

FIG; ROME; 2012

HISTORY WORKSHOP

MAY 4TH, 2012

Fondazione dei Geometri Italiani

*THE ROMAN WORLD SURVEY
BEFORE, AFTER AND ITS LEGACY*

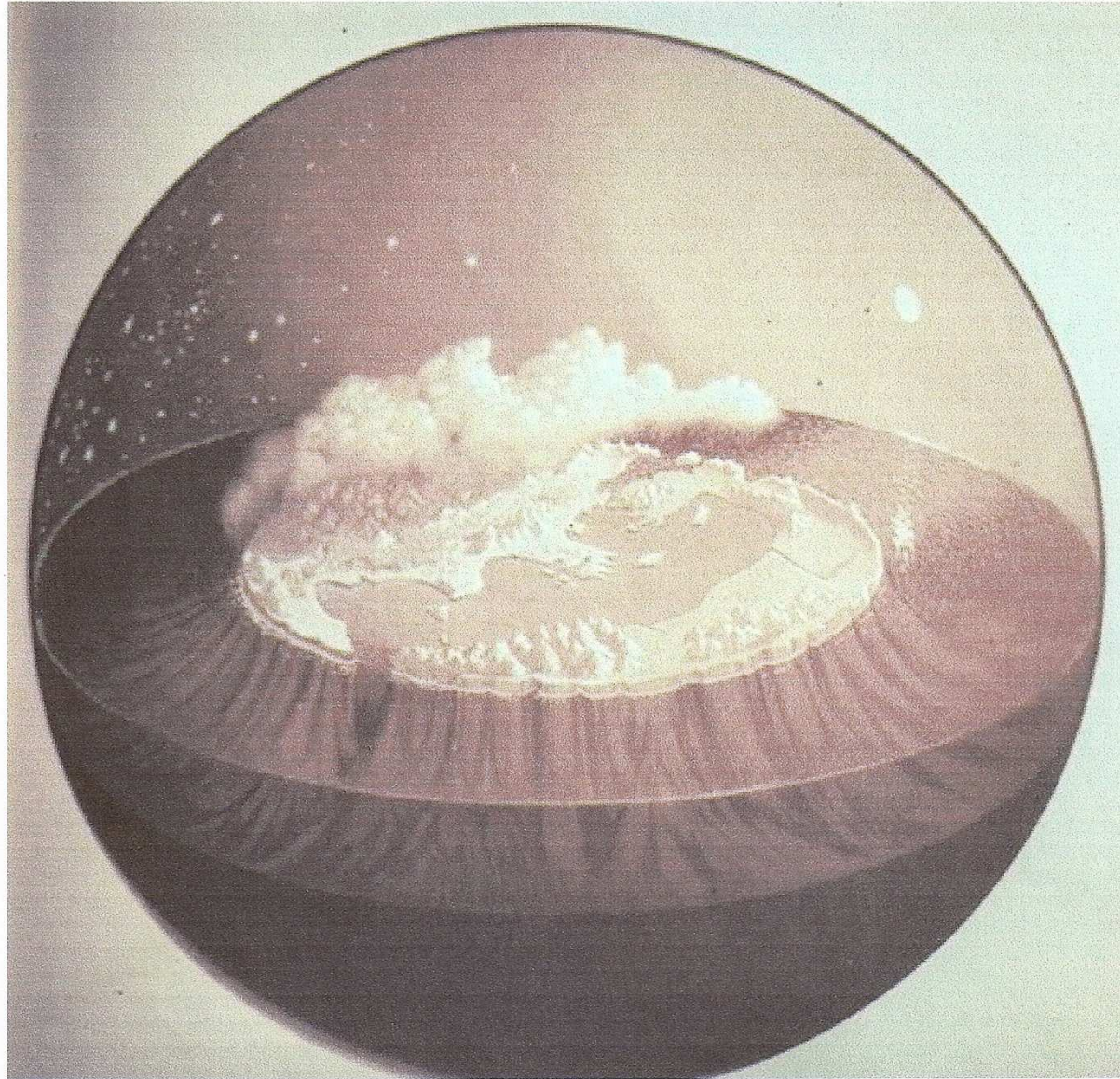
- THE FIRST MENTION OF A ROMAN WORLD SURVEY OCCURS SOME 400 YEARS AFTER THE PURPORTED EVENT. A SINGLE TEXT WRITTEN WE THINK BY JULIUS HONORIUS THE ORATOR, DESCRIBES HOW JULIUS CAESAR INSTIGATED SUCH A SURVEY. BUT HERE WE SHOULD BE VERY CLEAR IN OUR TERMINOLOGY. THIS IS A GEOGRAPHICAL SURVEY AND NOT A SURVEY CENSUS, WHICH OCCURRED ALL TOO FREQUENTLY IN THE ROMAN PERIOD IN ORDER TO ASSESS TAX REVENUES.
- BUT THIS GEOGRAPHICAL SURVEY AS DESCRIBED IS HIGHLY CONTENTIOUS. THERE ARE NO CONTEMPORANEOUS TEXTS OR EVEN HINTS BY ROMAN AUTHORS THAT THIS UNDERTAKING WAS CARRIED OUT.
- THUS WE MUST LOOK TO OTHER METHODS OF RESEARCH TO OBTAIN A CLEARER PICTURE OF THE SITUATION IN 50BC.

*BEFORE; CARTOGRAPHIC AND
GEOGRAPHICAL KNOWLEDGE PRE 54 BCE*

- IF A SURVEY ON THE SCALE INDICATED WITHIN THE TEXT OF JULIUS HONORIUS ACTUALLY TOOK PLACE; THAT IS LASTING SOME 32 YEARS; (AND HERE I SHOULD ADD I AM NOT DISCUSSING THE TEXT, IT IS IN MY ORIGINAL PAPER AND WILL BE DISCUSSED AT LENGTH BY THE FOLLOWING SPEAKER,) THERE IS THE POSSIBILITY THAT BY ANALYSING THE CARTOGRAPHY PRIOR TO, AND FOLLOWING THE EVENT, WE MAY TRACE ITS FINGERPRINT ACROSS LATER MAPS AND SURVEYS. WE SHOULD NOTICE GREATER ACCURACY AND GEOGRAPHICAL KNOWLEDGE IN THE ROMAN WORLD AFTER SUCH AN EVENT.
- TO INDICATE THAT A DIFFERENCE IS NOTICEABLE WE MUST LOOK AT THE MAPS PRIOR TO THE SURVEY THAT ARE AVAILABLE, ALTHOUGH MANY ARE 20TH CENTURY REPRODUCTIONS, AND COMPARE THOSE FOLLOWING IT.
- IT IS ALSO NECESSARY TO LOOK AT MANY PLAIN TEXTS WITH GEOGRAPHICAL DATA THERE-IN, WHICH DID NOT NECESSARILY EVER CONTAIN A MAP OR DIAGRAM. SOME OF THESE ARE SURPRISING IN THEIR ORIGINS.
- FINALLY WE MUST BE PREPARED TO REVUE THE ACCEPTED HISTORICAL SITUATION APROPOS THE PERIOD WHEN ROME WAS DEFEATED IN 410AD.
- THE EVIDENCE IS THERE IN THE LANDSCAPE AWAITING RECOGNITION.

Slide #105

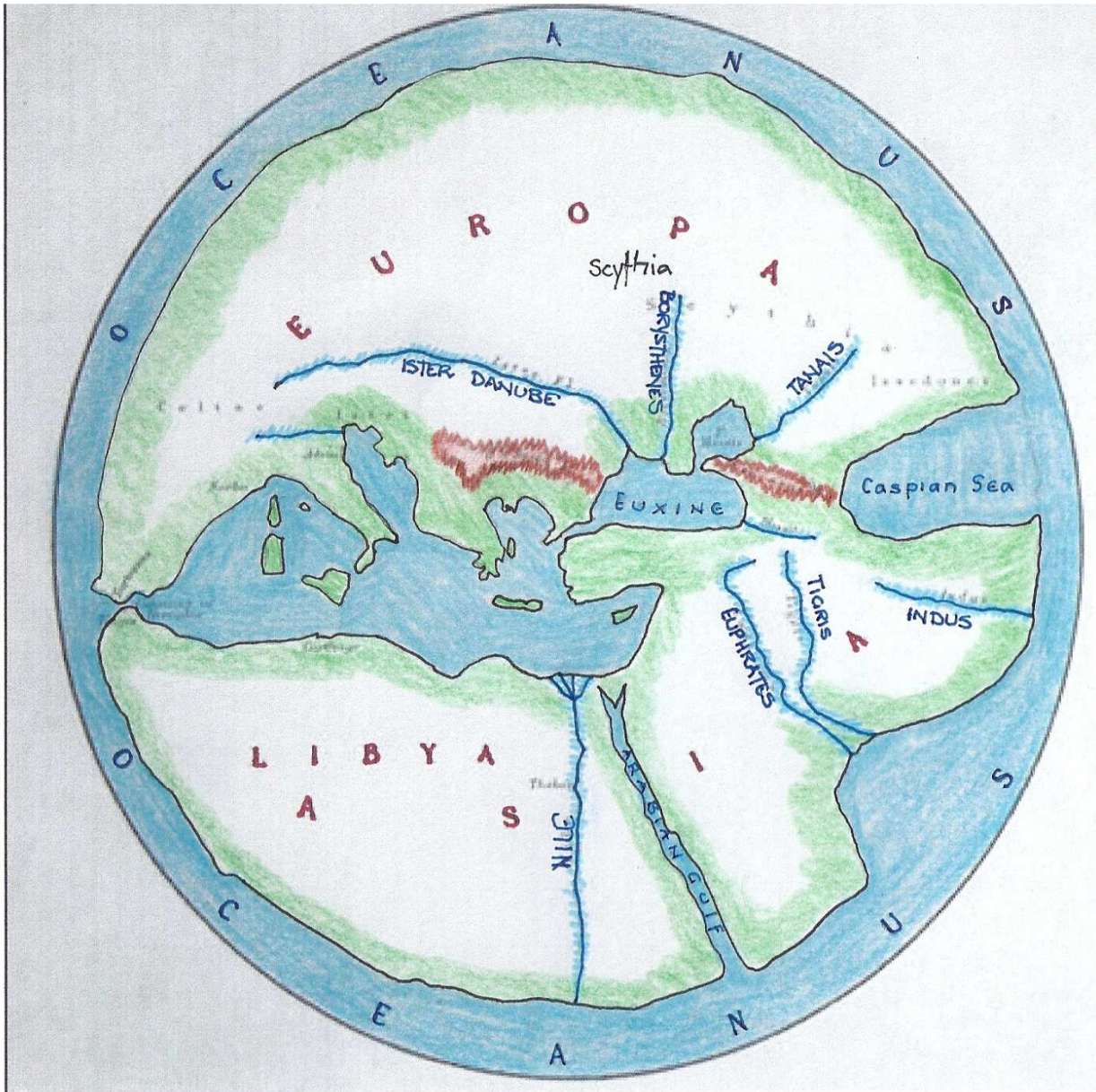
105 Homer's view of the earth (900 B.C.)

