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MERSA/WADI GAWASIS IN ITS REGIONAL SETTING

1. INTRODUCTION

Since the discovery by Abdelmoneim Sayed of the 12th Dynasty harbour on the Red Sea from where the expeditions to the land of Punt were launched¹, the evidence suggesting an intense Egyptian maritime activity in the Red Sea at the beginning of the 2nd millennium BC has increased. The investigations at Mersa/Wadi Gawasis (*Fig. 1*), resumed in 2001 by an Italian-American team², collected fresh data about previously unknown Egyptian maritime expeditions in the Red Sea³, the regions in the southern Red Sea involved in trade with Egypt⁴, ancient Egyptian naval technology⁵, and the administration⁶ and organization of the expeditions⁷.

Other aspects remain unexplored, among them how the fleet was transported from the dockyards of Koptos. As stated in the inscription commemorating the expedition led by the vizier Antefoker and the herald Ameni under the reign of Senwsert I and discovered at Mersa Gawasis, the seafaring ships were built at Koptos⁸. They were then dismantled and carried through the Eastern Desert to *S3ww*, i.e. Mersa/Wadi Gawasis, where they were finally launched⁹. Perhaps a reference to the assemblage of ships built in Koptos and successively dismantled also occurs in an earlier inscription dating to the time of Mentuhotep III and carved by order of the steward Henu in the Wadi Hammamat (Hammamat 114), where it is stated that ships to be sent to Punt were built on the seashore¹⁰. In fact the practice of dismantling ships built in Koptos to move them to the Red Sea coast is not unique and not limited to ancient times, since it also occurred in Medieval times¹¹.

¹ ABDELMONEIM SAYED 1977, 1978, 1979, 1980, 1983, 1999.

² For the project in general and for the results of the first five field-seasons see BARD - FATTOVICH ED. 2007. Reports are published regularly after each field season on the web site www.archaogate.org.

³ ELSAYED MAHFOUZ 2007a, 2007b, 2007c; PIRELLI 2007a, 2007b.

⁴ MANZO 2007, 2010.

⁵ WARD - ZAZZARO 2010.

⁶ MANZO - PIRELLI 2006.

⁷ BARD - FATTOVICH 2007, pp. 250-253.

⁸ ABDELMONEIM SAYED 1977, p. 170, Pl. 16, b, line

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⁹ ABDELMONEIM SAYED 1983, pp. 23, 30; FAROUT 1994, p. 154.

¹⁰ COUYAT - MONTET 1912, n. 114, p. 83, line 14.

¹¹ GABOLDE 2002, pp. 142-144.

The inscription Hammamat 114 is the only one to give details on the regions which were crossed on the way to the spot on the coast from where the maritime expedition was launched as well as on the organization of the expedition itself¹². Before the transit of the caravan of donkeys carrying the equipment and the dismantled ships, the road was cleared by the army, by scouts and by allied groups of the Eastern Desert. Water and bread are listed among the supplies along with sandals for the 3000 men of the expeditionary corps. Wells, whose dimensions are specified in the inscription, were dug on the way to the coast and in the regions of *Id3ht* and *Bhtb*. It is also made clear that at least in this specific case the route leading to the coast was different from the one which was followed on the way back to the Nile valley, and that the latter crossed the region of *R-hnw*, to be identified with the present Wadi Hammamat¹³.

Unfortunately, for the moment more precise reconstructions of the tracks leading to the Red Sea are not available as this sector of the Eastern Desert has been investigated primarily in terms of the quantities of inscriptions from all periods known from the Wadi Hammamat¹⁴ and in connection with the relatively intense frequentation of the area in Roman and Late Antique times related to the exploitation of mineral resources and mostly of the quarries, as well as to the control of the caravan trade with the Red Sea coast¹⁵.

2. THE GIS AND THEORETICAL MODEL

As stated above, the movements of the expeditionary corps crossing the Eastern Desert were an important part of an expedition to the land of Punt and thus were considered an important aspect to be investigated by the archaeological project conducted at Mersa/Wadi Gawasis by the University of Naples "L'Orientale" and Boston University. The transit of the expeditions in the Eastern Desert had to be investigated not just with respect to their organization but also the routes followed. Moreover, the systematic investigation of the sectors of the Eastern Desert which may have been crossed could represent a further project to be conducted in the future. Therefore, a GIS was implemented¹⁶ with a twofold aim: to collect systematically all the available data on this sector of the Eastern Desert and to help to plan possible future investigations in the area.

The GIS was based on the 1:250000 maps of the Egyptian General Mapping Agency of the area under investigation¹⁷ on which open source satellite images were draped¹⁸. The GIS included all the possible ethnographic and ancient tracks crossing this part of the Eastern Desert¹⁹ (Fig. 2), the wells, including the ones which are dry today but which would have been

¹² COUYAT - MONTET 1912, n. 114, pp. 81-84.

¹³ GAUTHIER 1925-1931, III, p. 122.

¹⁴ COUYAT - MONTET 1912; GOYON 1957; PORTER - MOSS 1951, pp. 328-337.

¹⁵ SIDEBOTHAM *et al.* 2008, pp. 37-52, 70-93; BAGNALL - RATHBONE 2004, pp. 278-292.

¹⁶ GIS was implemented with Esri ArcGis 9.3.

¹⁷ EGYPTIAN GENERAL SURVEY AUTHORITY 1996a, 1996b.

¹⁸ Google Earth imagery, July 2008.

