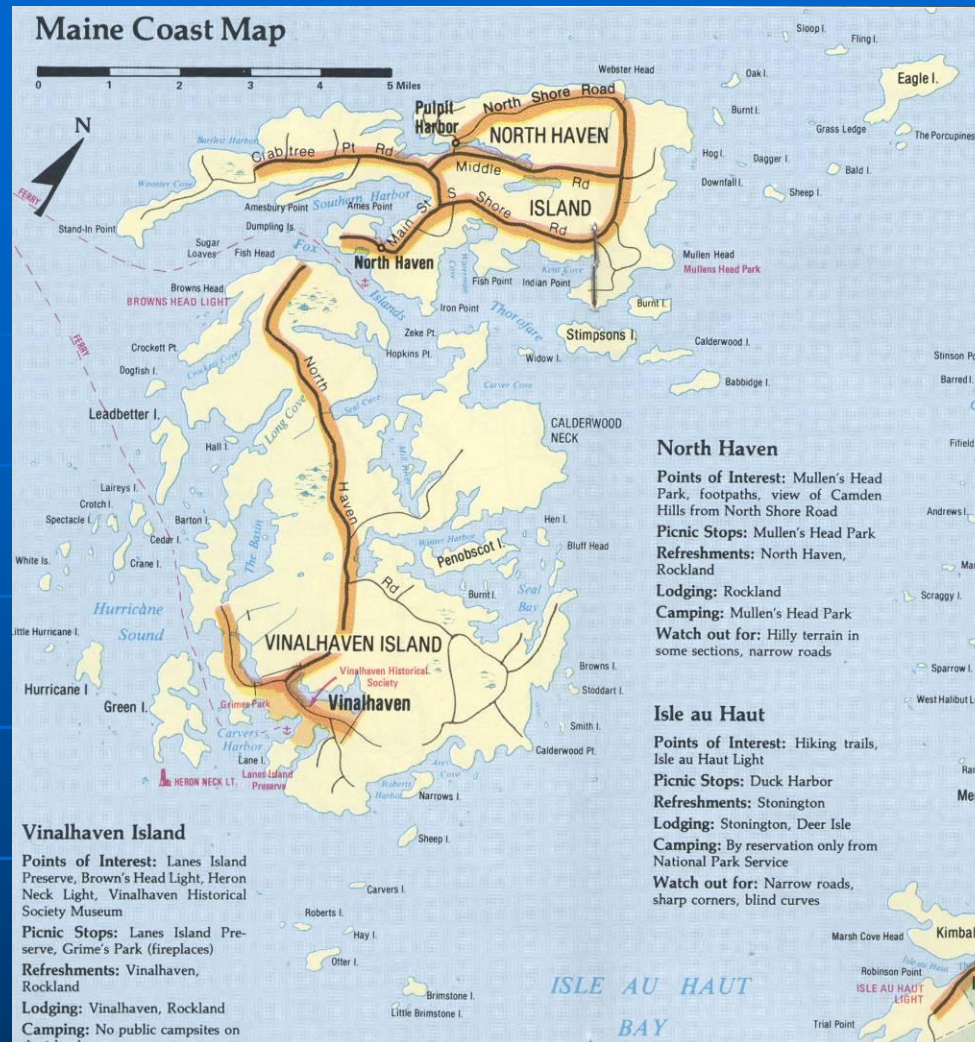


The Elements of a Map: Title

- The most important element of the map for acquiring information efficiently is the title.
- The title identifies the map area and the type of map.
- Cartographers may list the title simply or artistically.



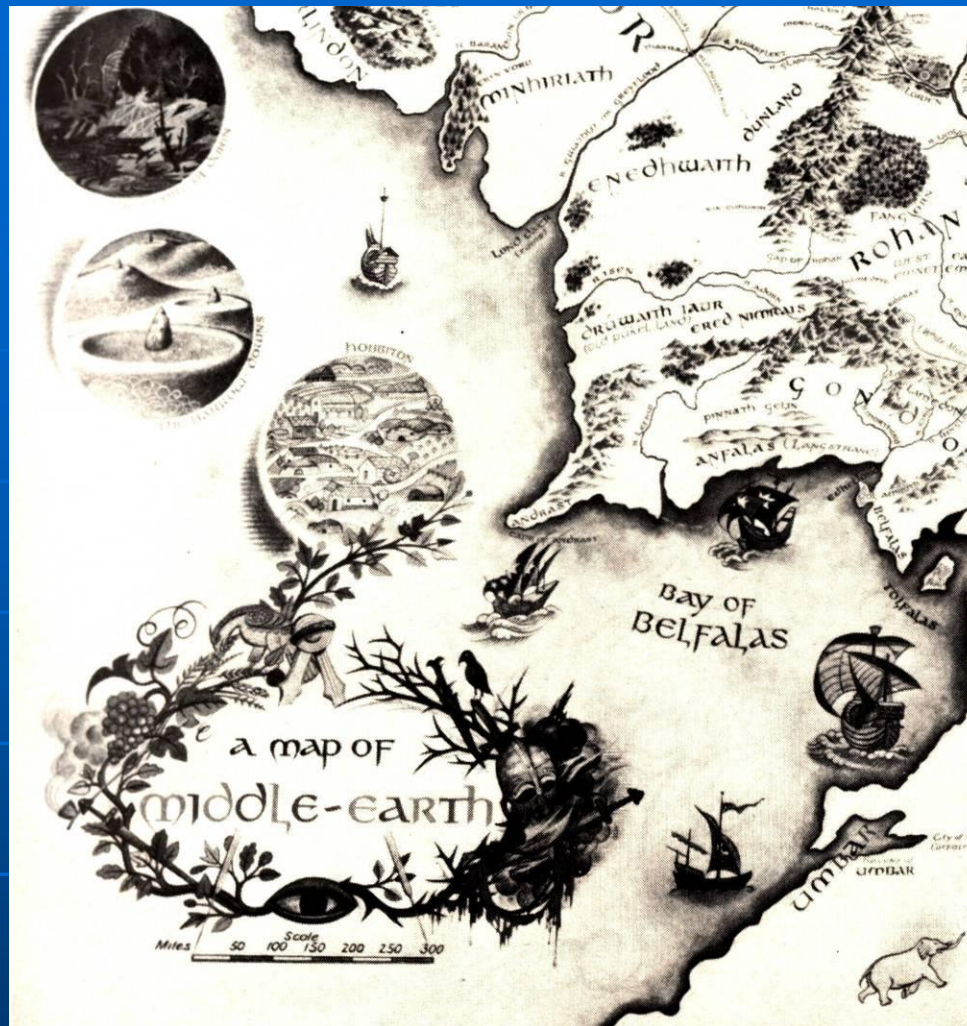
- The title of this bird's-eye-view map is predominant: *Muncie, Indiana, 1884.* (Muncie, Indiana, 1884, GRMC, Ball State University Libraries).