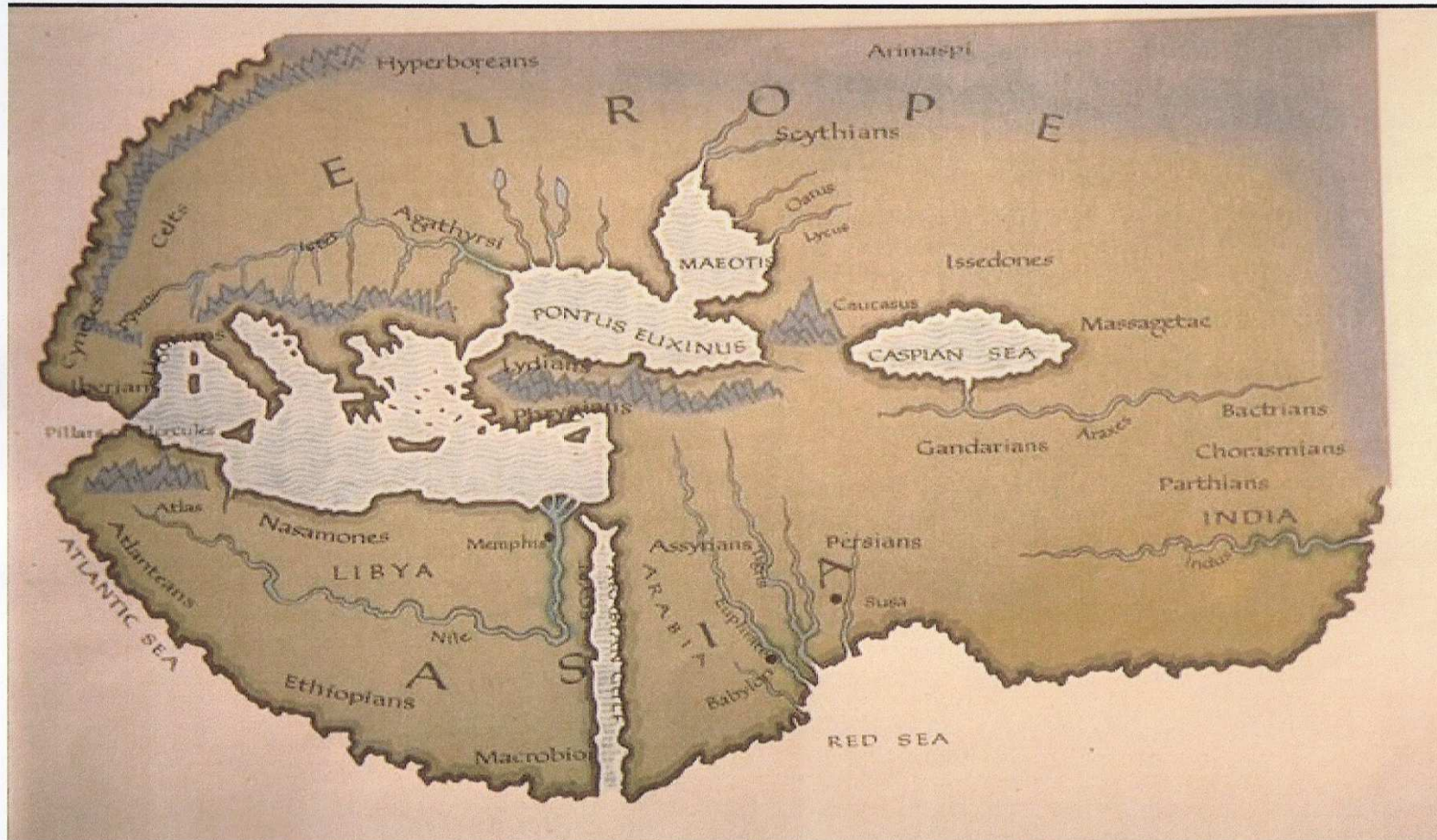


Reconstruction of Homer's view of the world

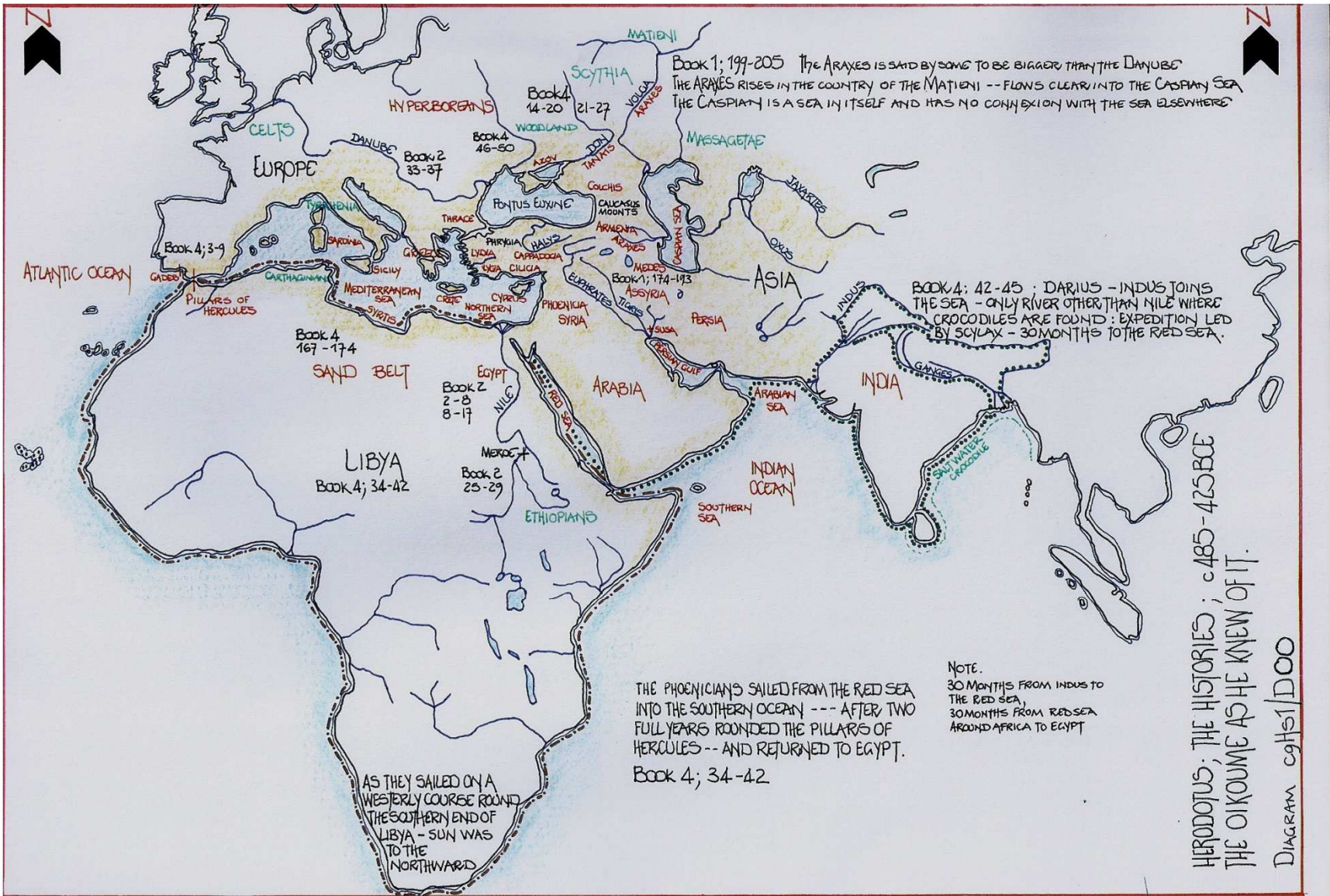
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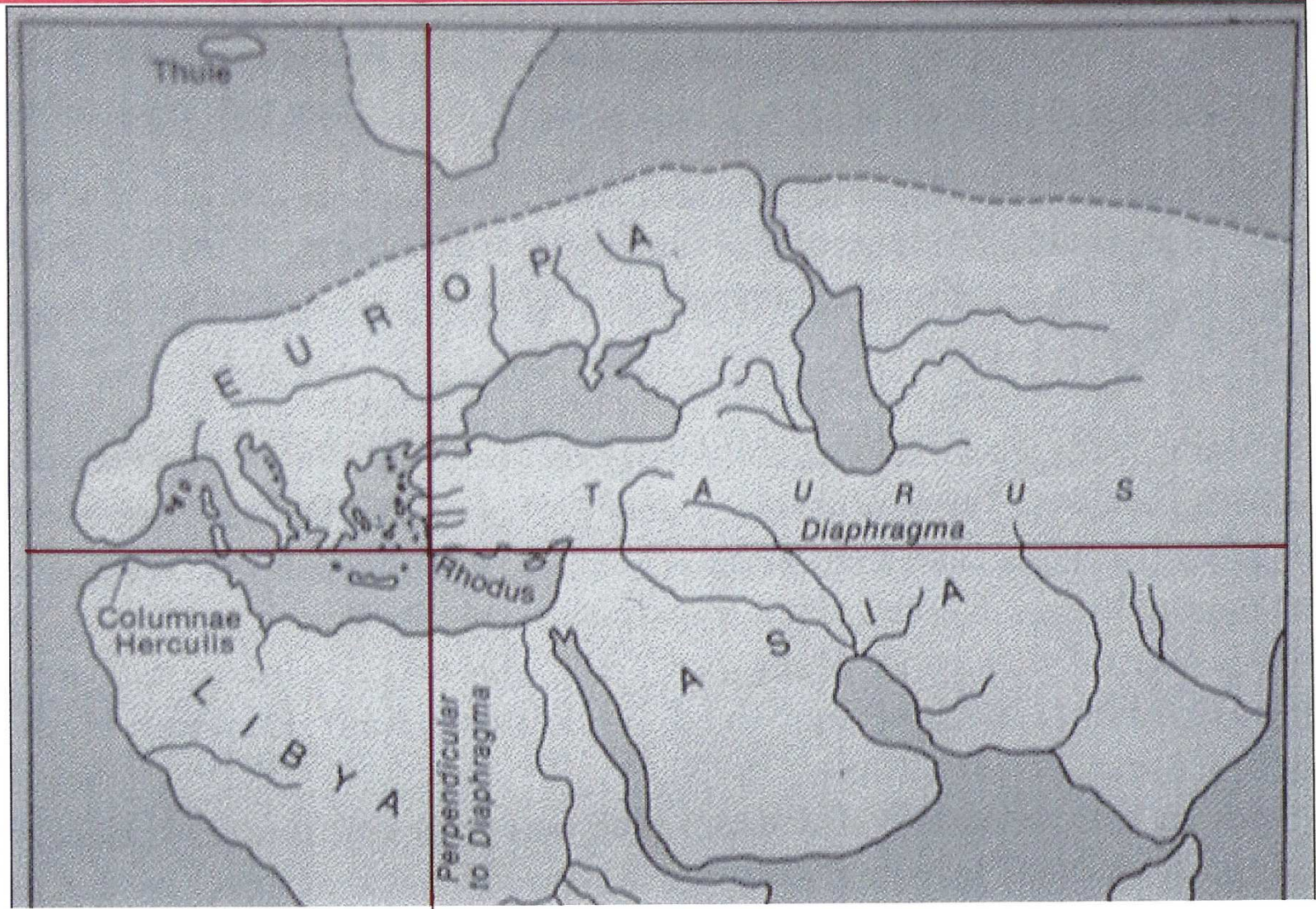
cgP12D07; THE WORLDS OF HECATAEUS AND HERODOTUS





Reconstruction of Herodotus World Map (ca. 450 B.C.)





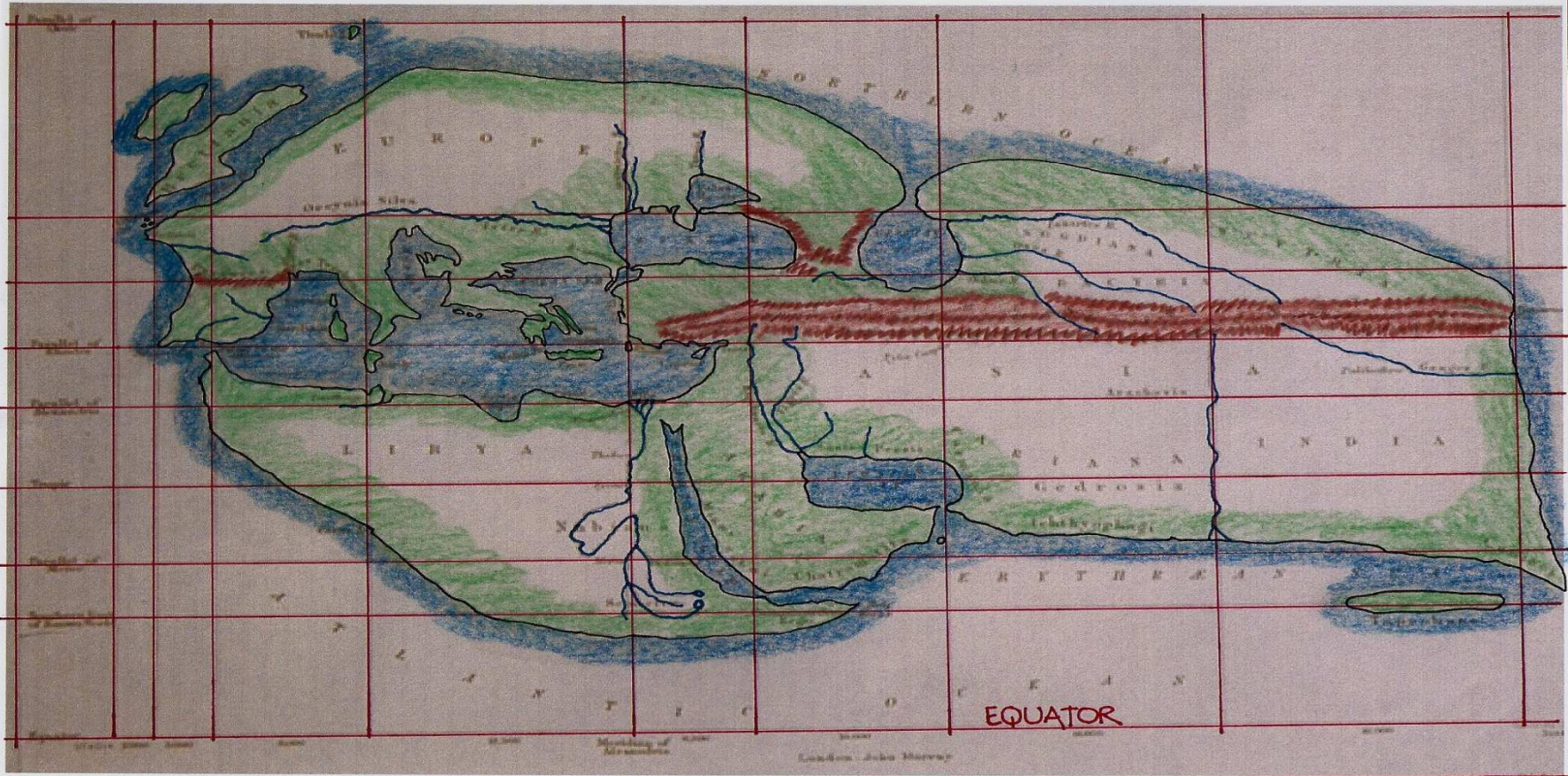
111 World map according to Dicaearchus (300 B.C.) modern interpretive drawing

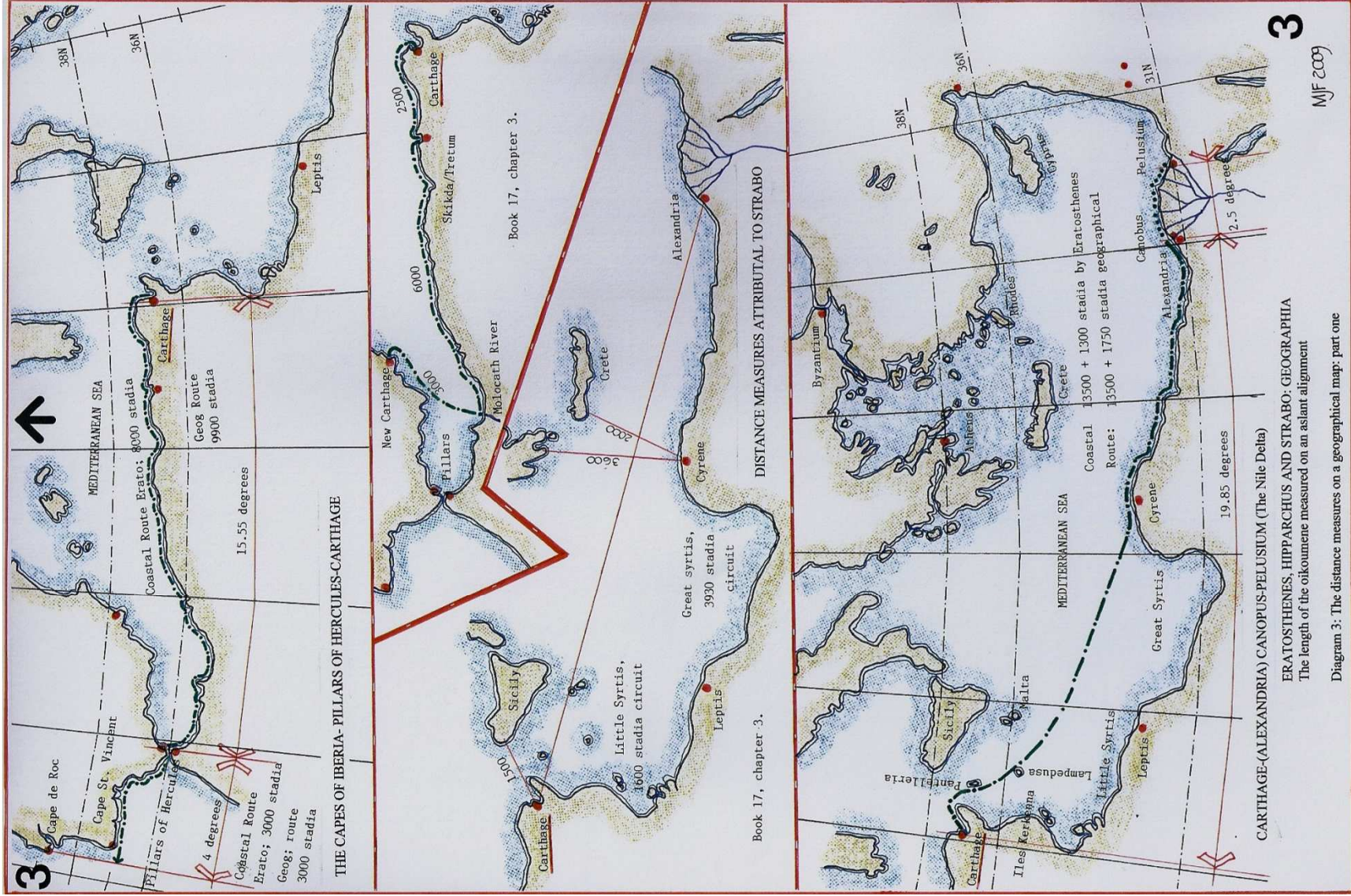
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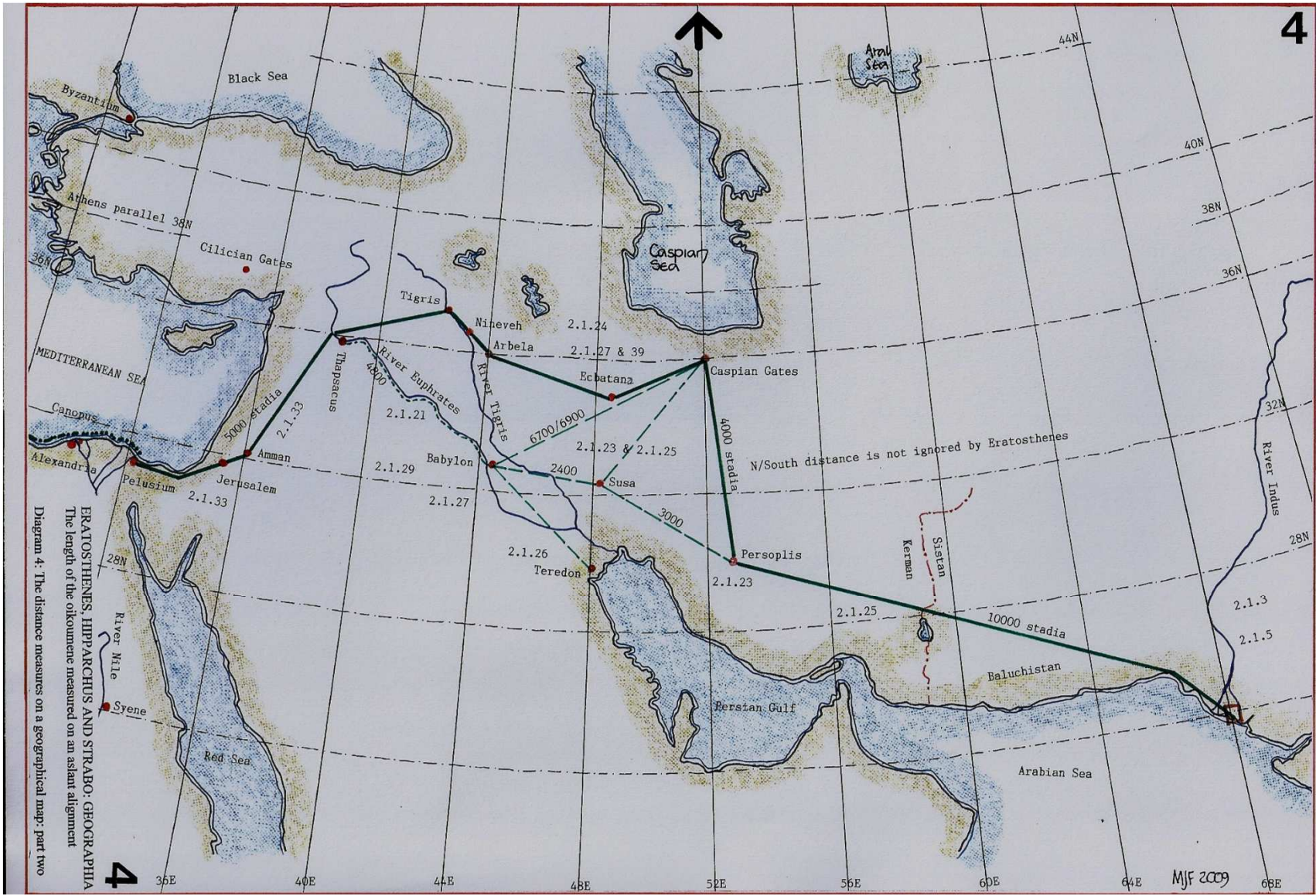
cgPI2D08; THE WORLDS OF DICAEARCHUS AND ERATOSTHENES

