

On the Occurrence of Hippopotamus in the Iron Age of the Coastal Area of Israel (Tell Qasileh)

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There are two points on which these two texts differ. In the older Sumerian version, the temple is specified by name, while in the later Akkadian text, it is not. Far more significant, however, is the fact that where the former has Mesilim, the latter has Mesannepadda. Therefore, unless we are prepared to assume variant traditions, or an error in transmission,²³ we are forced to conclude that Mesilim and Mesannepadda are identical.²⁴

ON THE OCCURRENCE OF HIPPOPOTAMUS IN THE IRON AGE OF THE COASTAL AREA OF ISRAEL (TELL QASÎLEH).

GEORG HAAS

Hippopotamus remains have been recorded from Palestine by Miss D. M. A. Bate (1937)¹ from the following levels of the Mt. Carmel excavations: Tabun E₁, D, and C₁, and Skhul. The sudden disappearance of this species together with other "warm" species, such as Phacochœrus, Rhinoceros and others, has been taken as one of the main evidences of the "faunal break" between Upper and Lower Levallois-Mousterian levels. Similarly, remains of Hippopotamus have been described from Mugharet ez-Zuttiyeh, and from Syria, all from levels corresponding to the time limit of occurrence stated by Bate (*ibid.*).

The excavations at Tell Qasileh near Tel-Aviv (B. Maisler, 1951),² a site containing twelve levels from the Early Iron Age to the Arab period, yielded a large amount of datable kitchen middens. Prof. Maisler had the kindness to hand over to me these remains, which consisted mostly of mammalian bones, scanty remains of birds and reptiles and some shells of marine mollusks. I take this occasion to thank him for the possibility of investigating this interesting faunal assemblage; a full

²³ It is worth noting that at present some ten of the sayings in the bilingual proverb collections from Aššurbanipal's library have been identified by the writer in their original Sumerian form in the material which he has been studying, and that by and large they seem to represent a faithful transmission of the earlier Sumerian texts. This subject will be treated more fully in the near future. On the other hand, there is the possibility that Mesannepadda was a later substitution for Mesilim by association with his son's name Annane.

²⁴ Note that both Mesilim and Mesannepadda call themselves king of Kish, and their respective dates have been placed by most scholars in the same generation. It is also noteworthy that Eannatum of Lagash, who, after conquering most of Sumer, acquired the title "King of Kish," had two names: Eannatum, his *Kalam*-name and Lumma, his *Tidnu*-name. (Galet A, *Déc.*, p. xliii, 5:11-14 and 5:22-6:5; cf. Poebel, *Paul Haupt Anniv. Vol.*, p. 235, n. 2; and Jacobsen, *op. cit.*, p. 98 f., n. 168).

¹ Garrod and Bate, *The Stone Age of Mount Carmel*, Vol. 1 (Oxford, 1937), pp. 115 f.

² Maisler, B., *The Excavations at Tell Qasile* (Jerusalem, 1951).

report on this material will be given later and I shall here deal only with the Hippopotamus material found at this site.

According to Maisler (*ibid.*, p. 67/68) the following chronology is given to the series of strata containing Hippopotamus material:

Layer XII-XI: Early Iron Age IIa (Philistine period)—end of 12th and 11th century B. C.

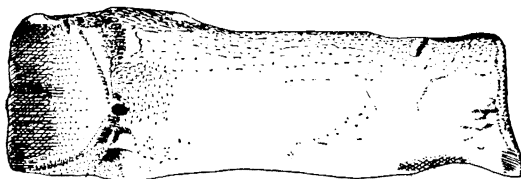
Layer X: Early Age IIb (Pre-Israelite period in Tell Qasileh)—end of 11th century to beginning of 10th century B. C.

Layer IX₂ and IX₁: Early Iron Age III (United kingdom, 10th century B. C.).

Layer VIII: Middle Iron Age II (House of Omri, 9th century B. C.).

Layer VII₂ and VII₁: Middle Iron Age I (House of Jehu, 8th century to 732 B. C.).

Layer VI: Persian period (Postexilic, 5th to 4th century B. C.).



Specimen E: Complete metapodial

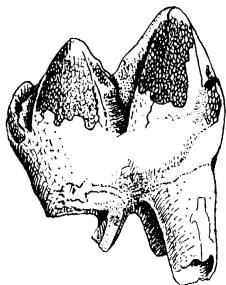
(reduced to half size; at right angle to stance).