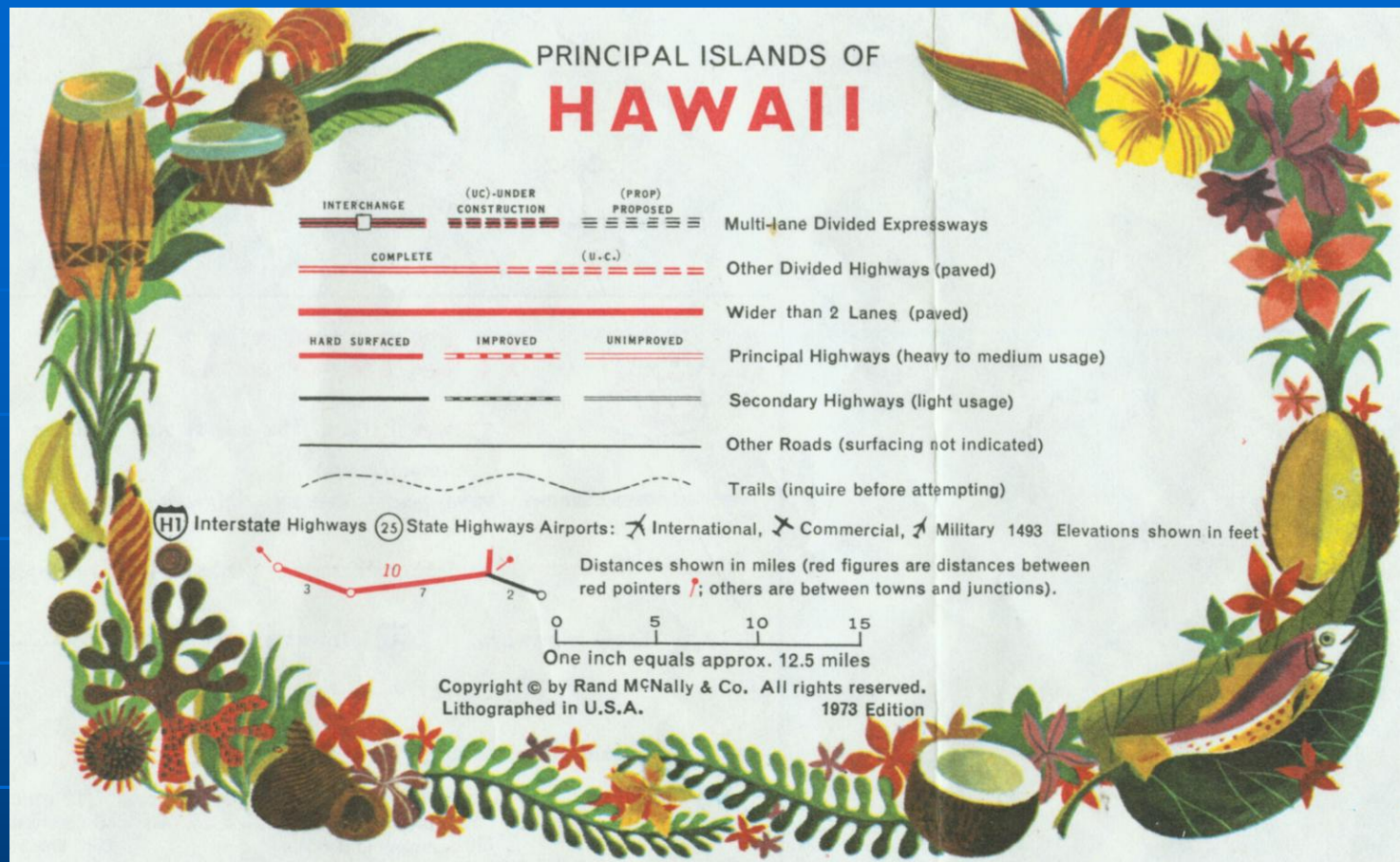
- Titles of maps typically appear at the top of the map, but not always. (*Maine Coast Map*, Maine Geographic Bicycling Maps, 1989, GRMC, Ball State University Libraries).



- The title of this pictorial map of Indiana was created to match the artistic design of the map. (*A Map of Indiana Showing Its History, Points of Interest*, 1967, GRMC, Ball State University Libraries).



- Another artistically-created map title: *A Map of Middle Earth*. (A Map of Middle Earth from *An Atlas of Fantasy*, 1979, J.B. Post, Atlas Collection, Ball State University Libraries).