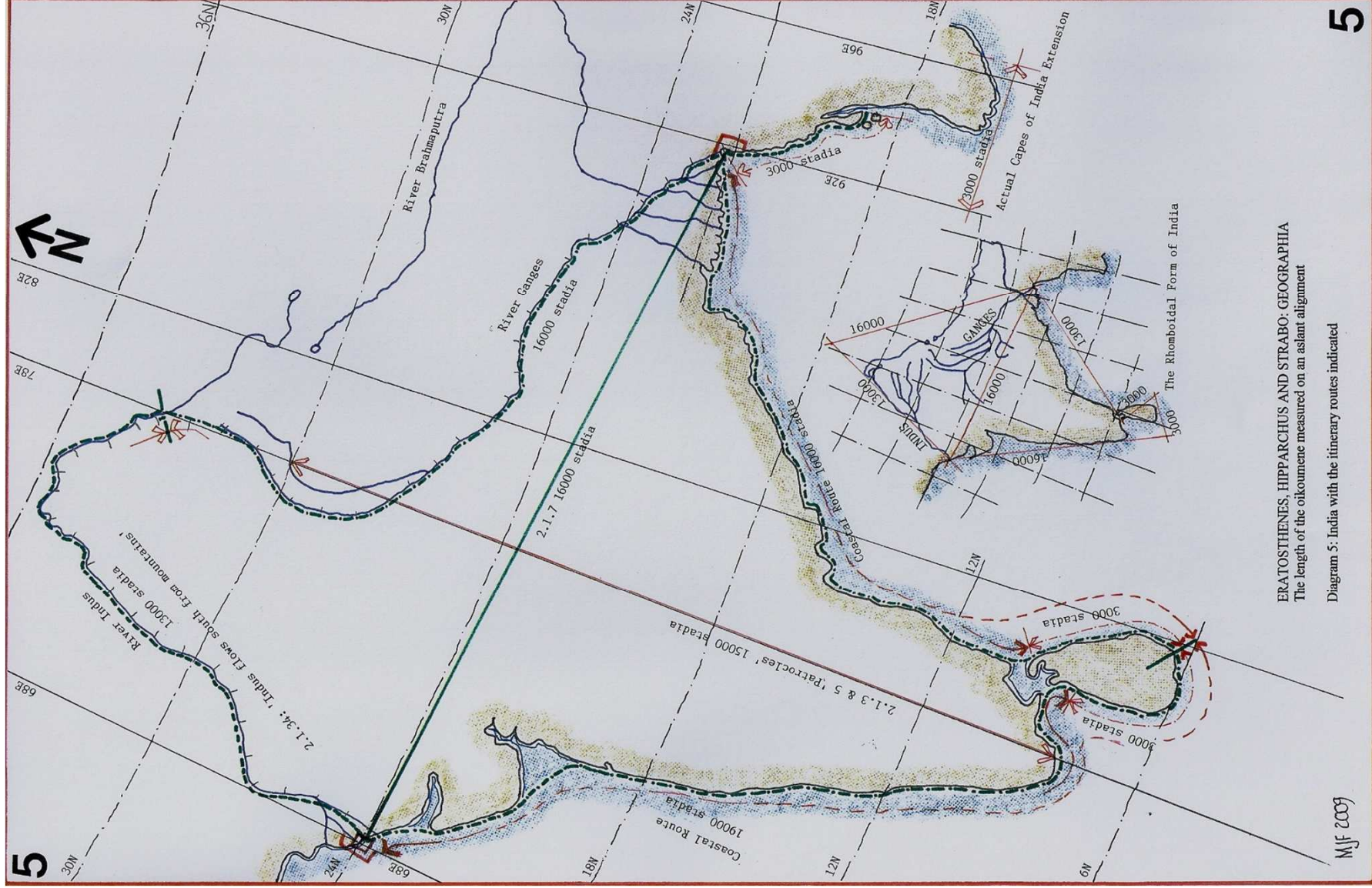
112 World map according to Eratosthenes (194 B.C.)

<http://www.henry-davis.com/MAPS/AncientWebPages/112.html>





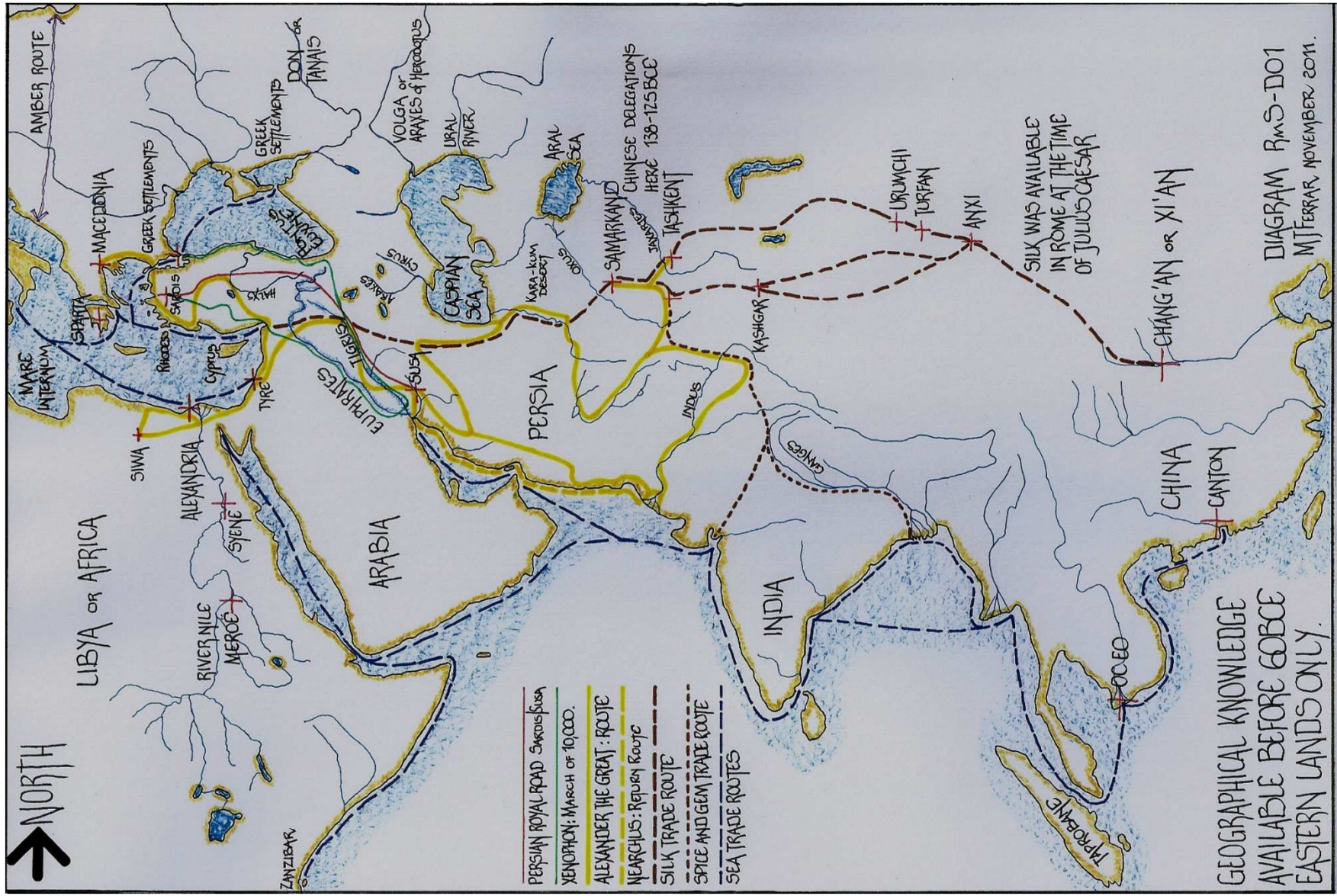




ERATOSTHENES, HIPPARCHUS AND STRABO: GEOGRAPHIA
 The length of the oikoumene measured on an aslant alignment

Diagram 5: India with the itineraries routes indicated

MJF 2009



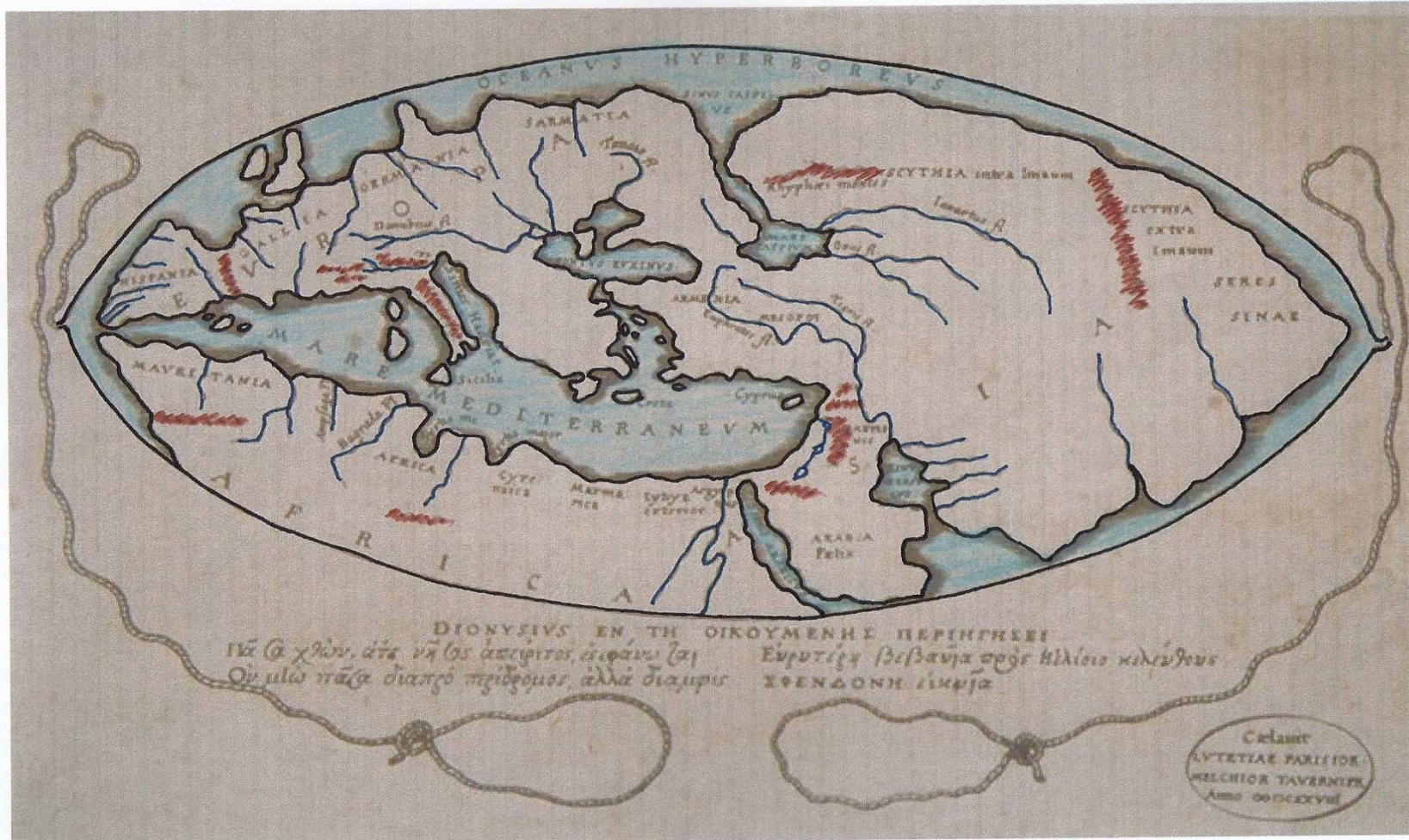
→ NORTH

- PERSIAN ROYAL ROAD SAKROSISUSIA
- XEROPHON: MARCH OF 10000.
- ALEXANDER THE GREAT: ROUTE
- NEARCHUS: RETURN ROUTE
- SILK TRADE ROUTE
- SPICE AND GEM TRADE ROUTE
- SEA TRADE ROUTES

SILK WAS AVAILABLE IN ROME AT THE TIME OF JULIUS CAESAR

GEOGRAPHICAL KNOWLEDGE AVAILABLE BEFORE 600 BCE EASTERN LANDS ONLY.

DIAGRAM Rm.S-DO1
M.J.FERRAR, NOVEMBER 2011.



World map according to Posidonius (150-130 B.C.)

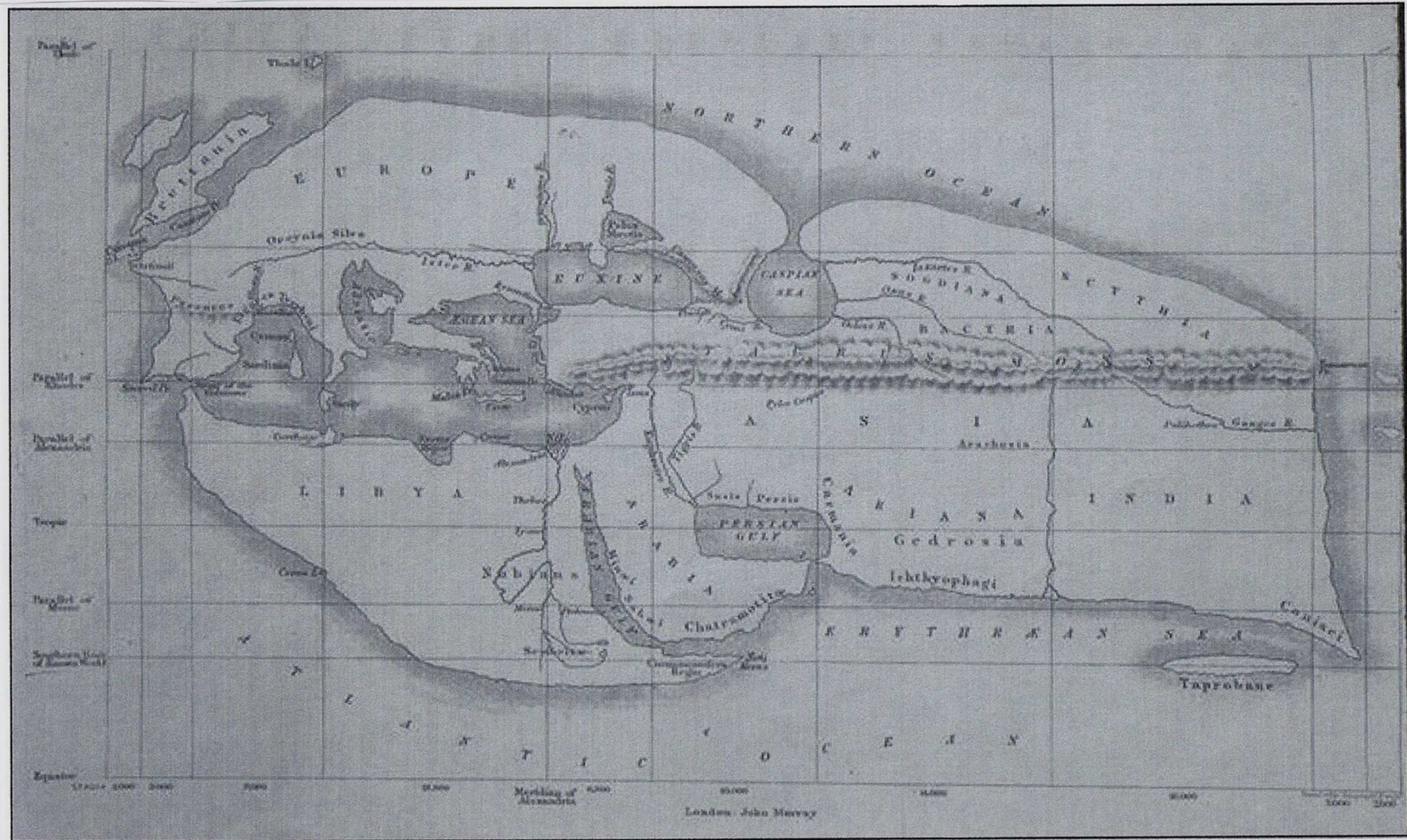
114 World map according to Posidonius (150-130 B.C.)