Here follows the list of the datable material with the collector's inventory number.

- A. One phalanx, 5188, k III. Layer XII and above.
- B. Fragment of articular facet of right scapula, 8025, k III. L. XII and above.
- C. One phalanx, 3916, k. III, Layer XI-XII.
- D. Fragment of carpal or tarsal, 5027, k. III, Layer XI and above.
- E. Complete metapodial, 6209, Layer XI.
- F. Fragment of squamosal, 2627, k. III. Layer X.
- G. Fragment of tusk, 5074, k. II. Layer X.
- H. Two fragments of right upper canine, 1717, Layer X-XI. A complete left upper PM₃ belongs probably to the same level.
- I. Fragment of right I₂, 6606, Layer X.
- J. Right upper milk I₁, 3424, k. III. Layer IX₂.
- K. One right upper canine, one right lower canine, one left upper I₂, 3451, Layer IX.
- L. Right lower PM₃, deeply worn, fragment of lower I₁ (?), 3265, K. II, Layer IX or VIII.
- M. Upper right milk I₂, 7833, k. II. Layer VII.
- N. Fragment of lower right canine, 6776, k. ii., Layer VII-VI₁.
- O. Right upper canine, 7159, k. III, no data.
- P. Fragment of right scapula, mainly the articular facet: may belong to M.
- Q. One complete left lower M₂, one right lower I₁, one upper left dC (burnt), one right lower canine: these 4 specimens were found together and belong almost certainly to levels X-XII.
- R. Complete metapodial, 7696, k. III. Layer XII.
- S. Phalanx, 7538, k. III, Layer X-XI.

This list shows that Hippopotamus remains occur from the 12th to the 4th century B. C. Prof. R. Vaufrey has given me the kind permission to mention here the fact that he has in his collection at the Institut de Paléontologie Humaine (Paris) remains of Hippopotamus tusks from Ras Shamra (Ugarit) at the northern Syrian coast, from the 13-14th century B. C.

The possibility that tusks (where found alone) may have been imported from Egypt for local ivory cutters cannot be excluded, but the fact that molars and other skeletal fragments are found together with tusks proves that the species lived at that time in the immediate neighbourhood of the site. Specimen M, one of the latest datable pieces in this series, is a very small tooth indeed, measuring at the thicker end 24 to 19 mms. It seems very improbable that so small a tooth should have been imported for local ivory carvers from abroad. The latest datable specimen of our series, N, belonged to an animal of fair but not very big size, probably a female. We see, therefore, that this species survived probably down to the 4th century B. C. in the coastal plain of Palestine.



Specimen Q: One complete hippopotamus tooth, left lower m.,
(reduced to half size).

It appears justified to ask whether we must assume an uninterrupted occurrence of this animal from Upper Paleolithic to the relatively near past, or if the "faunal break" in the sense of Bate represents a real interruption of the existence of this animal in this area. The question is not without importance because we know of several similar cases of an interrupted faunal record for this area.

The soft-shelled turtle *Trionyx triunguis*, widely dispersed in the Nile system and in tropical Africa, has been recorded by Bate from the levels C, D, and E of Tabun (Carmel); fragments of the shell were found again in Tell Qasileh—and the animal survives in swamps and rivers throughout the coast of Israel, Lebanon, Syria, Hatay and even the southeastern corner of Asia Minor.

Crocodile remains have been found by Bate in the level of C of Tabun. The Nile crocodile lived in a limited coastal swamp area south of Haifa up to the beginning of this century (Nahr Zerqa near Binyamina)

and has been recorded by Josephus from the same place, therefore called Crocodilopolis.

Similar "disrupted" records are known of two other mammals, namely the antelope *Alcelaphus* (the hartebeest), and the squirrel *Sciurus*, cf. *anomalus*. The first is known from Palestine up to the faunal break (levels F to C of Tabun) and again from level B to Mugharet el-Kebara, a stratum contemporaneous with the Natufian level B of Wad. This animal survived probably up to the last century in the most arid parts of the country, in the Wadi Araba, *fide* Tristram.

The squirrel has been found in level E_b of Tabun (upper Acheulean) and again from Middle Aurignacian to Natufian levels, and survives in the Lebanon.

