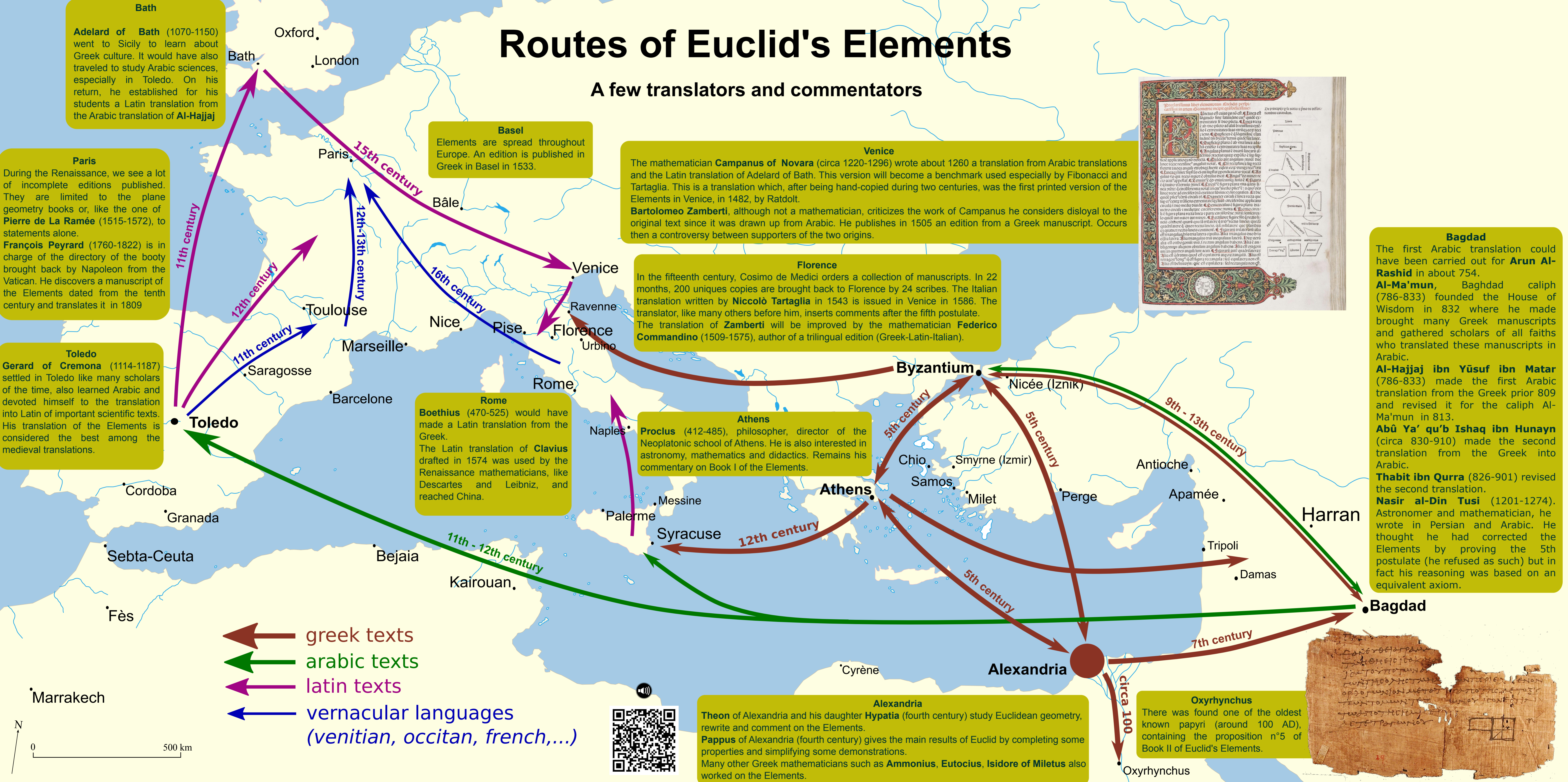


Routes of Euclid's Elements

A few translators and commentators



Bath
Adelard of Bath (1070-1150) went to Sicily to learn about Greek culture. It would have also traveled to study Arabic sciences, especially in Toledo. On his return, he established for his students a Latin translation from the Arabic translation of **Al-Hajjaj**

Paris
 During the Renaissance, we see a lot of incomplete editions published. They are limited to the plane geometry books or, like the one of **Pierre de La Ramée** (1515-1572), to statements alone.
François Peyrard (1760-1822) is in charge of the directory of the booty brought back by Napoleon from the Vatican. He discovers a manuscript of the *Elements* dated from the tenth century and translates it in 1809

Toledo
Gerard of Cremona (1114-1187) settled in Toledo like many scholars of the time, also learned Arabic and devoted himself to the translation into Latin of important scientific texts. His translation of the *Elements* is considered the best among the medieval translations.

Basel
 Elements are spread throughout Europe. An edition is published in Greek in Basel in 1533.