<http://www.henry-davis.com/MAPS/AncientWebPages/114.html>

cgP12D09; THE WORLDS OF POSIDONIUS AND STRABO

115 World map according to Strabo (18 A.D.)

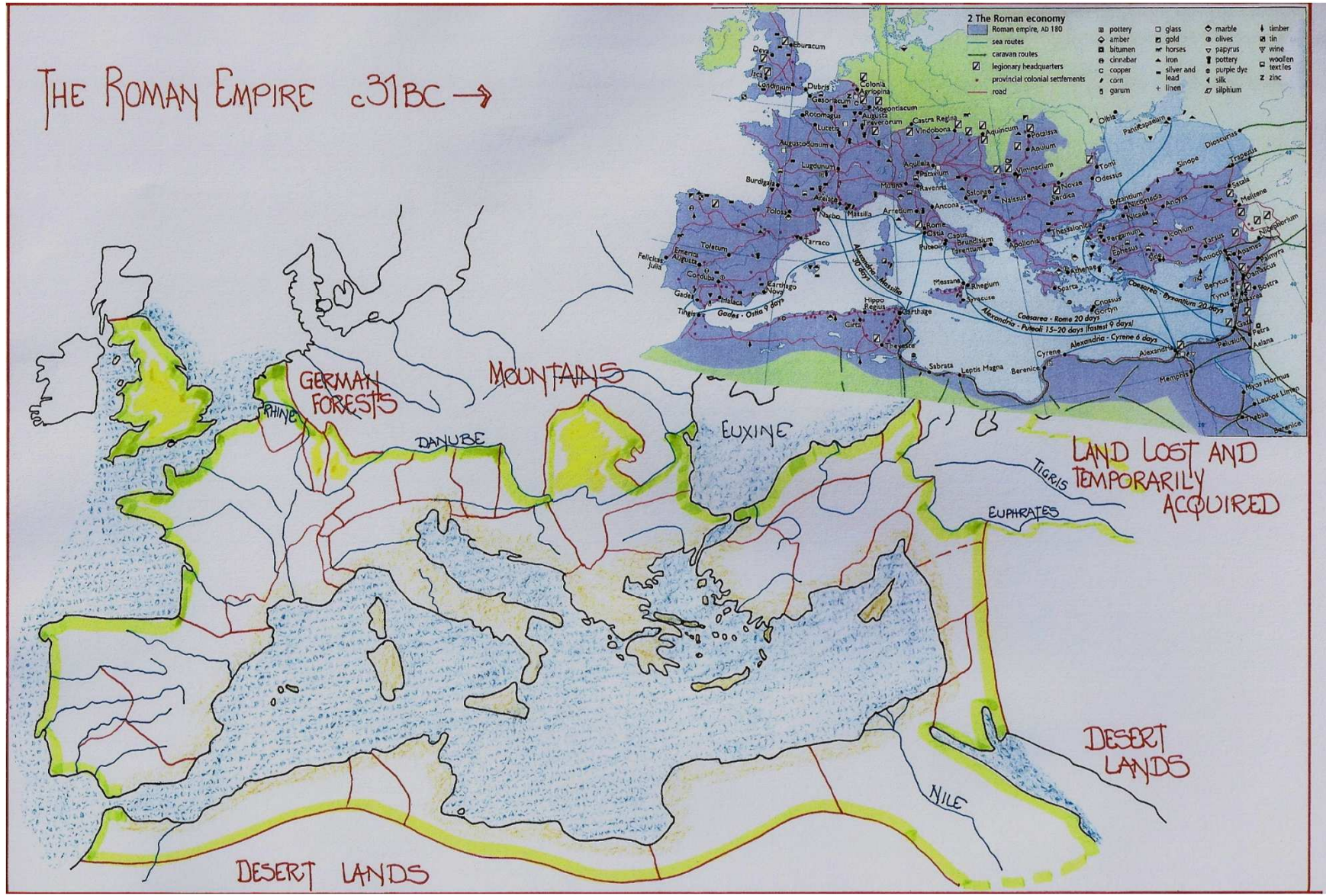
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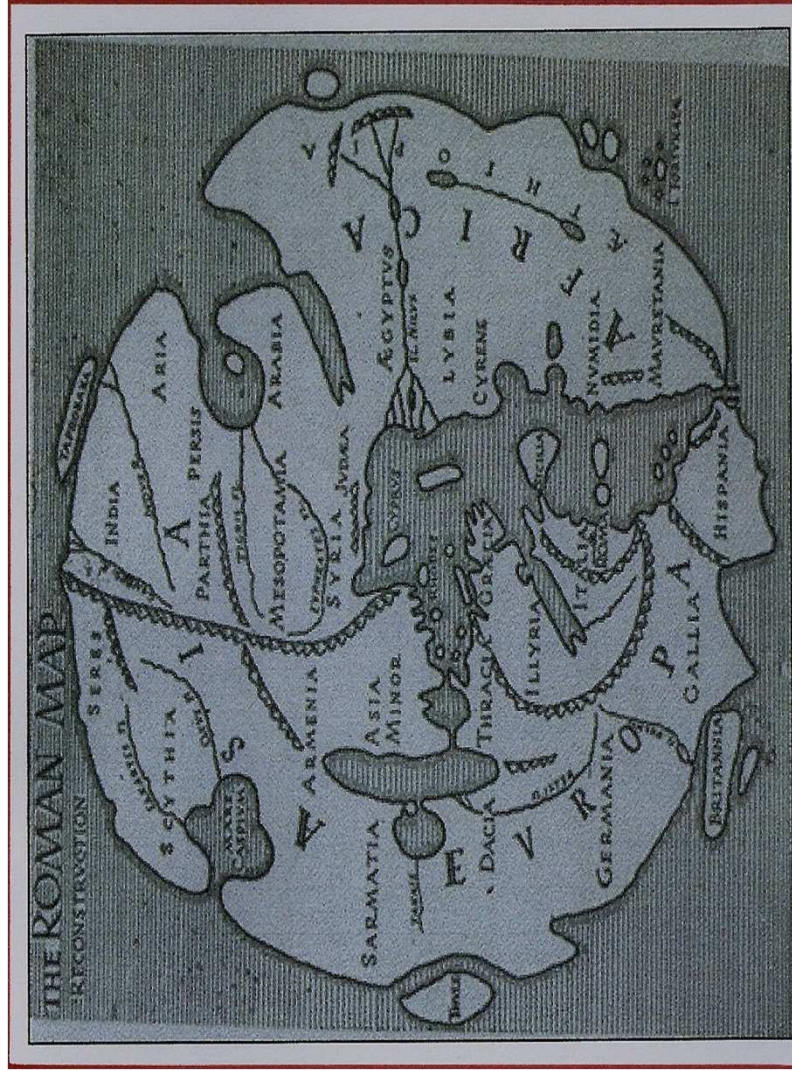


THE ROMAN WORLD OF JULIUS CAESAR

- JULIUS CAESAR WAS BASICALLY THE LEADER WHO TROUNCED ALL PREVIOUS RULERS.
- HE WAS SO RUTHLESS AND CAPABLE THAT THE END RESULT COULD ONLY HAVE BEEN HIS DEMISE, BUT WHAT AN EXIT. “ET TU BRUTE”
- HE HAD SEEN POMPEY ENLARGE THE EMPIRE BY ADDING THE LANDS OF ASIA MINOR
- HE HAD WITNESSED THE COMPLETE DISASTER THAT WAS THE EXPEDITION OF CRASSUS TO PARTHIA
- HE HAD SUBDUED GAUL
- HE HAD A QUICK LOOK AT BRITANNIA
- HE WAS CONSIDERING MANY OTHER CONQUESTS AT THE TIME OF HIS DEMISE
- HE CHOSE A SUCCESSOR, AN ADOPTED SON, OCTAVIAN, WHO WAS TO BECOME ONE OF ROME’S GREATEST LEADERS AS AUGUSTUS CAESAR
- THAT IS PROBABLY HIS GREATEST LEGACY TO ROME AS STABILITY ENSUED WITH HIM
- HE WAS VERY AWARE OF THE POWER OF THE POPULACE OF ROME AND THE NECESSITY TO ENSURE THEIR SUPPORT.
- THAT SUPPORT WAS PURCHASED BY THE DONATION OF FOOD AND OLIVE OIL
- THE LEGIONS OF COURSE REQUIRED SILVER COINS
- THOSE TWO ITEMS WERE A CONSTANT SOURCE OF PROBLEMS WITH AN EVER GROWING POPULACE AND EVER MORE LEGIONS BEING REQUIRED FOR EXPANSION

THE ROMAN EMPIRE c.31BC →





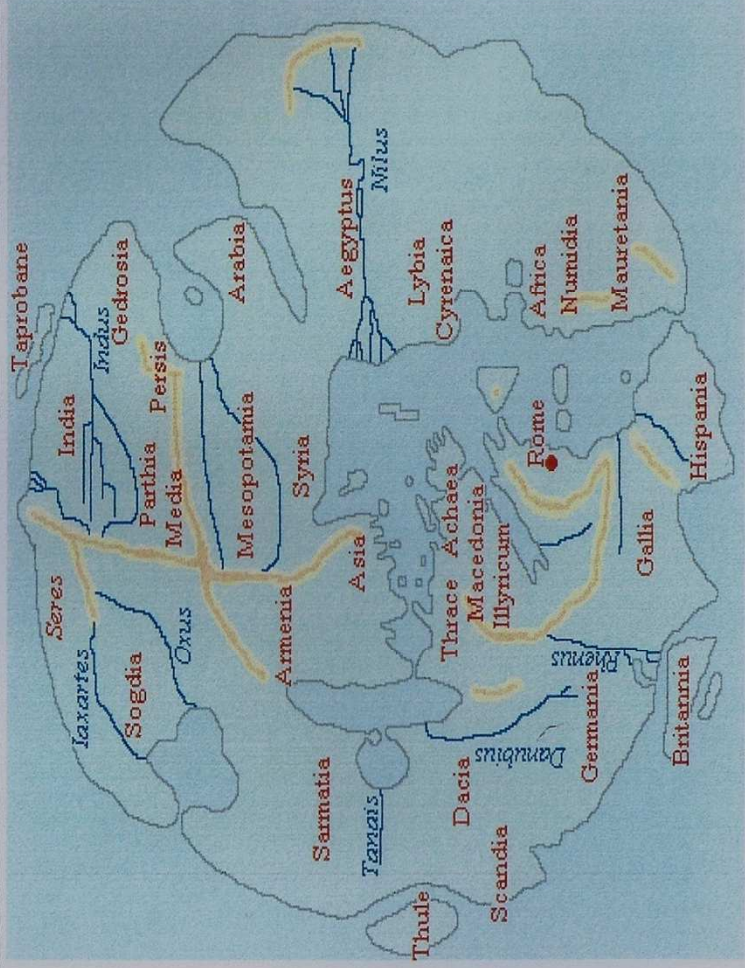
118 Orbis Terrarum (20 A.D.)

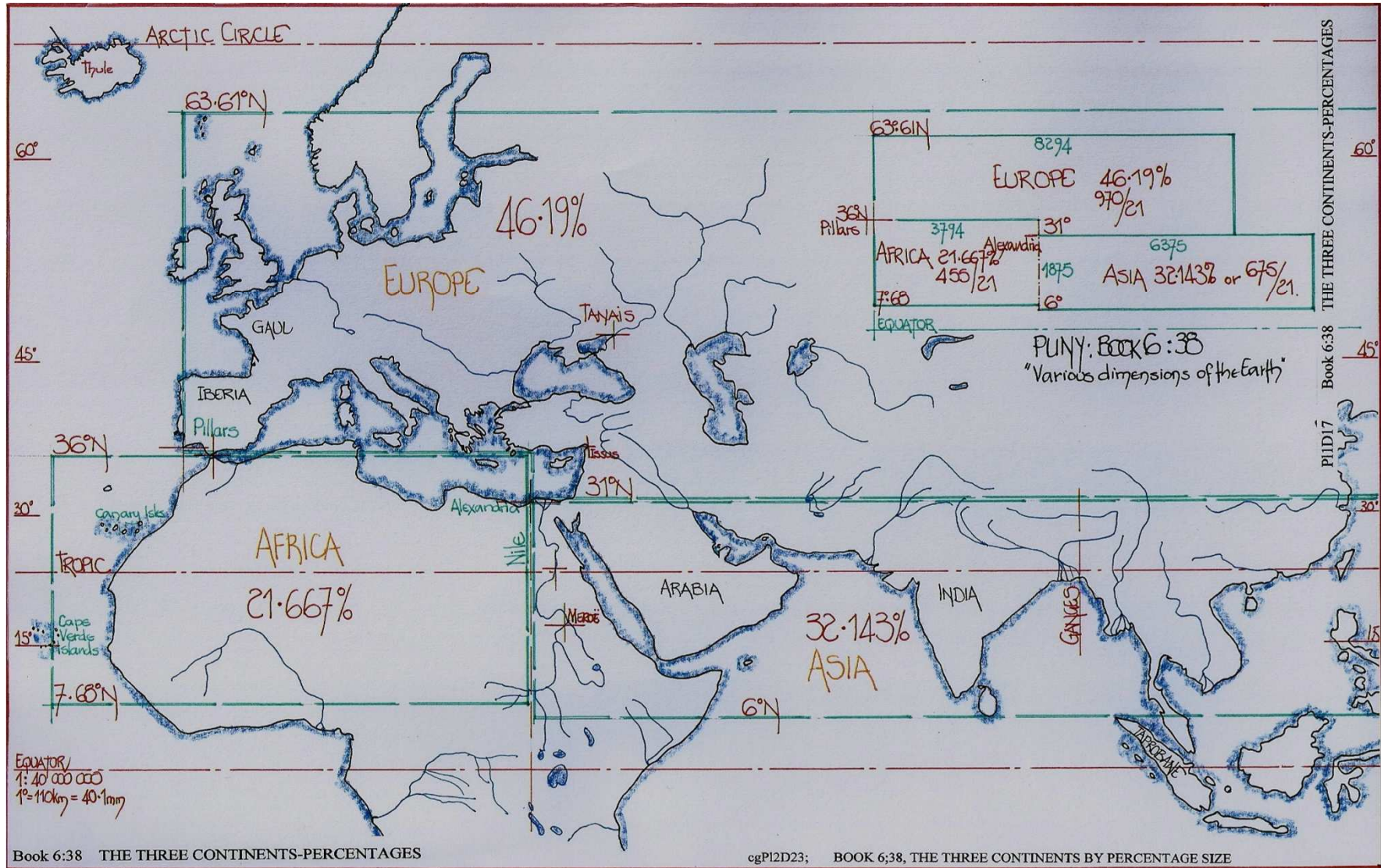
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CgP2D10; THE ORBIS TERRARUM (AGRIPPA)

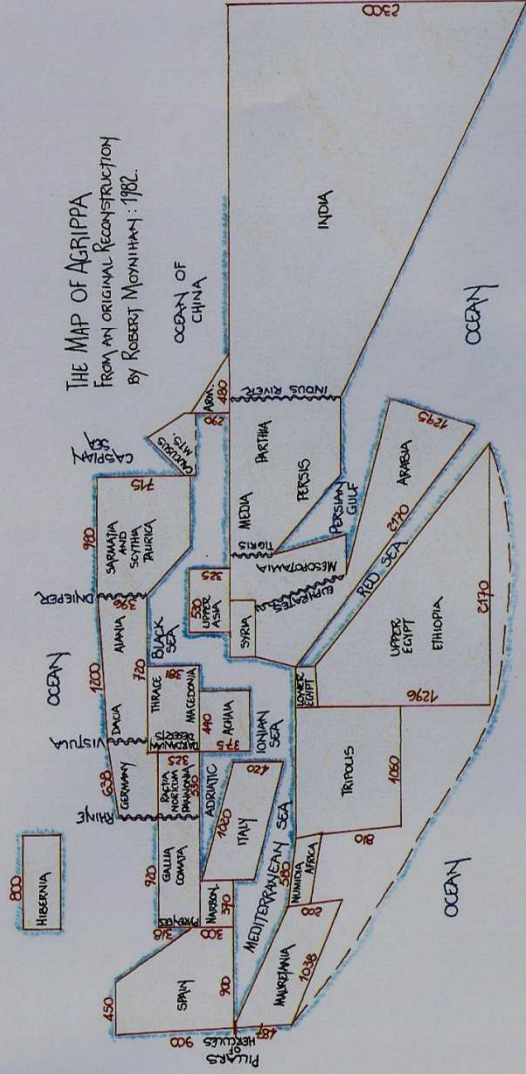
agrippa_map.gif (GIF Image, 425x425 pixels)

http://www.livius.org/a/1/maps/agrippa_map.gif





THE MAP OF AGRIPPA
FROM AN ORIGINAL RECONSTRUCTION
BY ROBERT MOYNIHAN: 1982.