Limiting the discussion to the inhabitants of coastal rivers and swamps, we have to try to find an answer in favour of or against a faunal continuity for the three species involved. A repeated resettlement from the Sea is not impossible in the case of the Nile crocodile: its occurrence on the African continent and in Madagascar has been explained by migration across the Sea. Such considerable wanderings are impossible for a comparatively inert animal like *Trionyx*, but the contrary has been stressed by Flower, who considered the whole population along the Levant shore to consist of accidental stragglers carried into the Sea by the floods of the Nile. This assumption has been disproved (Haas, 1952). Extensive migrations of *Hippopotamus* are very unlikely across the Sea and even more so across stretches of dry and barren land.

The explanation may be sought in either of two directions. The first would have to assume the persistence of a certain biotope along the shore since the Lower Paleolithic, namely swamps covered with papyrus, Nuphar or other water lilies and an ample supply of a luxuriant swamp flora. Such a belt of coastal swamps would follow, of course, the shifting shore line of the Pleistocene in accordance with the global glacial regressions and interglacial transgressions of the sea level. The very gentle slope of the continental shelf along the Palestinian coast favours the gradual shifting of such a coastal swamp zone.

The second way to cope with the fact of discontinuity would have to postulate the development of this particular biotope on two separate occasions. Both periods were separated by climatic conditions precluding the survival of forms such as crocodiles, soft-shelled turtles and hippopotami. The existence of a dry postglacial phase during the Mesolithic, some 10,000 to 6000 years ago, makes the resettlement theory very unlikely indeed; it would be especially difficult to explain the vast resettlement area of the clumsy and sluggish *Trionyx*, whose nocturnal land migrations cannot have been very extensive.

The author feels more inclined to believe that coastal swamps could locally persist under otherwise savanna-like conditions; such conditions are known to exist along the rivers in the African savanna regions. On the other hand, pluvial conditions would be less pronounced near the sea shore than at a place far inland: both facets would enable the survival of African animals linked with such a stabilized biotope. We

may even add to our list of African swamp-linked animals the Ichneumon, which is found at similar biotope all over the country. Papyrus and Nuphar swamps are still found today at the northern border of the lake of Huleh. About a hundred years ago Lortet found papyrus swamps at the northern shores of the lake of Galilee; there is nothing left of them today. Sparse remains of papyrus exist still at certain points along the Israeli coast inside the belt of coastal dunes.

Hippopotamus remains of early to middle Paleolithic times have been dredged recently from the bottom of the bed of the upper Jordan south of the lake of Huleh.

Probably the idea of a "faunal break" has a restricted application for certain biotopes, like coastal swamps and sluggish lowland rivers. The break does not necessarily take place for animals living far away from the main glaciation areas attached to this special biotope which could always provide sufficient vegetable food. Both reptiles could easily pass a limited cooler season in a hibernating state and Hippopotamus had to adapt itself to such a seasonal reduction of temperature. The very special condition of this particular biotope does not preclude substantial climatic fluctuations in the coastal area, the coastal hills and the more elevated inland region, but the swamps seem to offer all the conditions necessary for the survival of certain faunal elements now restricted to tropical Africa, under rather fluctuating climatic conditions which strongly affected the surrounding land fauna.

A GREEK INSCRIPTION AT JATHUM IN TRANSJORDAN

LUCETTA MOWRY

In a recent issue of the BULLETIN Dr. F. V. Winnett mentioned two expeditions undertaken by the American School at Jerusalem into north-eastern Transjordan where he had hoped to find Arabic inscriptions.¹ He was abundantly rewarded for he found hundreds of stones covered with writing in Kufic and Safaitic. In addition to the great number of Arabic inscriptions seven written in Greek were found. The best preserved, longest, and apparently most informative of the latter was one discovered near the Syrian border at Jathum beside a ruin, possibly a desert fortification or tomb. As the accompanying photograph indicates, this inscription (like the other six) was roughly scratched on basalt rock. Fortunately the surface of the rock suffered little from the destructive effects of exposure. A small fragment chipped off at the bottom of the stone causes less difficulty for a reading of the text than the growth of lichen in several places on the upper part of the stone and the faintness of the letters near the broken section.

¹ In the BULLETIN, No. 122 (April, 1951) pp. 49-52, Dr. Winnett discusses one of the Arabic inscriptions which were found, copied and photographed by Mr. G. Lankester Harding and members of the School.