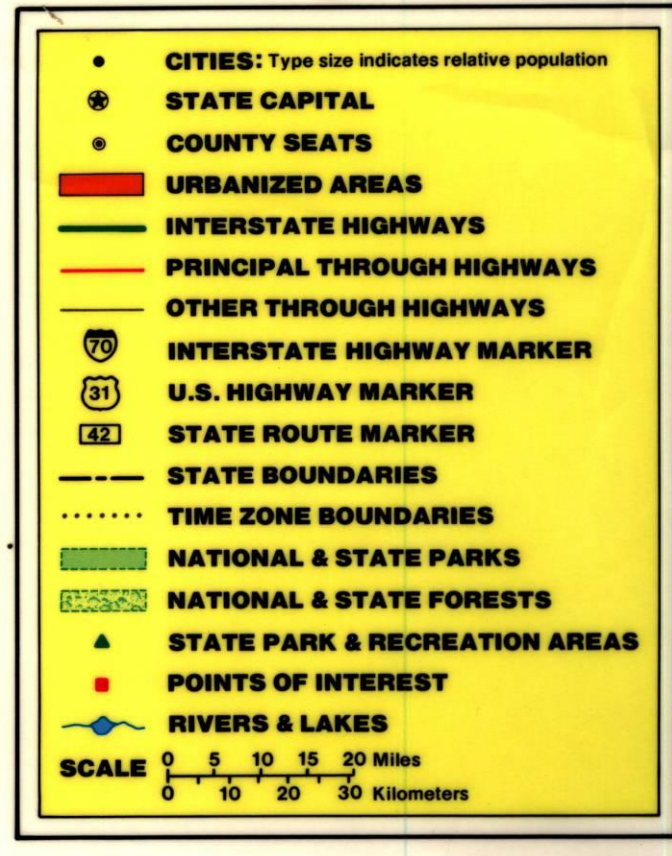


- This festive map title for a map of Hawaii continues the artistic theme: *Principal Islands of Hawaii*. (*Principal Islands of Hawaii*, 1973, GRMC, Ball State University Libraries).

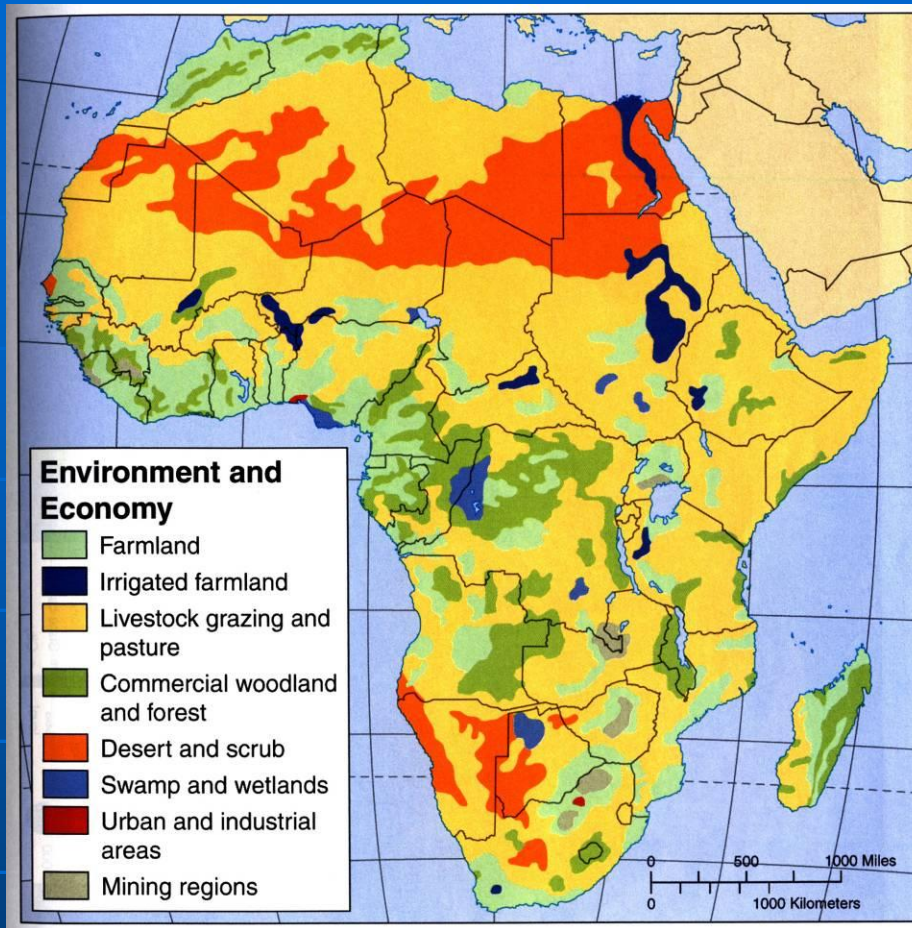
The Elements of a Map: Legend

- Another important feature on a map is the legend or map key.
- Information needed to read a map is found in the map legend.
- Most maps use symbols or colors to represent different geographic features. The map legend helps determine what the symbols and colors mean.