Abstract

When we try to depict what sort of a world "map", conceived by Agrippa, was to be seen in the *porticus Vipsania*, several models have been proposed by scholars, according to different types of *orbis terrarum* laid out by ancient cartography: either a sort of road system, of which the Peutinger Table was a good example, or an oblong map as the model was given in the Age of Augustus by Greek or Latin authors, or a circular map of unknown date, known as T-O and very common in late Roman period.

Another way for this reconstruction could be supported on Pliny's annotations about Agrippa: the "map" would be a sort of tripyque, with the three parts of the world, painted or carved on each wall of the portico and oriented respectively towards the North, the South and the East. Such a representation would be conform to Roman vision of *otium* and useful as a tool for the Augustean imperial propaganda.

Pol TROUSSET *

* UFR 424 du CNRS, "Recherches d'Antiquités africaines", Université de Provence, 29, av. R. Schuman 13621 Aix-en-Provence.

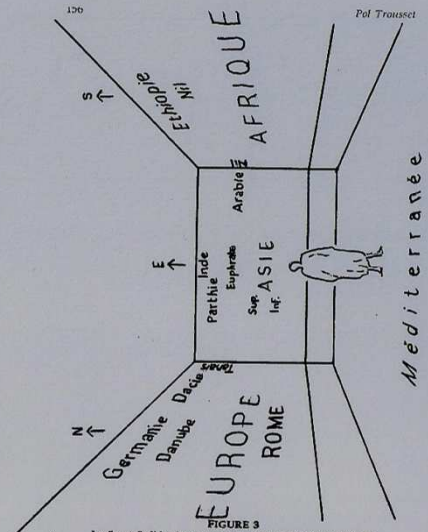
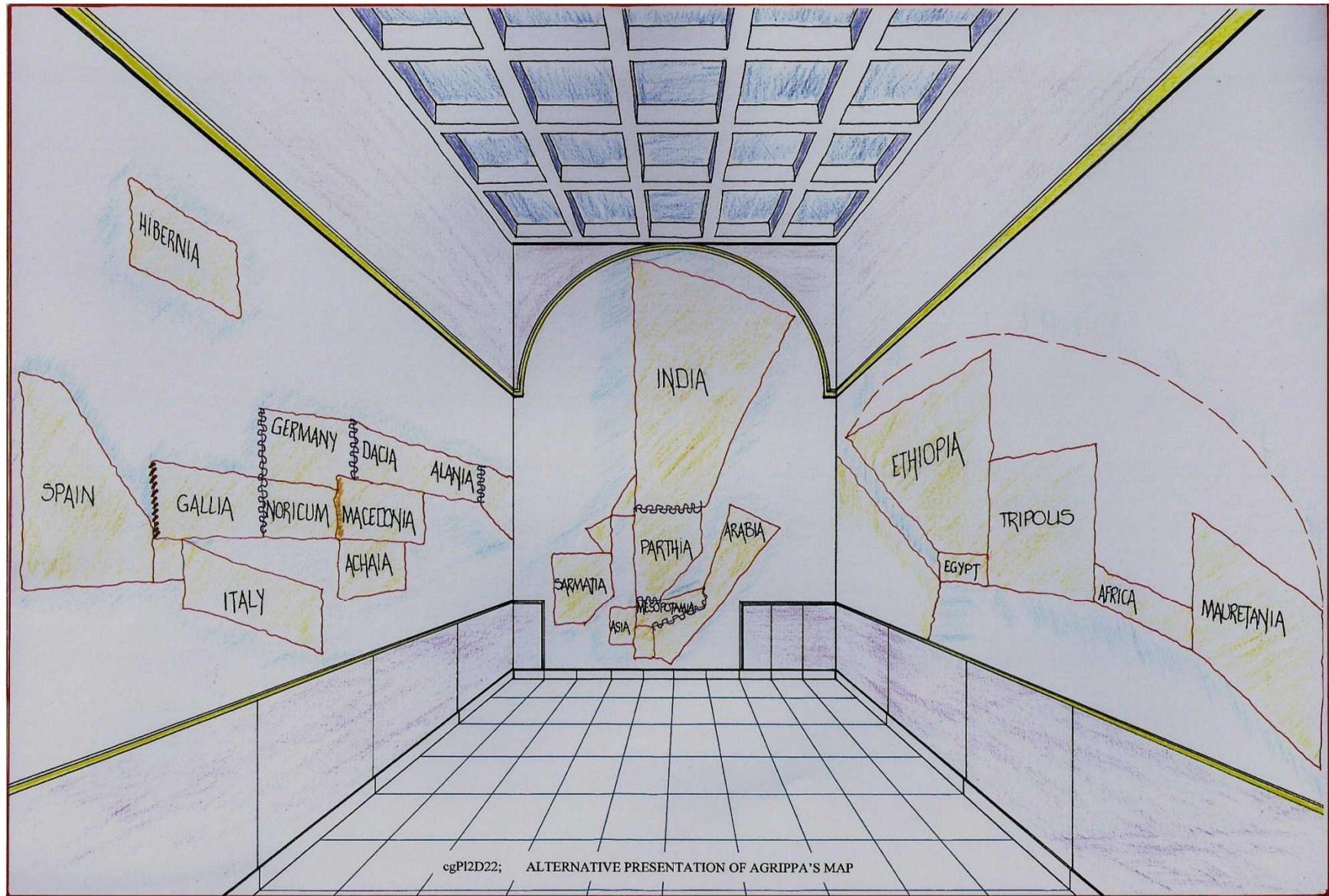
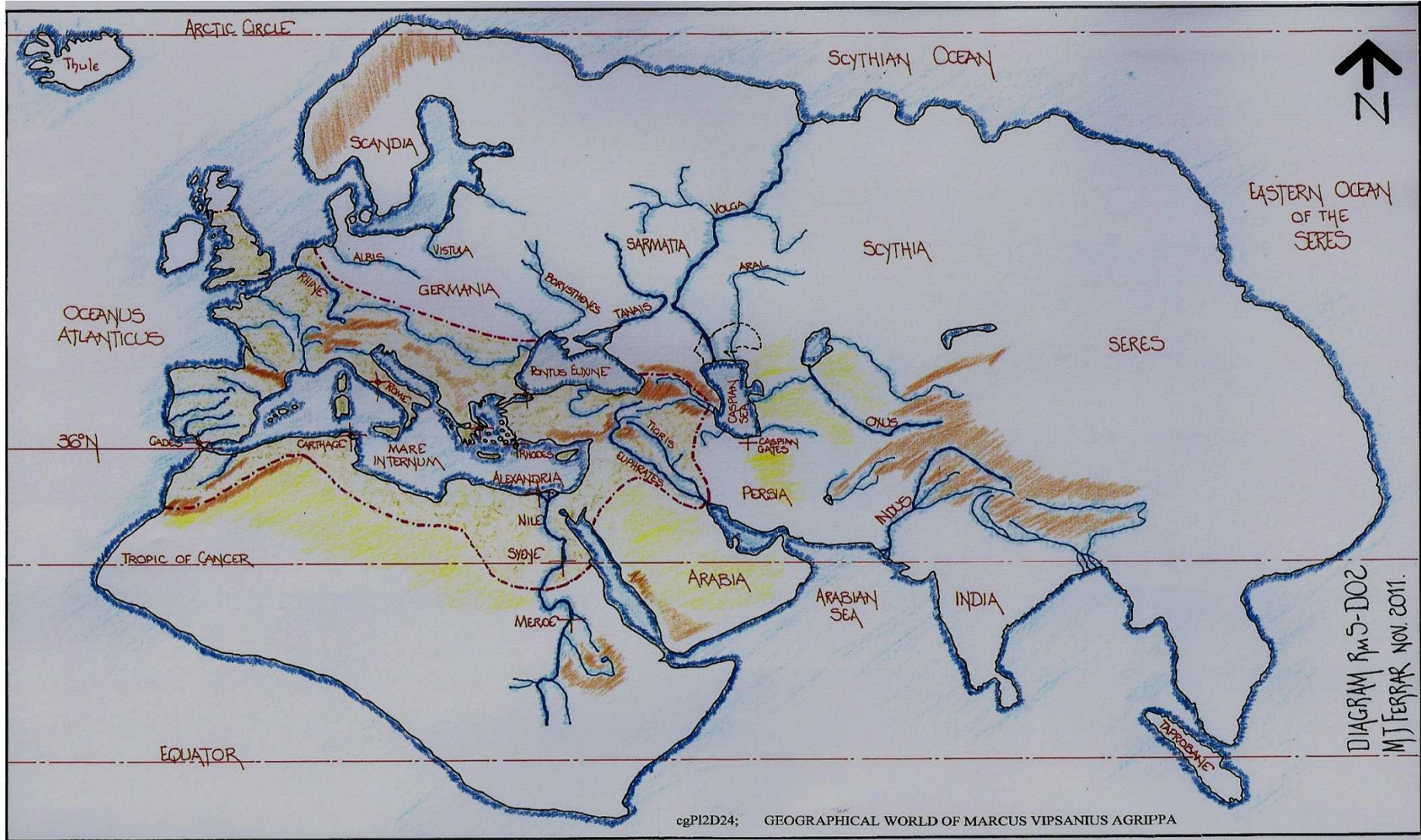


FIGURE 3
La "carte" d'Agrippa, proposition TROUSSET-LENNE
(apud Salviat 1977).



cgPI2D22; ALTERNATIVE PRESENTATION OF AGRIPPA'S MAP

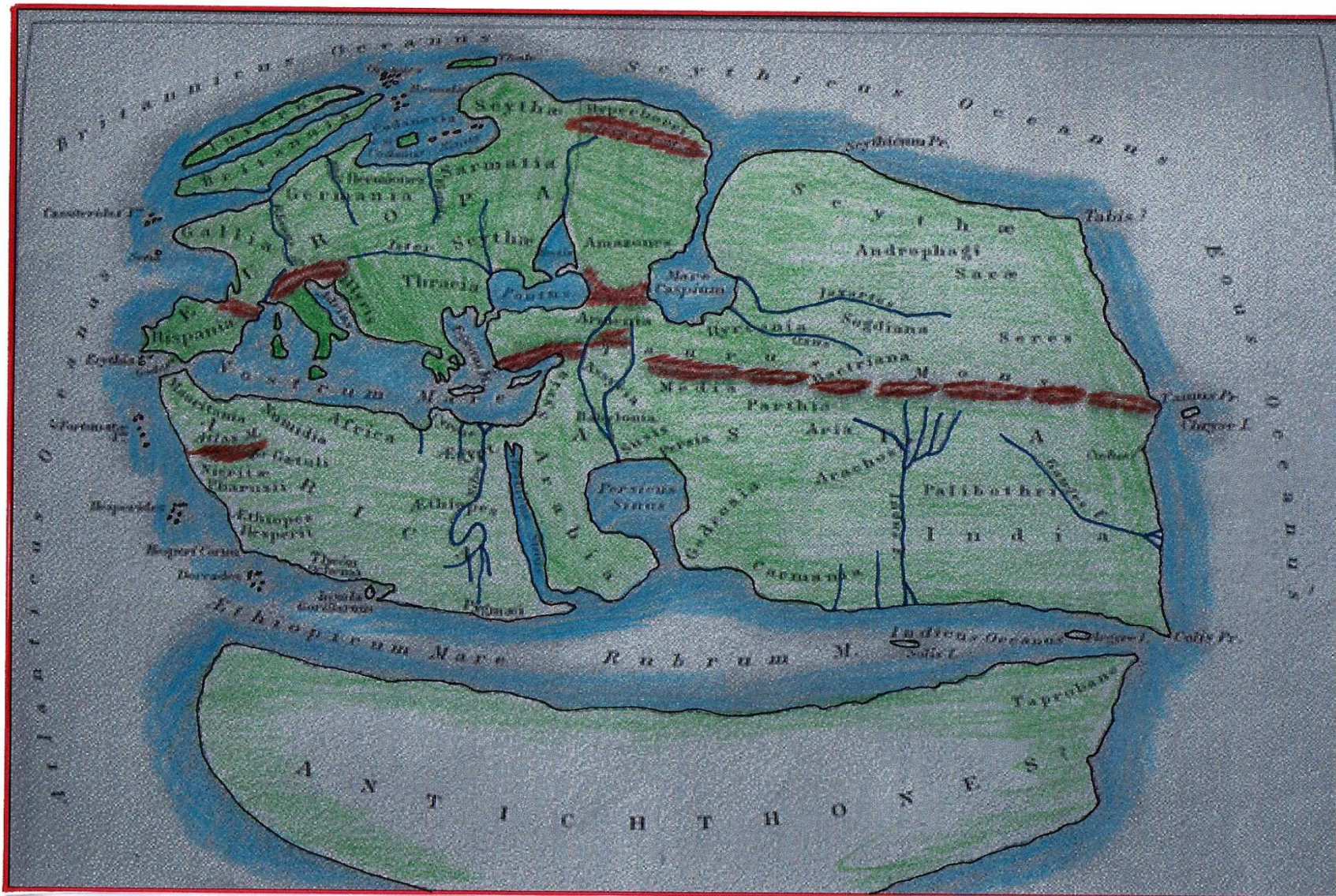


cgPI2D24; GEOGRAPHICAL WORLD OF MARCUS VIPSANIUS AGRIPPA

DIAGRAM Rm 5-D02
 M J FERRAR NOV. 2011.

