

Hydrol. Earth Syst. Sci. Discuss., referee comment RC2
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Comment on hess-2021-7

Anonymous Referee #2

Referee comment on "From mythology to science: the development of scientific hydrological concepts in Greek antiquity and its relevance to modern hydrology" by Demetris Koutsoyiannis and Nikos Mamassis, Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2021-7-RC2>, 2021

Dear Authors,

I read with interest the manuscript also because it collects several useful quotations in English and in the original Greek language about the development of hydrological concepts emancipating them from mythology. And it sheds light on history of some hydrological questions, as the concept of evaporation and precipitation, the hydrological cycle, the Nile paradox, the measurement of flow which are not precisely known to a wide audience of geo-scientists.

A solid evidence also with recent sources is given about how Aristotle (who suggested to Alexander of Macedonia to organize a campaign to Ethiopia to solve this scientific challenge) provided the right solution of the Nile paradox which created conceptual hydrological problems until the early 19th century.

The paper is too long to become a standard paper so I recommend to move the Appendixes A, B, C in a separated Supplemental material section.

I would also recommend to briefly mention in the abstract (shortening other sentences) the clear vision of Heron of Alexandria of the definition of flow of a spring as the product, or at least the combination, of wet area and velocity and the measurement of discharge with the volumetric method. A key concept of hydrometry which was lost throughout the modern era until it was re-discovered by Leonardo da Vinci and Benedetto Castelli.

Some minor remarks or typing errors

362 I would add 'ancient' Egyptian

413 Ethiopia

609 area