Irrigation basins and cultivated land under the Twelfth Dynasty

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This paper considers the extension of the irrigated land in the Nile valley. It discusses the similarity between the measurement of the riverine basin in the Sohag and Memphis area (about 10 km) and the Egyptian unit of measurement, the iteru (itrw). This could have been the basis of the ancient irrigation structure of the Nile basin. Details from the White Chapel at Karnak are presented to support this idea in relation to recorded levels of water. This set of data, according to the author, is essential in understanding the irrigation system of ancient Egypt, which had already been constructed by the Middle Kingdom and whose origins can be traced back to the early Dynasties.

Words: Middle Kingdom, Senwseret I, White Chapel, irrigation

The ancient basin system in use in Egypt until the construction of the first Aswan Dam is not only one of the wonders of the ancient and medieval worlds, but in sheer scale, conception and achievement one that far surpasses any others, or indeed perhaps all the seven canonical wonders combined. Both in its immense size and area, and also in its incredibly long period of existence as a working agricultural machine, it was unparalleled throughout the entire world until modern times.

Whilst looking for some possible clues as to its origin and its form of layout during the Pharaonic period, I was struck with the fact that some of the basins in the Sohag area and Memphite zone averaged approximately 10 km in length, or slightly more as recorded in plans and statistics of their length. This seemed to be analogous to 10.5 km and one ancient Egyptian riverine iteru (itrw) measure, which if so seemed an ideal unit to use in first laying out a hydraulic system. Given that the whole basin system in the Nile valley, and to some extent the Delta also, was arranged in a system of terraces or steps, often averaging about 1 m drop or 2 cubits, to allow for the descent of the Nile between Aswan and Cairo, this fact again seemed significant as suggesting that while a number of early tentative irrigation schemes for basins might have been constructed, a final or even entirely new scheme was first conceived at the time of the unification of Egypt or in the period soon after. When one government was in control of the Two Lands, it would command not only all the resources needed in both manpower and land resources i.e. tenure, but also have the political strength and hydraulic knowledge to effect this ambitious scheme. Given that the system has obviously been enlarged by the addition of new supplementary basins in the Nile valley as