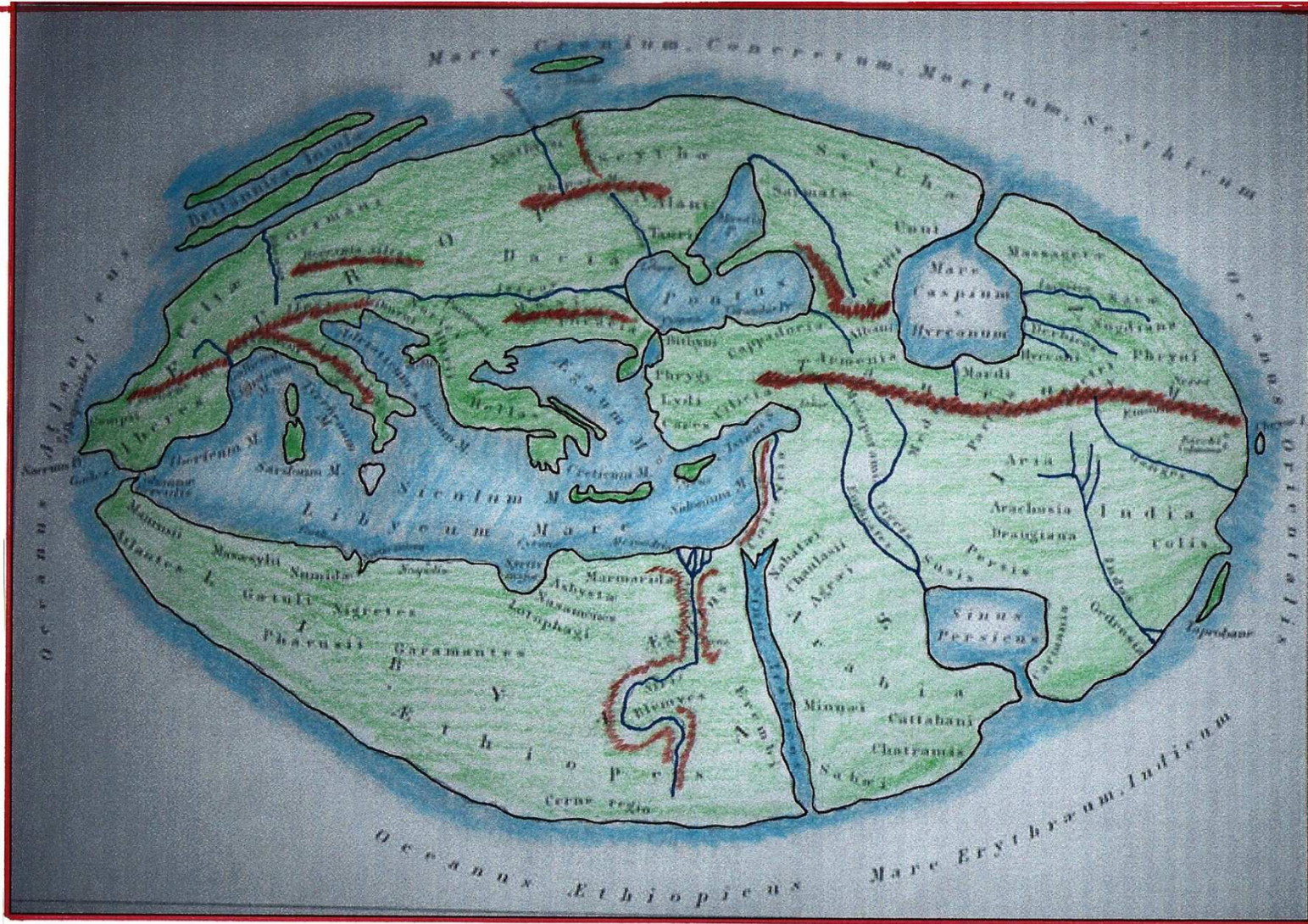
AFTER THE ROMAN SURVEY PERIOD

- I HAVE ALREADY MENTIONED THE TWO MAIN TEXTS WHICH ARE OF THIS PERIOD.
- STRABO OF AMASEIA WROTE HIS GEOGRAPHIA BASED UPON THE NOW LOST TEXT OF ERATOSTHENES.
- PLINY THE ELDER WROTE HIS NATURAL HISTORY AND INCLUDED WITHIN IT A LARGE PERCENTAGE OF INFORMATION FROM THE WORK OF MARCUS VIPSANIUS AGRIPPA.
- PLINY UNFORTUNATELY DIED WHILST ATTEMPTING TO RESCUE THE INHABITANTS CAUGHT IN THE ERUPTION OF VESUVIUS 79AD, AND THUS HIS WORK WAS FINITE.
- AROUND THAT PERIOD POMPONIUS MELA C45AD, WROTE A “DESCRIPTION OF THE WORLD”, BUT IT REVERTS TO THE GREEK METAPHYSICAL VIEW AND INCLUDES ALL OF THE ERRORS SO DECRIED BY HERODOTUS NEARLY 500 YEARS EARLIER.
- IN C124AD, DIONYSIUS PRODUCED HIS WORLD MAP WHICH COULD HAVE BEEN A COPY OF ANY MAP FROM C600BCE.
- THE GREEK SCHOOL OF CHOROGRAPHY FOUND IT HARD TO COME TO TERMS WITH A SPHERICAL WORLD AND MASSIVE CONTINENTS.
- BUT WAITING IN THE WINGS WERE TWO OF THE GREATEST CARTOGRAPHERS OF THAT AGE, MARINUS THE TYRIAN AND CLAUDIUS PTOLEMY.
- WE CAN READILY SEE THAT THEY WERE THE RECIPIENTS OF ROMAN INFORMATION.



116 World map according to Pomponius Mela (ca. 40 A.D.)

117 World map according to Dionysius (124 A.D.)



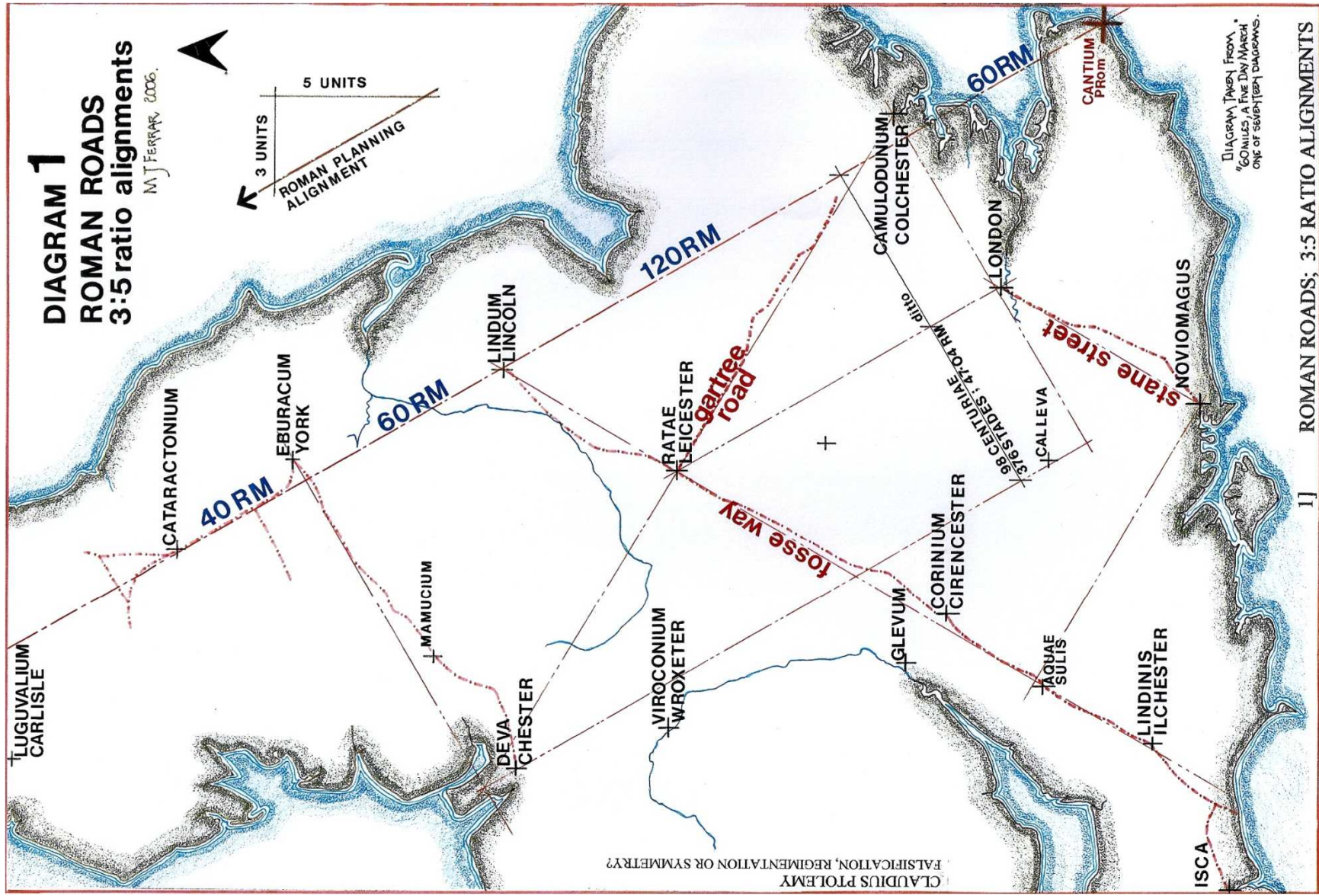
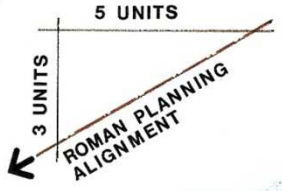
<http://www.henry-davis.com/MAPS/AncientWebPages/117.html>

Reconstruction of the world map according to Dionysius (124 A.D.)



DIAGRAM 1 ROMAN ROADS 3:5 ratio alignments

M.J. FERRAR, 2006.



1] ROMAN ROADS; 3:5 RATIO ALIGNMENTS

63 12 13 14 15 16 17 18

DIAGRAM 2 ROMAN BRITANNIA

GEOGRAPHICAL BRITANNIA DRAWN
FROM BASE POINT OF CANTIUM FROM
22E-54N with 11-20 ratio GRATICULE
275-500 STADES of 0.184Km
coastal points calculated
from OS co-ordinates

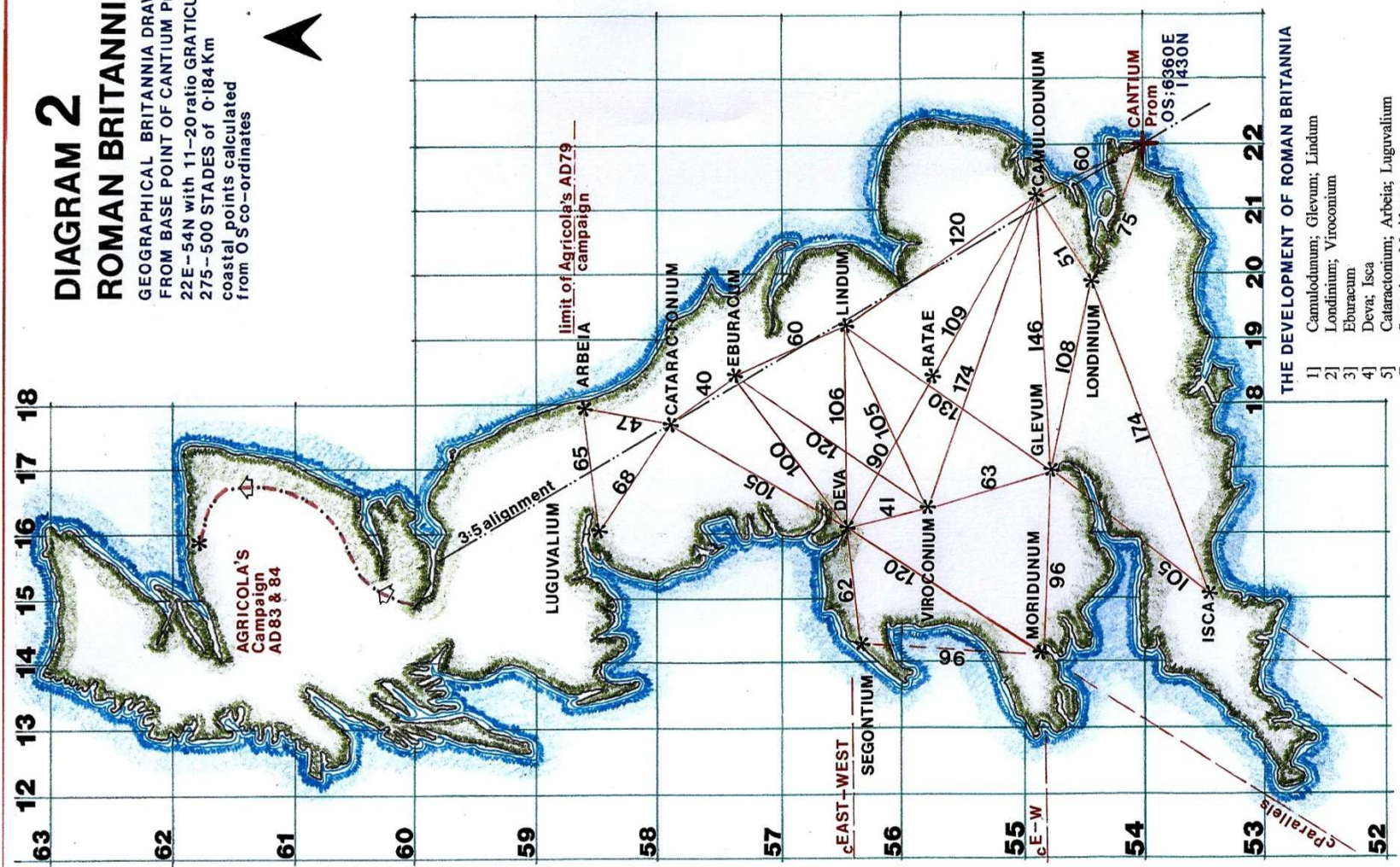


AGRICOLA'S
Campaign
AD 83 & 84

3:5 alignment

limit of Agricola's AD79
campaign

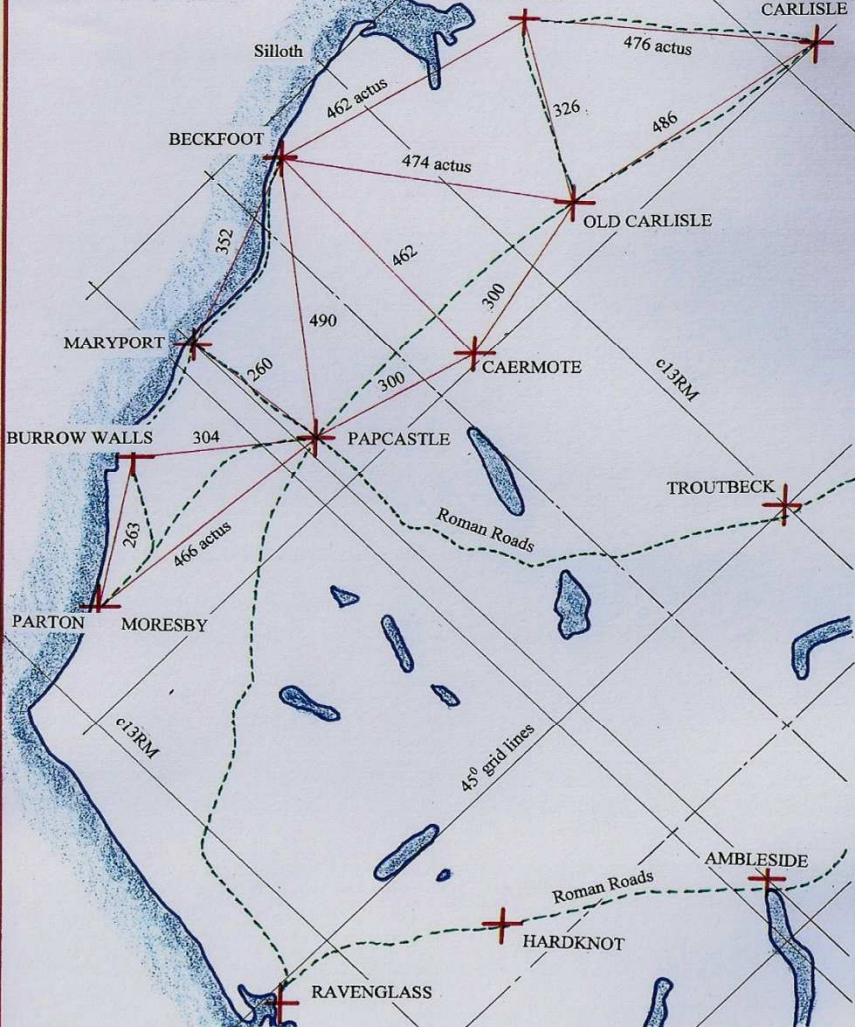
CLAUDIUS PTOLEMY
FALSIFICATION, REGIMENTATION OR SYMMETRY?