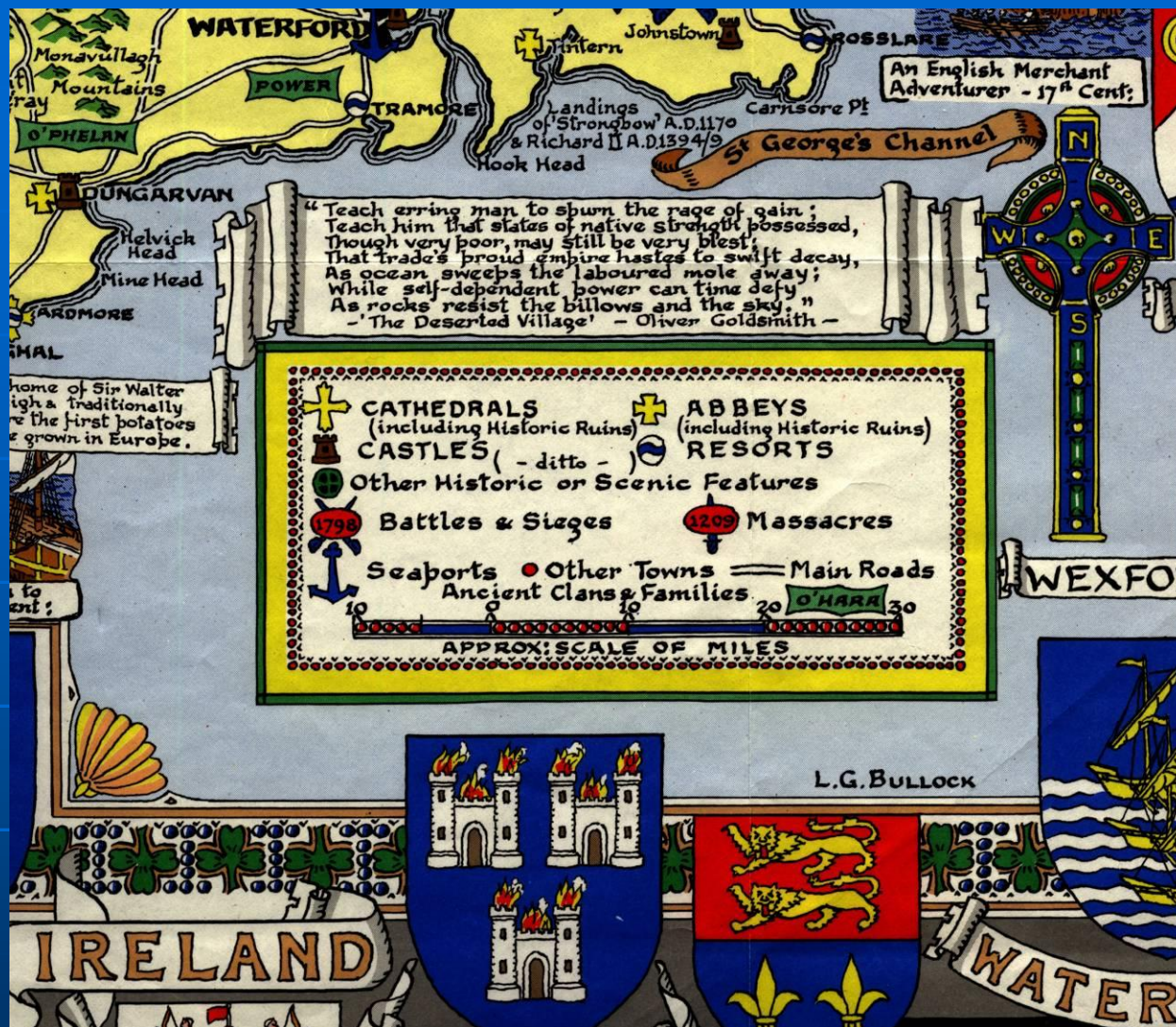
Legend



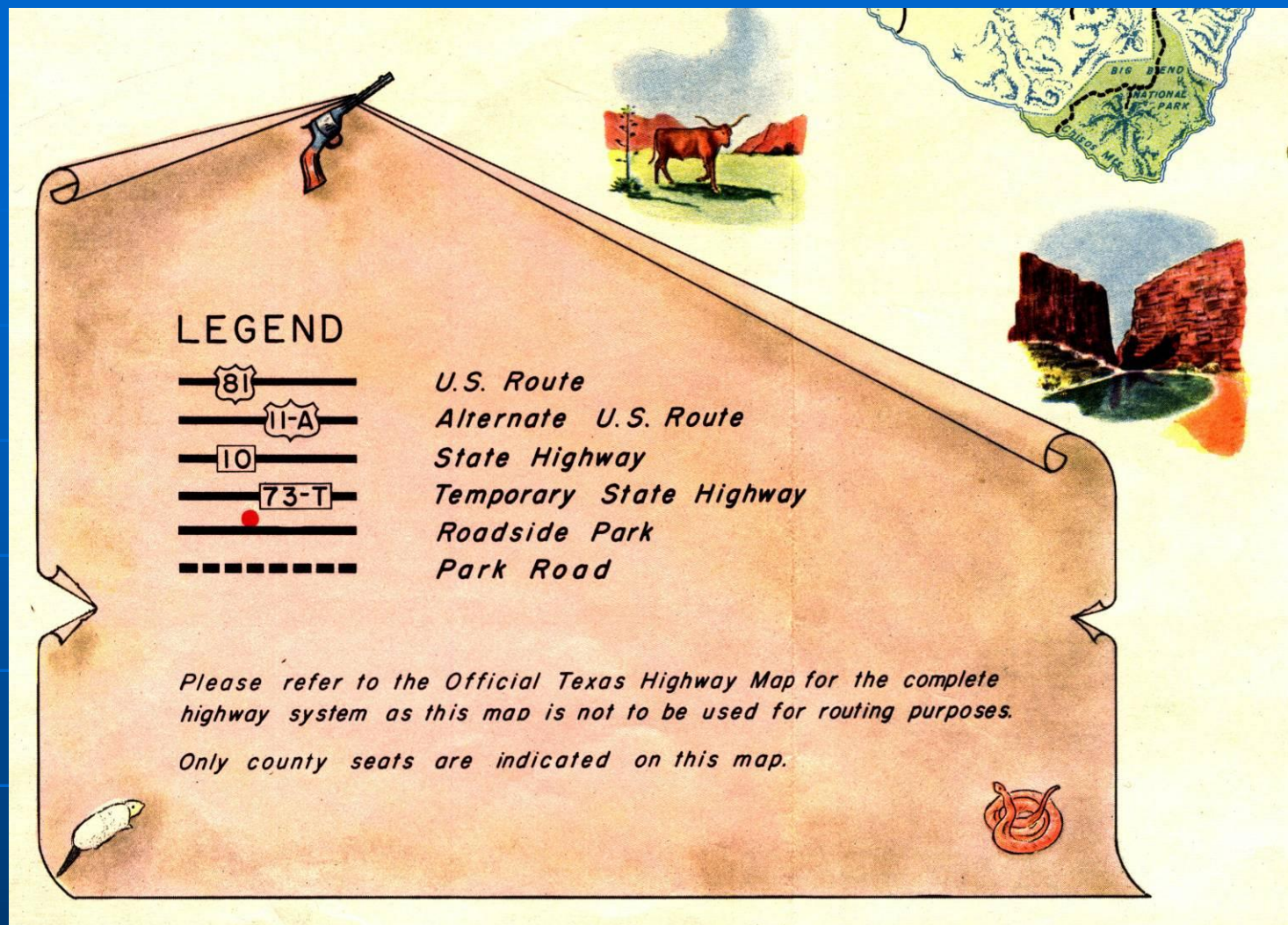
- This is a basic map legend featured on a map of Indiana. This type of legend or key is common for identifying features of maps. (*Indiana: "The Hoosier State,"* 1983, GRMC, Ball State University Libraries).