Venice
 The mathematician **Campanus of Novara** (circa 1220-1296) wrote about 1260 a translation from Arabic translations and the Latin translation of Adelard of Bath. This version will become a benchmark used especially by Fibonacci and Tartaglia. This is a translation which, after being hand-copied during two centuries, was the first printed version of the *Elements* in Venice, in 1482, by Ratdolt.
Bartolomeo Zamberti, although not a mathematician, criticizes the work of Campanus he considers disloyal to the original text since it was drawn up from Arabic. He publishes in 1505 an edition from a Greek manuscript. Occurs then a controversy between supporters of the two origins.

Florence
 In the fifteenth century, Cosimo de Medici orders a collection of manuscripts. In 22 months, 200 unique copies are brought back to Florence by 24 scribes. The Italian translation written by **Niccolò Tartaglia** in 1543 is issued in Venice in 1586. The translator, like many others before him, inserts comments after the fifth postulate. The translation of **Zamberti** will be improved by the mathematician **Federico Commandino** (1509-1575), author of a trilingual edition (Greek-Latin-Italian).

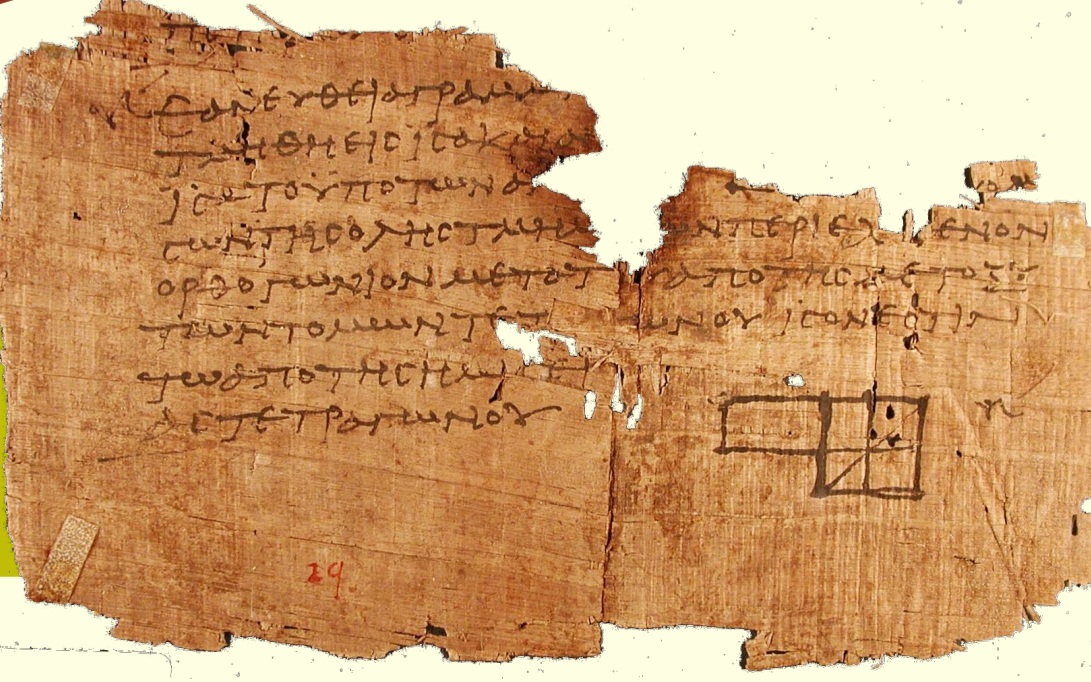
Rome
Boethius (470-525) would have made a Latin translation from the Greek. The Latin translation of **Clavius** drafted in 1574 was used by the Renaissance mathematicians, like Descartes and Leibniz, and reached China.

Athens
Proclus (412-485), philosopher, director of the Neoplatonic school of Athens. He is also interested in astronomy, mathematics and didactics. Remains his commentary on Book I of the *Elements*.



Bagdad
 The first Arabic translation could have been carried out for **Arun Al-Rashid** in about 754.
Al-Ma'mun, Baghdad caliph (786-833) founded the House of Wisdom in 832 where he made brought many Greek manuscripts and gathered scholars of all faiths who translated these manuscripts in Arabic.
Al-Hajjaj ibn Yūsof ibn Matar (786-833) made the first Arabic translation from the Greek prior 809 and revised it for the caliph Al-Ma'mun in 813.
Abū Ya' qu'b Ishaq ibn Hunayn (circa 830-910) made the second translation from the Greek into Arabic.
Thabit ibn Qurra (826-901) revised the second translation.
Nasir al-Din Tusi (1201-1274). Astronomer and mathematician, he wrote in Persian and Arabic. He thought he had corrected the *Elements* by proving the 5th postulate (he refused as such) but in fact his reasoning was based on an equivalent axiom.

Oxyrhynchus
 There was found one of the oldest known papyri (around 100 AD), containing the proposition n°5 of Book II of Euclid's *Elements*.



- ← greek texts
- ← arabic texts
- ← latin texts
- ← vernacular languages (venitian, occitan, french,...)