THE DEVELOPMENT OF ROMAN BRITANNIA

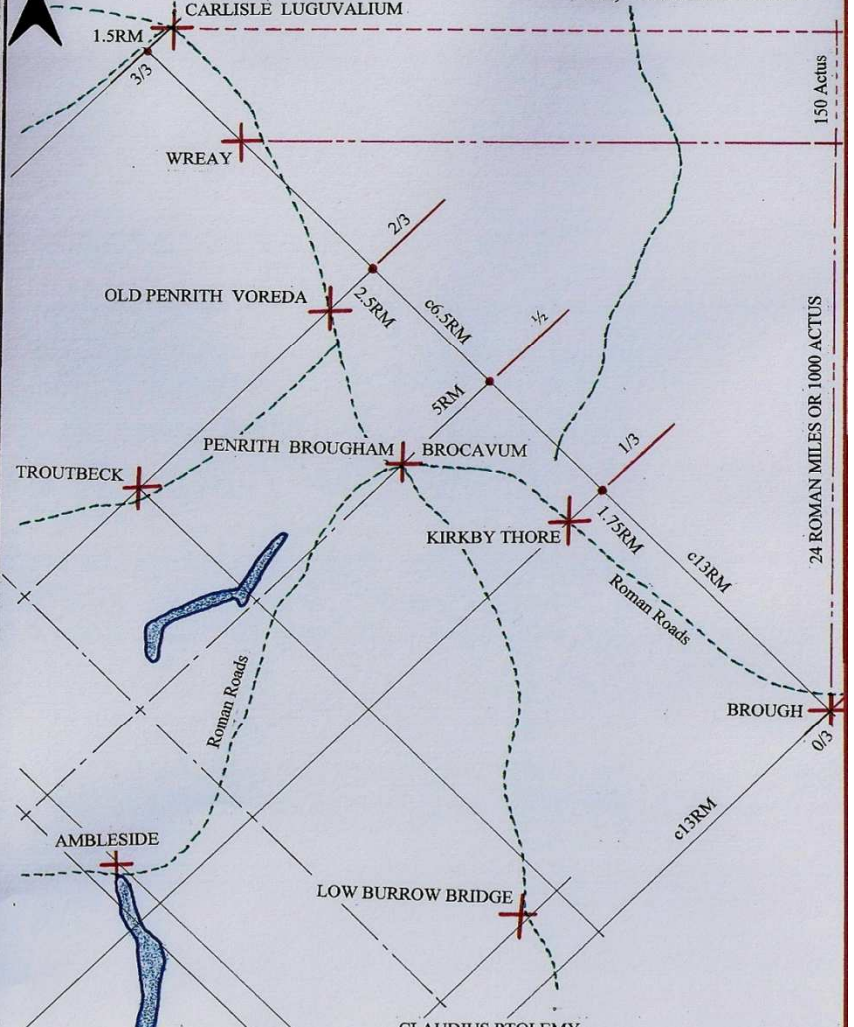
- 1) Camulodunum; Glevum; Lindum
 - 2) Londinium; Viroconium
 - 3) Eboracum
 - 4) Deva; Isca
 - 5) Cataractonium; Arbeia; Laguvallium
 - 6) Segontium; Moridunum
- Distances are in Roman Miles

2B; CUMBRIA WEST



CLAUDIUS PTOLEMY
FALSIFICATION, REGIMENTATION OR SYMMETRY
THE ROMAN SURVEY, AD70, CERALIS IN CUMBRIA; Similar Distances.

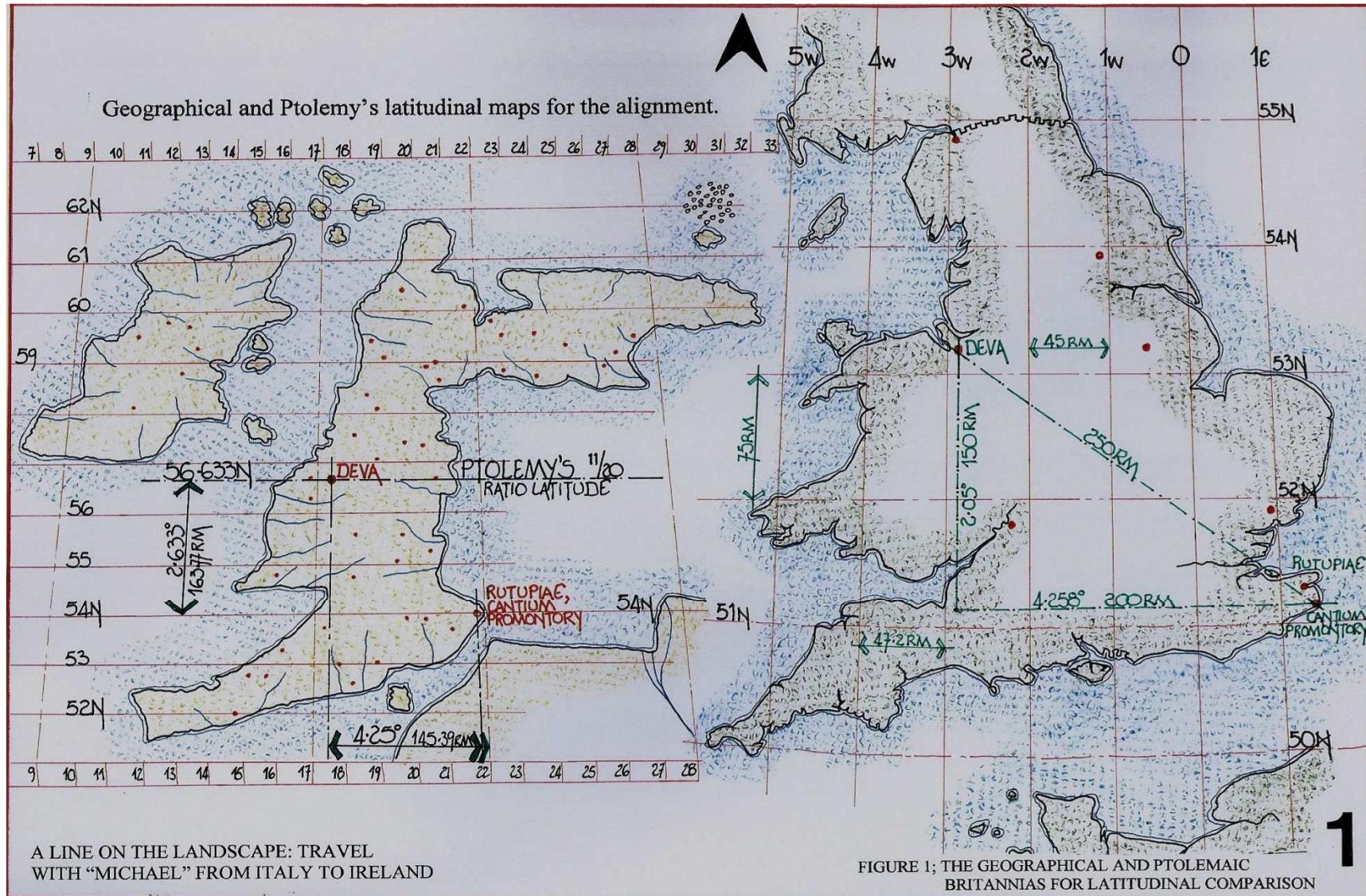
2A; CUMBRIA EAST



CLAUDIUS PTOLEMY
FALSIFICATION, REGIMENTATION OR SYMMETRY
THE ROMAN SURVEY, CERALIS IN CUMBRIA; 45° ALIGNMENTS

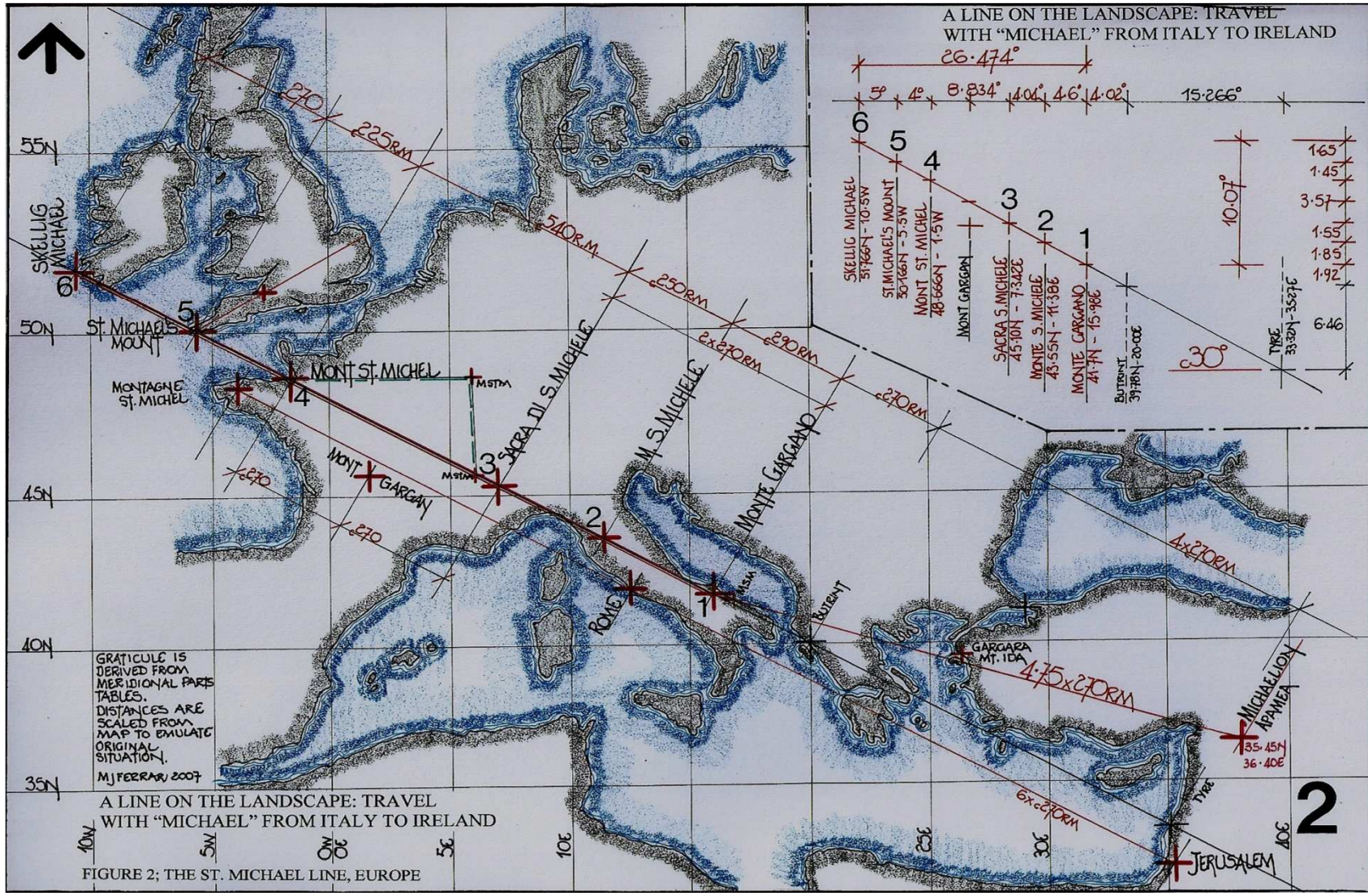
THE LEGACY OF ROMAN SURVEYS

- AS A COMPARISON WE CAN STUDY THE MAP OF BRITANNIA AS DRAWN BY CLAUDIUS PTOLEMY AND THE BASIC SURVEY ATTRIBUTED TO THE ROMAN ARMY.
- CLAUDIUS PTOLEMY USED THE SURVEY DATA TRANSMITTED TO ALEXANDRIA TO DRAW HIS MAP, BUT WAS INHIBITED BY HIS MIS-DIMENSIONING OF THE WORLD SPHERE.
- THUS THE LENGTH OF BRITANNIA WAS DEFORMED TO FIT A REDUCED SPHERE.
- THE ROMAN ARMY HAD NO SUCH MIS-INFORMATION. THEY MEASURED AND KNEW THE DISTANCES AND BEARING BY TANGENT ANGLE OF THEIR CONSTRUCTIONS, THEIR ROADS AND THUS THE COASTLINE.
- BUT THERE WAS A NEW FORCE TO BE RECKONED WITH, ONE WHICH WOULD SUPPLANT THE ROMAN EMPIRE.
- FIRST THERE WAS THE GERMANIC INVASION WHICH SWEEPED THE EMPIRE AWAY IN 410AD WHEN ALARIC THE VISIGOTH SACKED ROME WITH THE KINGDOM OF ODOACER.
- SECONDLY THERE WAS CHRISTIANITY WHICH SWEEPED THE OLD GODS OF ROME AWAY, HAVING BEEN ACCEPTED BY CONSTANTINE IN 313AD AS THE STATE RELIGION.
- THE EARLY CHRISTIAN CHURCH BY 410AD WAS IN FACT A LARGE ORGANISATION AND WAS NOT STOPPED BUT ENCOURAGED BY THESE GERMANIC INVADERS.
- THUS IN THE LANDSCAPE WE FIND NATURAL FEATURES BEING RENAMED TO ACCORD WITH THE NEW RELIGION AND ITS HIERARCHY.