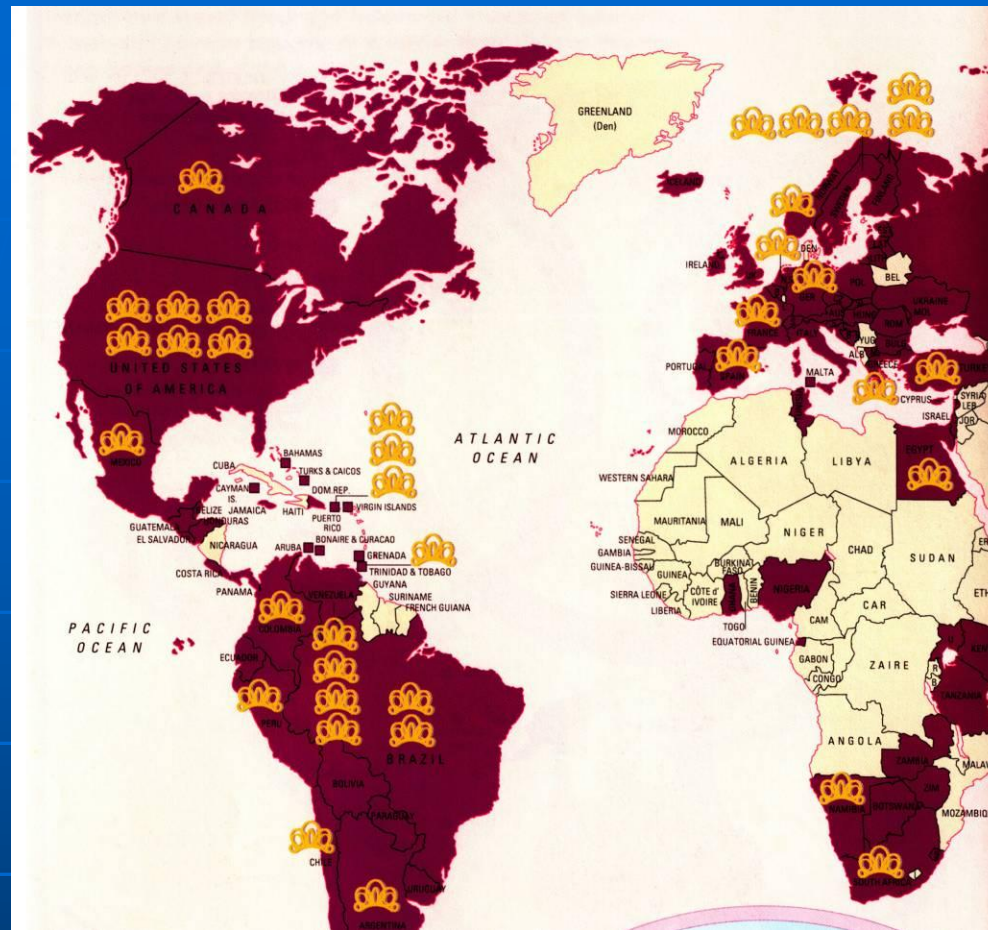
- Sometimes colors are used to identify certain areas on a map. On this map, the different colors shown in the legend represent areas of specific types of land use in Africa. (*Africa's Environment and Economy, Student Atlas of World Politics, 2006, Atlas Collection, Ball State University Libraries*).



- This colorful legend identifies the cathedrals, castles, battle sites, and ancient families of Ireland. (Historical Map of Ireland, 1969, GRMC, Ball State University Libraries).



- This legend simply identifies the roads of Texas, but the cartographer chose to be creative in the design of the legend to add character to the map. (Texas Guide Map, 194-, GRMC, Ball State University Libraries).



