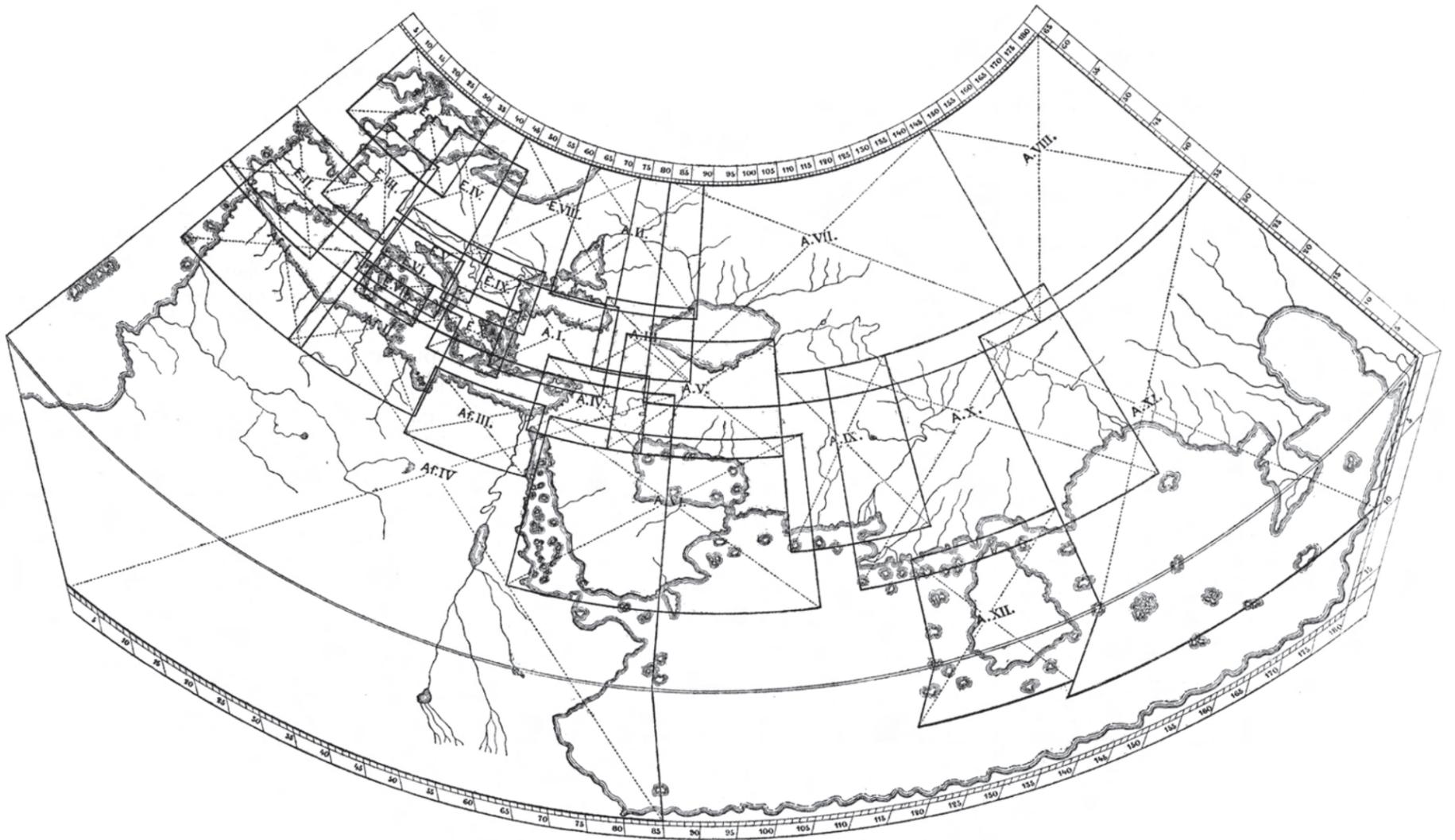# Index Map of the Regional Maps in the

Ptolemaic canon

[Index Map]

A.E. Nordenskiöld,

Facsimile-Atlas to the Early History of Cartography

Stockholm: P.A. Norstedt, 1889

Newberry Library: oversize G 004 .63

This index map was prepared by the great historian of cartography A.E. Nordenskiöld in 1889, based on the world map included in the edition of the *Geography* published in Rome in 1507-1508. It locates the 26 regional maps that, with the world map, comprise the Ptolemaic canon: 10 maps to cover Europe, 4 for Africa, and 12 for Asia. Nordenskiöld outlined these regions on his index map and we have identified some of them for you in the image below.

In general one "reads" Ptolemy's world from west to east, or left to right, much as one reads a page of written text in a Western language. This assumes, correctly, that Ptolemy's maps are oriented with north at the top, an arbitrary convention that the *Geography* helped to establish.

