

Medieval Portolan Charts, a Geodetic and Historical Mystery

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SUMMARY

The sudden appearance of portolan charts, realistic nautical charts of the Mediterranean and Black Sea, at the end of the thirteenth century is one of the most significant occurrences in the history of cartography. Using geodetic and statistical analysis techniques these charts are shown to be mosaics of partial charts that are considerably more accurate than has been assumed. Their accuracy exceeds medieval mapping capabilities. These sub-charts show a remarkably good agreement with the Mercator map projection. It is demonstrated that this map projection can only have been an intentional feature of the charts' construction. While the physical charts are without doubt medieval, the geo-information on them, i.e. the coastlines, are not. Through geodetic analysis Nicolai eliminates the possibility that the charts are original products of a medieval Mediterranean nautical culture, which until now they have been widely believed to be. Their true origin must lie considerably further back in time.

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