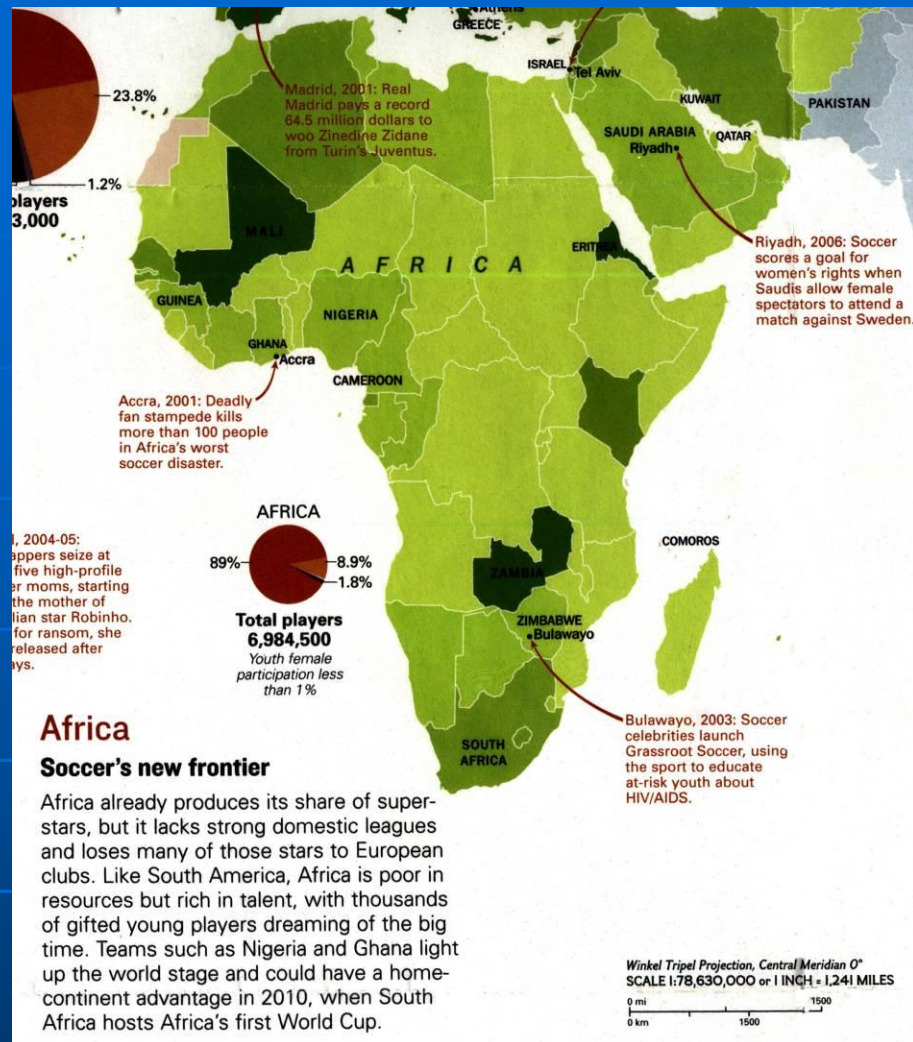
- Cartographers also use creative symbols on maps. The crowns on this map represent winners of the Miss Universe pageant, while the purple identifies countries with contestants in the beauty pageant. (*The State of Women in the World atlas*, 1997, Atlas Collection, Ball State University Libraries).

The Elements of a Map: Scale

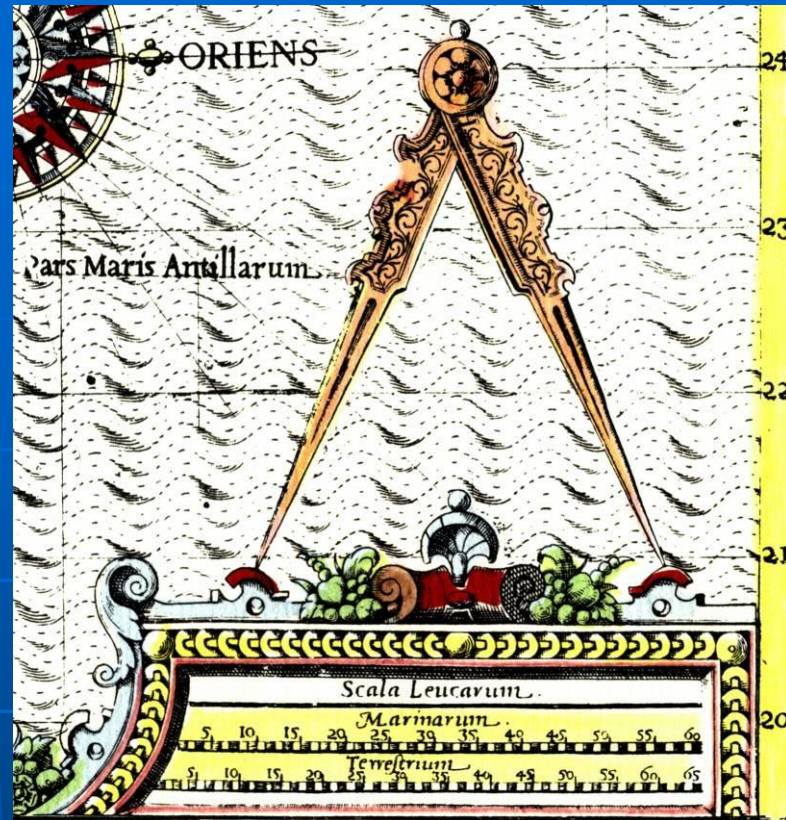
- Almost all maps have scales.
- Scales compare a distance measured on the map to the actual distance on the surface of the earth.
- Scales appear on maps in several forms, but most cartographers draw a line scale as a point of reference.

Scale, continued...

- A map displaying the entire surface of the earth with all the continents and oceans would be drawn at a larger scale. A scale on this type of map would be drawn in thousands of miles and kilometers.
- A map of the White House, however, may have a scale with distance determined in feet.
- ***The two maps described above may be the same size on paper—only their scales are different.***



- This map scale shows the distance on the map of 1500 miles/kilometers. The scale is also translated to how many miles are represented in one inch on the map. (National Geographic *Soccer Unites the World*, 2006, GRMC, Ball State University Libraries).



- Ancient cartographers created very artistic maps, and the elements of the maps could be quite elaborate and colorful. This map scale is surrounded by a decorative border and compass. (Floridae Americae Provinciae: Recens & Exactissima Descriptio, 1564, engraved reproduction, GRMC, Ball State University Libraries).



- This scale from a historical map of Kentucky features an image of George Washington surveying the land. (*Kentucky: The Dark and Bloody Ground, An Historical and Geographical Map of the State of Kentucky*, 1933, GRMC, Ball State University Libraries).



- Another simple scale showing the distance in miles in relation to the map of Europe. (*World of Sherlock Holmes* map from *An Atlas of Fantasy*, 1979, J.B. Post, Atlas Collection, Ball State University Libraries).

