

into the 11–12th cc. A.D.; (3) a series of ancient maps, though being later graphic reconstructions from the verbal description in old texts (see [249]): by Hesiod, traditionally dating from the 6th c. B.C. (*ibid.*, p. 38, Fig. 1); Hecataeus, traditionally dating from the 6–5th cc. B.C. (*ibid.*, p. 39, Fig. 1); Herodotus, traditionally dating from the 5th c. B.C. (*ibid.*, p. 44, Fig. 2); Democritus, traditionally dating from 5–4th cc. B.C. (*ibid.*, p. 45, Fig. 2); Eratosthenes, traditionally dating from 276–194 B.C. (*ibid.*, pp. 68–71, Fig. 6); globe by Crates, traditionally dating from 168–165 B.C. (*ibid.*, p. 77, Fig. 7) all fell into the 9–15th cc. A.D. when dated by means of the graphs of $L(T_0, T)$ (see above) with respect to the indicated scale of Maps 1–17, and all after Cosmas Indicopleustes. Each of the maps was completed by its list of geographic names (see the definition of the MC). For example, Herodotus' map was extended with the data gathered from a map in [67*]. It should be noted that the traditional datings of the indicated old maps are outside the 6–18th cc. A.D. embraced by Maps 1–17. The performed experiment showed that the complete collection of all these maps, including Nos. 1–17, if we retain the traditional datings, did not satisfy the map-improvement principle; we, therefore, preferred Maps 1–17 as established sufficiently stably in chronological respect. An argument for the use of such an approach is that the rejection of the traditional dates permitted us to discover a new the map ordering which is well consistent with the graphs in Figs. 39 and 42.

4.3. Herodotus' map

The above confirmation of the map-improvement principle means that if the maps are ordered chronologically correctly, their quality improves as the ordinal number increases. The maps characterized by approximately the same features and quality turned out to be placed close to each other; the younger the map, the closer it is to the modern one graphically. The beginning of the scale contains the maps distorted most of all, and the exact contemporary ones are at the end. The map quality becomes satisfactory only from the end of 16th to the beginning of the 17th cc. A.D. One of the seas described by Herodotus was indentified by the historians as the Black Sea; however, it turned out that the figures given by Herodotus are not at all consistent with the data about the size of the Black Sea, known from ancient geographies (see the Russian edition of the *Histories*, [67*], p. 521).

One of Herodotus' seas was identified with the Caspian Sea; it then turns out, that in the opinion of Herodotus, the Caucasus borders on this "Caspian" Sea in the West ([67], [67*], Bk. 1, Nos. 203–204). It can mean that Herodotus' map was turned upside down, with North placed at the bottom, and South at the top. But then such a position of the map superimposes Assyria on Europe (Germany) and, in particular, Babylon on Rome. This change of map orientation (at least, in certain parts of the *Histories*) does not contradict the other geographic data given by Herodotus.

According to him, the Persians lived in Asia up to the Southern Sea said to be the Red Sea ([67], Bk. 4, No. 37). According to the modern version, the Persians must have lived in Asia up to the Southern Sea called today the Persian Gulf. The farther the worse. Describing the peninsula (regarded by today's historians as Arabia), Herodotus writes that it starts with the Persian land and extends to