A LINE ON THE LANDSCAPE: TRAVEL WITH "MICHAEL" FROM ITALY TO IRELAND

FIGURE 1; THE GEOGRAPHICAL AND PTOLEMAIC BRITANNIAS FOR LATITUDINAL COMPARISON



A LINE ON THE LANDSCAPE: TRAVEL WITH "MICHAEL" FROM ITALY TO IRELAND

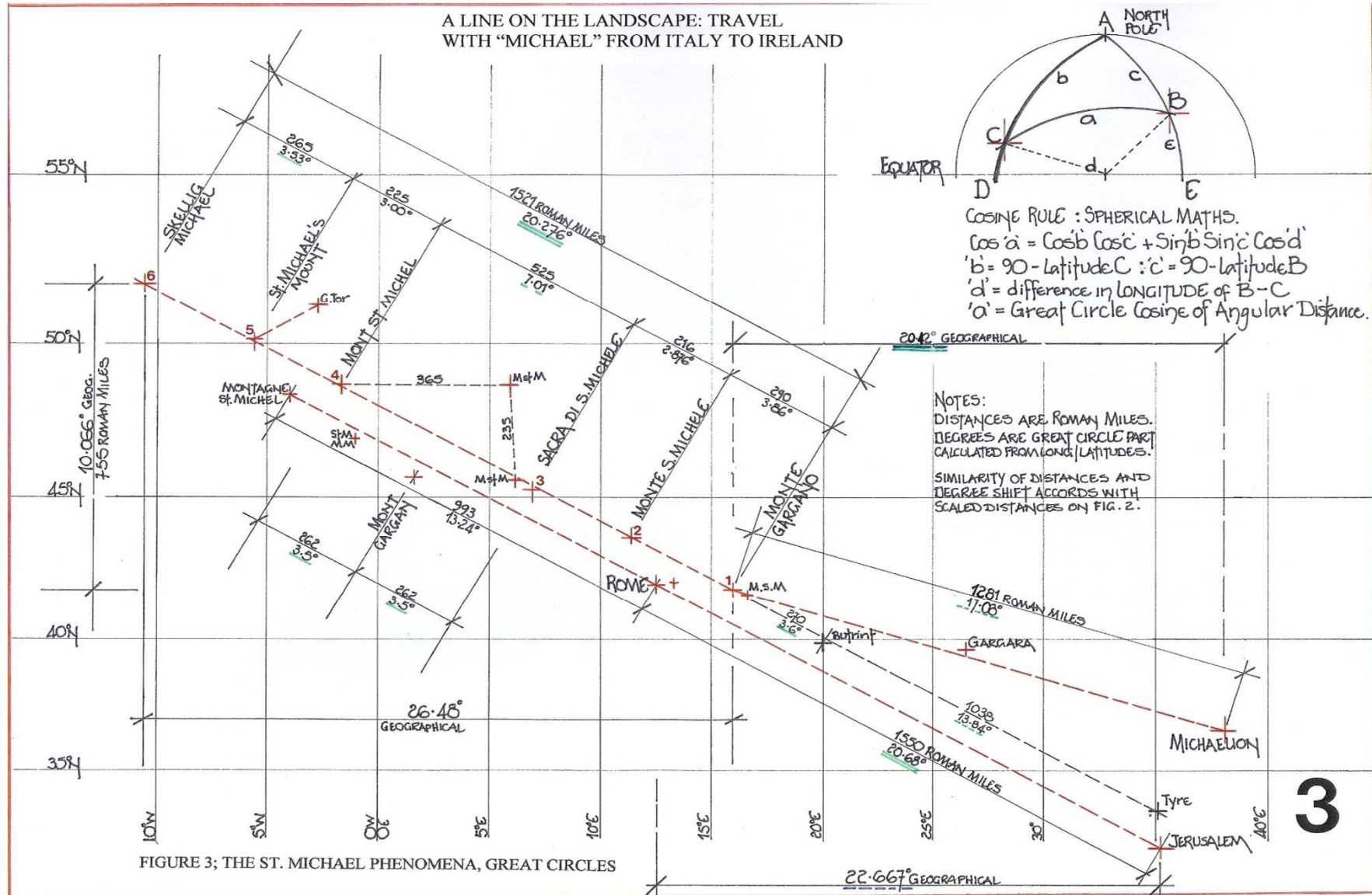
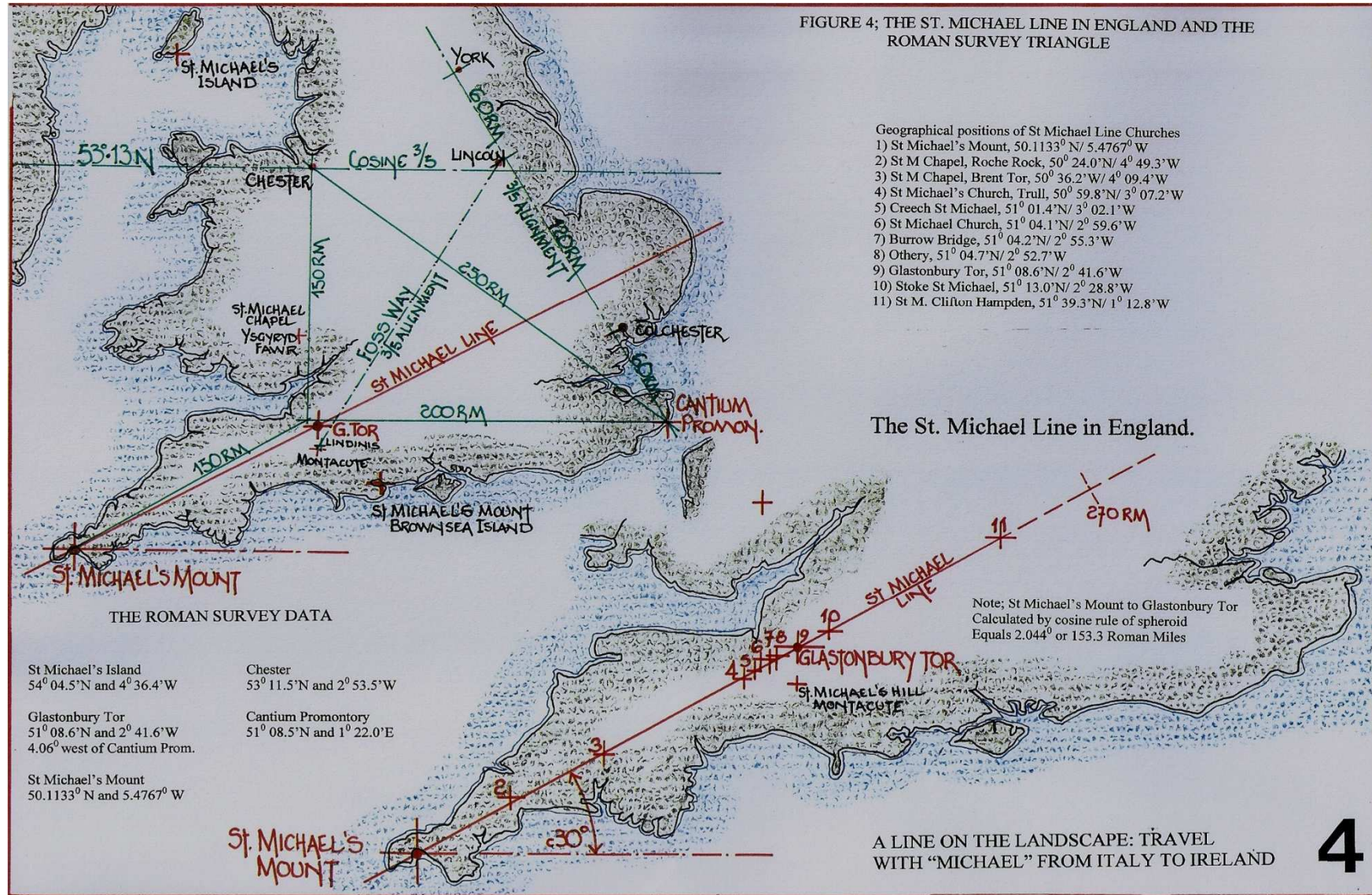
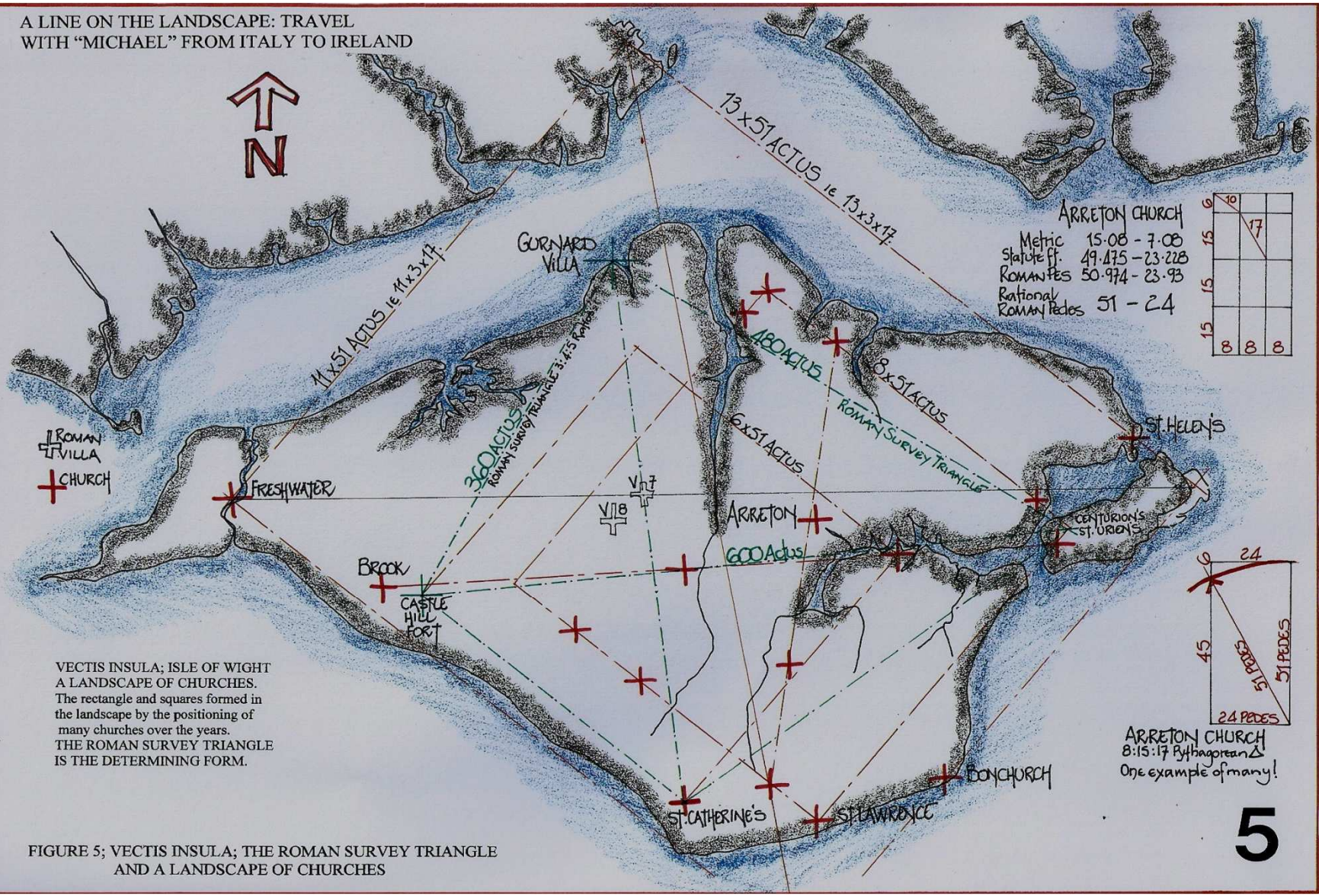


FIGURE 3; THE ST. MICHAEL PHENOMENA, GREAT CIRCLES

FIGURE 4; THE ST. MICHAEL LINE IN ENGLAND AND THE ROMAN SURVEY TRIANGLE

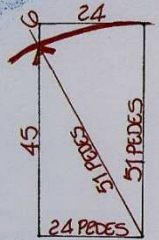


A LINE ON THE LANDSCAPE: TRAVEL WITH "MICHAEL" FROM ITALY TO IRELAND



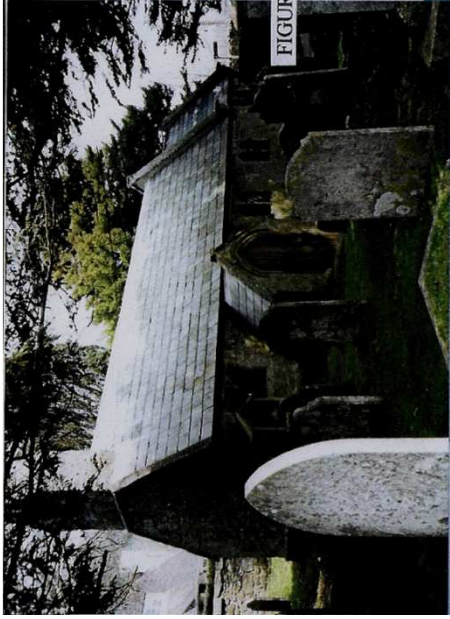
ARRETON CHURCH
 Metric 15.08 - 7.08
 Statute ft. 49.175 - 23.228
 Roman Paces 50.974 - 23.93
 Rational Roman Paces 51 - 24

6	10	
15		17
15		
15		
15		
8	8	8



VECTIS INSULA; ISLE OF WIGHT
 A LANDSCAPE OF CHURCHES.
 The rectangle and squares formed in the landscape by the positioning of many churches over the years.
 THE ROMAN SURVEY TRIANGLE IS THE DETERMINING FORM.

FIGURE 5; VECTIS INSULA; THE ROMAN SURVEY TRIANGLE AND A LANDSCAPE OF CHURCHES



ST. LAWRENCE; this tiny church nestles under "the Undercliff" and is a tranquil gem for surveyors!

A LINE ON THE LANDSCAPE: TRAVEL WITH "MICHAEL" FROM ITALY TO IRELAND

7

FIGURE 7; THREE PHOTOGRAPHS, CHURCHES IN EXTREMIS

ST. CATHERINE'S; a church on a bleak hill top. This is a surveyors dream; a point from which to sight a whole landscape. The view is west towards Castle Hill Fort and The Needles promontory.



BONCHURCH; the second Gem positioned in extremis!

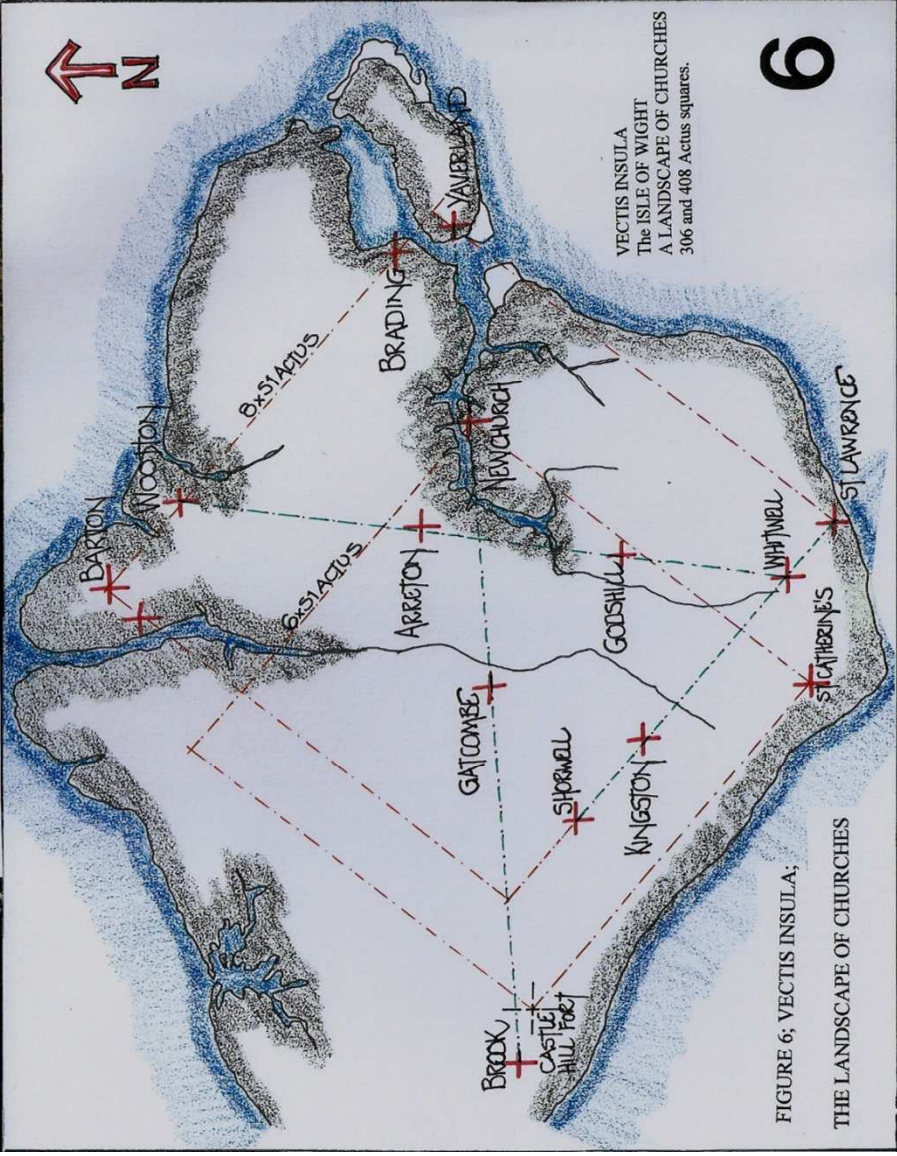


FIGURE 6; VECTIS INSULA; THE LANDSCAPE OF CHURCHES

VECTIS INSULA
The ISLE OF WIGHT
A LANDSCAPE OF CHURCHES
306 and 408 Actus squares.

6

CONCLUSIONS

- THE ROMAN ARMY WAS ADEPT AT SURVEYING AND PRODUCING MAPS OF EXTRAORDINARY ACCURACY
- THE PROBABILITY OF A WORLD SURVEY IS BORNE OUT BY THE WORK OF MARCUS VIPSANIUS AGRIPPA WHO WAS IN ROME AT PRECISELY THE CORRECT PERIOD TO COORDINATE THE RESULTS. HE WAS A FIRST CLASS HIGHLY EDUCATED PERSON WHO WAS CHARGED WITH THE TASK OF PRODUCING THE MAP BY AUGUSTUS CAESAR .THIS IS WELL RECORDED BY PLINY THE ELDER IN HIS NATURAL HISTORY.
- WHETHER THE TEXT OF JULIUS HONORIUS IS CORRECT OR A FOLK MEMORY GIVEN A MAKE OVER I WILL LEAVE TO OUR NEXT SPEAKER, TO SET OUT THE ARGUMENT.
- REGARDLESS OF ANY CONTROVERSY WE MUST REVISE OUR UNDERSTANDING OF ROMAN TECHNOLOGY. IT WOULD APPEAR THAT THEY WERE ACTUALLY FAR SUPERIOR TO THE GREEKS IN THE WORLD OF SURVEYING AND CARTOGRAPHY.
- THE EARLY CHRISTIAN CHURCH BECAME THE INHERITORS OF THE ROMAN STATE IN NAME, THE ROMAN CHURCH, AND IN TECHNICAL ABILITY BY COPYING THEIR SURVEY, MEASUREMENT, BUILDING AND MAPPING TECHNIQUES.
- THIS CONTINUED FOR SEVERAL CENTURIES UNTIL EUROPE STARTED TO CHANGE, BUT, THE ROMAN PES WAS STILL USED FOR MEASUREMENT IN THE 14TH CENTURY.
- THUS WE MAY THANK THE EARLY CHURCH FOR LEAVING SUCH GOOD MARKERS.