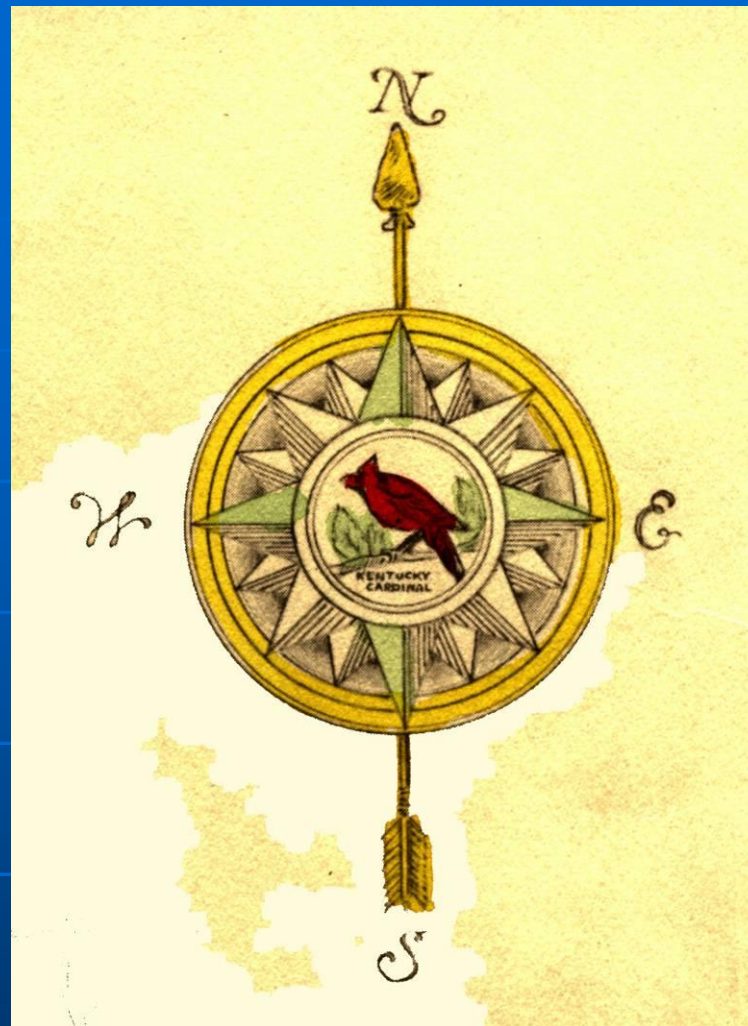
The Elements of a Map:

Directional Indicator

- Another common map element is a directional indicator. A directional indicator on a map helps determine the orientation of the map.
- Some cartographers place an arrow that points to the North Pole on the map. This is a “north arrow.”
- Other maps indicate direction by using a “compass rose,” with arrows pointing to all four cardinal directions.



- Ancient cartographers drew elaborate, artistic directional indicators—most commonly a compass rose. (*Floridae Americae Provinciae: Recens & Exactissima Descriptio*, 1564, engraved reproduction, GRMC, Ball State University Libraries).



- This simple compass rose features a Kentucky cardinal and an arrow pointing north. (*Kentucky: The Dark and Bloody Ground, An Historical and Geographical Map of the State of Kentucky*, 1933, GRMC, Ball State University Libraries).



- This compass rose was featured on a map of Indiana history. The young girl is pointing east and west while her feather serves as a north arrow. (Liberty Elementary School's *Indiana*, 1974, GRMC, Ball State University Libraries).



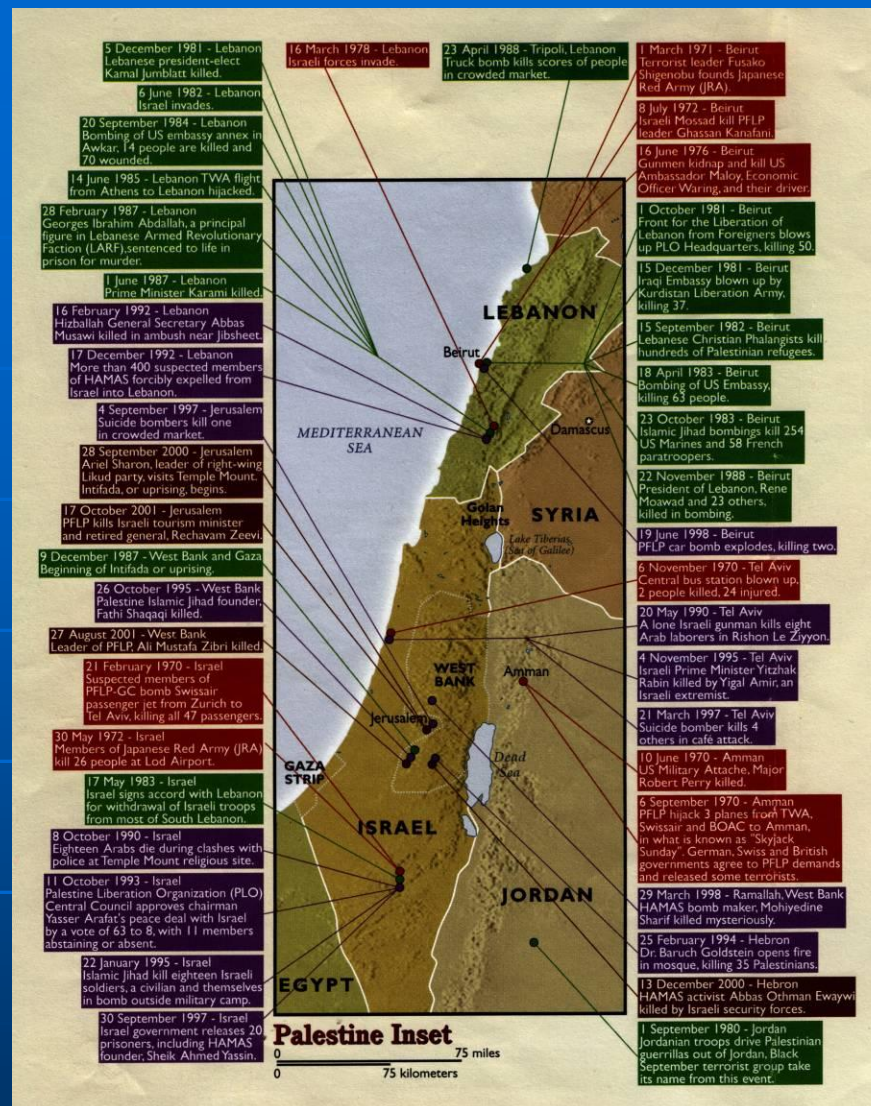
- This compass rose featuring *Tinkerbell* is displayed on a map of the Disneyland theme park. (*Walt Disney's Magic Kingdom, Disneyland U.S.A., Anaheim, California, 1964*, GRMC, Ball State University Libraries).