Europe 1 (UK)

Europe 2 (Iberia)

Europe 6 (Italy)

Africa 3 (Egypt)

Asia 12 (Taprobane)

Printing Techniques

WOODCUT

In the woodcut technique, a design is drawn on a block of wood and every area that should not appear on the map is cut down using very sharp knives and gouges. This means that every line that is to appear on a map, no matter how fine, has to be cut away on both sides, leaving only a thin portion of the original wood surface. An ink roller or pad is then used to coat the wood that sticks up and a piece of paper is pressed against the block to make an impression. Generally, you can recognize woodcuts by their relatively heavy lines, the variations in the width of lines, and the rather angular curves.

Because the woodcut, like printing from movable type, is a relief printing process, both type and maps can easily be combined on a page and printed in the same press. This was a powerful argument in favor of making maps using the woodcut technique. On the other hand, this technique makes more difficult two important aspects of cartography: lettering and revision. The extremely fine cuts needed to create letters means that rendering place-names in a woodcut map is a great test of skill. In the hand of a true master the woodcut could be as fluid and precise as a pencil sketch. In lesser hands, and on many maps, such as **Europe 6 (Strasbourg, 1513)**, the results were often chunky and difficult to read. A second drawback to a woodcut is the difficulty of revision. The only way to revise a woodcut is to cut out the offending area of the block, insert a plug of the same size, and re-engrave the details. In fact, such changes to woodblocks were relatively uncommon.

STEREOTYPE

Some early map printers tried to solve the difficulty of carving letters into a woodblock by cutting slots in the woodblock and inserting pieces of lead type to spell out place-names. The maps in the 1511 edition of the *Geography* were apparently lettered in this fashion, since on some impressions it is clear that a piece of type has fallen out of its slot and been replaced incorrectly. **See World map (Venice, 1511)**.

As early as 1530 printers had learned how to make stereotype plates, and cartographers soon adopted the technique for maps. To make a stereotype plate, the printer pressed ordinary printing type into a piece of papier-mâché or clay, leaving indentations in the shapes of the letters. After the impression had dried, molten metal would be poured into the indentations. The result was a single thin piece of metal containing a whole word, which was then glued onto the woodblock. **See Africa 1-3 (Basel, 1541 and 1545)**.

Stereotyping was quite commonly used on woodcut maps, particularly German ones. The technique can be identified by examining multiple copies of the same map and looking for places where an entire name has shifted its location. This shift occurs when the metal with the lettering detached from the woodblock and was reattached in a slightly different location. **On Asia 5 (Basel, 1571)**, notice the tribal names "Chorodna" and "Parthiena" at the middle of the right-hand page: they are here reversed from their positions in all previous printings of the block.

COPPERPLATE

Engraving is an intaglio (or "incised") process. Lines are cut into the polished surface of a metal plate using a tool called a graver, which leaves a v-shaped groove. Thick ink is rubbed on the plate and into the lines that have been cut. The polished surface of the plate is then wiped clean, leaving the ink in the v-shaped grooves. When a dampened piece of paper is pressed onto the plate, the paper pulls the ink out of the grooves.

Lettering on a copperplate is much more straightforward than on a woodcut. The engraver "writes" the letters directly (albeit backwards, and in copper), and the shape of the graver, like the nib of a calligraphy pen, creates the thick and thin lines of a letter. A skillful copper engraver could letter almost as quickly as a calligrapher with pen and ink. Revision was also much easier than with a woodblock. Because copper is quite malleable, all that was necessary was to turn a plate over on a hard surface and hammer on the back of the plate behind the area to be revised. This would "erase" the lines originally cut on the front of the plate, and new matter could be engraved in its place. So fast and easy was this method that literally hundreds of corrections might be made in a copperplate over the course of its life, and it was not unusual for plates to be so completely changed that two impressions from the same plate might appear to be from completely different plates. Sometimes such "erasures" were less than perfect and traces of the old matter could still be seen on later stages of the copperplate. **On Asia 12 (1618)**, traces of an earlier and larger cartouche can still be made out between the cartouche and the promontory at the southeast corner of the island.

Typically, engraved lines are much finer than those produced by a woodcut. The lines are also normally even in width but taper to a point at their ends. When wiping the excess ink from their copperplates, Italian printers typically left a thin patina of ink on the polished surface of the plate. When printed, this gave the entire plate a light gray tone, one of the hallmarks of Italian engraving style. **See Asia 3 (Venice, 1562)**. Another such hallmark is the use of tiny parallel lines to indicate water. **See Asia 4 (Venice, 1564)**.

COLORING ON MAPS

Until the middle of the 19th century, virtually all coloring on printed maps was applied by hand. The woodblock technique can be used for exquisite color printing, but it was simply not done often with maps produced in Western Europe.

Two-color printing was sometimes employed for maps, often as a means to distinguish lettering. For woodcut maps with inset lettering, the woodblock was inked with one color and the letters with a second color. **See World Map (Venice, 1511)**.

The thick paint that publisher Lienhart Holle utilized in his editions of the *Geography* was exceptional; a more transparent watercolor wash was the norm. **See World map & Europe 3 (Ulm, 1482)**.