The Elements of a Map: Inset Maps

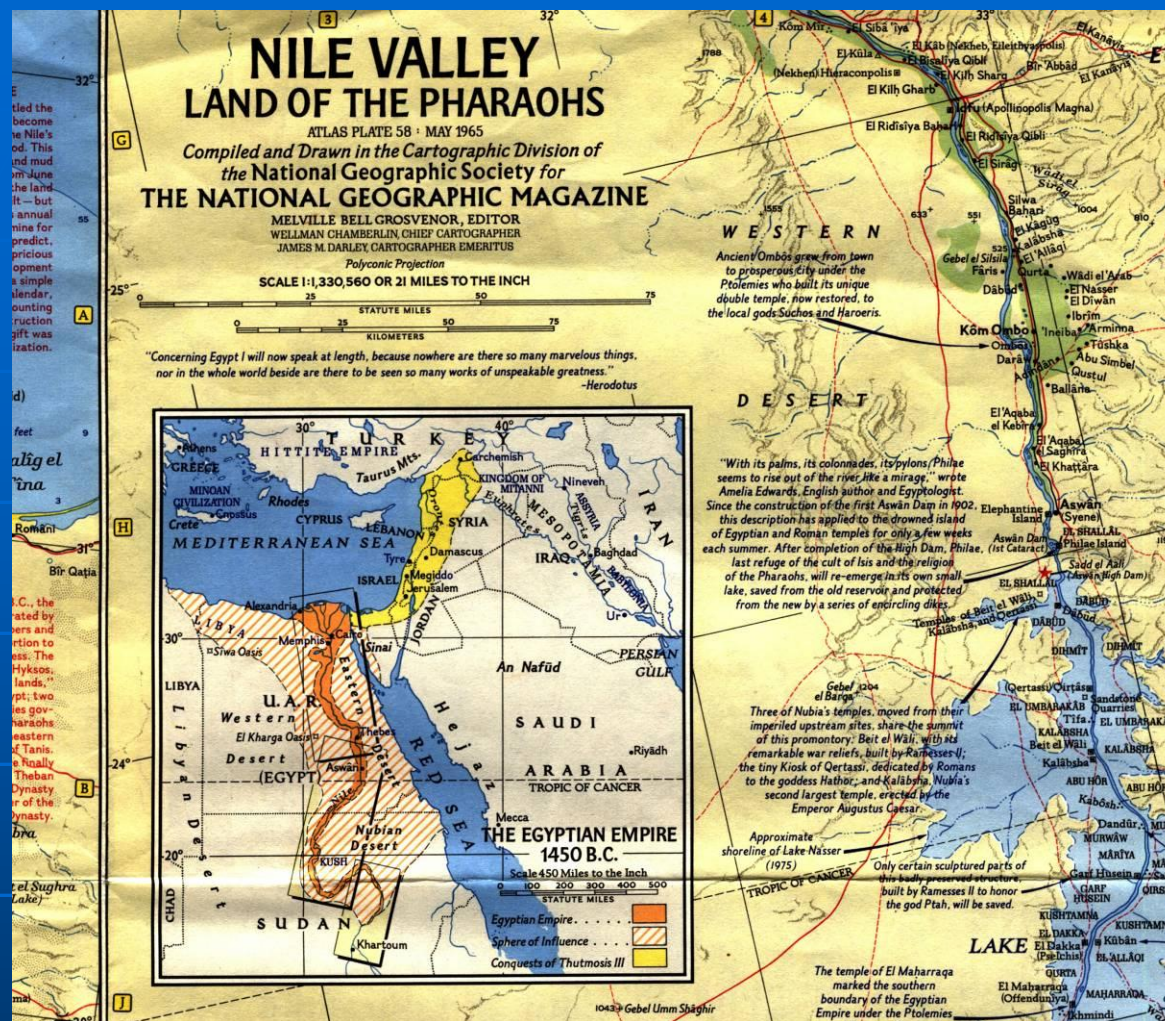
- Some maps feature inset maps—smaller maps on the same sheet of paper.
- Inset maps provide additional information not shown on the larger map.
- Inset maps are drawn at a larger, more readable scale.
- Inset maps usually feature areas of interest related to the larger map.



- Inset maps are commonly used on tourist/travel maps. The inset maps above feature suburbs of Brisbane, Australia, and a map of the city's train routes. (Lonely Planet's *Brisbane & Gold Coast*, 2002, GRMC, Ball State University Libraries).



- This inset map displays terrorist attacks that have taken place in Israel and its neighbors. This information would not have been easily read on the larger world map. (*World Terrorism: A Reference Map*, 2002, GRMC, Ball State University Libraries).



- The larger map above is a modern map of the Nile Valley. The inset map shows the ancient Egyptian Empire in the same area. (National Geographic *The Nile Valley: Land of the Pharaohs*, 1963, GRMC, Ball State University Libraries).



- The larger map of *Shakespeare's Britain* features inset maps of Stratford-Upon-Avon and a bird's-eye-view map of London. (National Geographic *Shakespeare's Britain*, 1964, GRMC, Ball State University Libraries).

- Geography is the study and discovery of the world, and maps are a critical component of geography. Learning more about cartography and the common elements of maps will enhance the understanding of the world.
- *Maps really are a geographer's most important tool.*



- For more information about any of the maps or atlases shown or the tutorial lesson *Maps and Cartography: The Elements of a Map*, please contact the Geospatial Resources & Map Collection, Ball State University Libraries, at (765) 285-1097.
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