¹⁹ BARRON - HUME 1902, Pl. I; BRUN 2002; MEREDITH 1952, Fig. 1; MURRAY 1925; PEACOCK 2006; RIFAAT ABDEL KAREIM OSMAN - SIDEBOTHAM 2000, pp. 19-21; SIDEBOTHAM 1996, 2002; SIDEBOTHAM - ZITTERKOPF 1996,

active in the past²⁰ (Fig. 3), mines²¹, and the ancient sites (including rock inscriptions)²² which were recorded in the earlier publications.

As no systematic extensive survey has been carried out in the sector of the Eastern Desert West of the ancient harbor of *S3w* and of the coast between Qosseir and Safaja except for the Wadi Hammamat, the archaeological and epigraphic evidence alone does not provide firm ground to reconstruct the tracks which may have been followed from the Nile valley to the coast. Therefore an attempt was made to predict which tracks may have been used by means of the GIS.

This attempt was conducted by taking into consideration the main constraints in selecting overland routes that could have affected the choice by the leaders of the expeditionary corps i.e. the availability of fresh water and the distances which could be daily covered by donkeys, the beast of burden which was used in these expeditions, as specified in the inscription of Henu²³.

The maximum distance that donkeys can cover in a single day is about 40 km, i.e. 80 km in two days with just a small amount of water²⁴. In a paper presenting the first results of this GIS model²⁵ this optimistic estimate of 40 km/day was adopted, but these values, perhaps possible on the flat tracks of the Western Desert, were rarely attained even with camel caravans in the difficult and craggy landscape of the Eastern Desert, and even for the donkey caravans in the Western Desert prudential figures of 25-30 km per day were considered more realistic²⁶. Thus, if we also consider that the caravans were heavily loaded mainly on their way eastwards, when they had to transport the dismantled ships, we may assume that a distance between 20 and 30 km was covered in a day, perhaps a bit more, up to 30-35 km with lighter loads. This estimate is consistent with the fact that, as has been remarked²⁷, the maximum distance between two wells in the Eastern Desert usually does not exceed 40 km, in our model corresponding to ca. 1.5-2 days for a caravan of donkeys, depending on their load.

Therefore, the GIS was asked to select automatically all the tracks in the radius of 2 km from wells and characterized by a distance between wells not exceeding 30 km, i.e. 1-1.5 days' walk and the ones with a distance between wells not exceeding the 35 km. Of course, these requirements are in some way restrictive if we consider that some donkeys could also have carried water and fodder for the others, as was a frequent practice in the Western Desert in

1998; TREGENZA 1955; TREGENZA 1958, pp. 69-191.

²⁰ BRUN 2002; MEREDITH 1952, Fig. 1; MEYER 1995; MURRAY 1925; PEACOCK 2006; RIFAAT ABDEL KAREIM OSMAN - SIDEBOTHAM 2000, pp. 22-23; SIDEBOTHAM 1996, pp. 181-184; SIDEBOTHAM 2002, 2007; SIDEBOTHAM - ZITTERKOPF 1996, 1997, 1998; TREGENZA 1955; TREGENZA 1958, pp. 69-191.

²¹ AUFRÈRE *et al.* 1994, pp. 185-186, 191-195, 203; FUCHS *et al.* 1997; MEYER 1995; KLEMM *et al.* 1997; KLEMM *et al.* 2002; MOHAMMED A. EL BEDEWI - K.H. ABDEL KADER 1997; SIDEBOTHAM 1996, pp. 185-190; SIDEBOTHAM 2007.

²² AUFRÈRE 2002a; AUFRÈRE *et al.* 1994, pp. 186-

235; BELL *et al.* 1984; BRUN 2002; GOLVIN - REDDÉ 1987; GREEN 1909; MEREDITH 1952, Fig. 1; MEYER 1995; MURRAY 1925; PEACOCK 2006; PORTER - MOSS 1951, pp. 321-339; SIDEBOTHAM 1996; SIDEBOTHAM 2002, 2007; SIDEBOTHAM *et al.* 1991, 2002; SIDEBOTHAM - ZITTERKOPF 1996, 1997, 1998; LUFT 2010; VIKENTIEV 1956; ZITTEKOPF - SIDEBOTHAM 1989.

²³ COUYAT - MONTET 1912, n. 114, p. 83, line 13.

²⁴ FÖRSTER 2007, p. 5; WAINWRIGHT 1935, p. 260.

²⁵ BARD *et al.* cds.

²⁶ FÖRSTER 2007, p. 5; MURRAY 1939, p. 98.

²⁷ ROTHE *et al.* 1996, p. 104.

²⁸ FÖRSTER 2007, pp. 2-3.

the late Old Kingdom and First Intermediate Period time²⁸. Moreover, it cannot be excluded *a priori* that the caravans could cover a longer distance, as additional wells could have been excavated in wadi beds, where the water table is closer to the surface, as is common practice today among nomads living in the region²⁹. As already mentioned, such practices are known from the inscription of steward Henu, Hammamat 114, but were referred to also in rock inscriptions in southern sectors of the Eastern Desert dating to the end of the Old Kingdom³⁰. Today, however, many ancient wells which were excavated in the desert may no longer be visible, as they have been completely covered with wadi sediments from occasional flash floods during the past 4000 years. Thus, the output of our analysis may be in some way restrictive, and it can be regarded as the minimum network which could be used.

Given the above constraints and considering the results of the GIS elaboration (*Fig. 4*), it may be suggested that in Pharaonic times the routes from the Qena Bend to Mersa/Wadi Gawasis followed the S-N Wadi Qena, turned eastward towards Kreyah, followed the Wadi Hammamh and Wadi Abu Jarida, crossed a plateau to the West of Jebel Maghrabyia, with two possible tracks, the first arriving at Bir Al Jidami and Bir Sirbakis, the second passing round the southern side of Jebel Maghrabyia and arriving in Bir Sirbakis. After crossing another plateau to the north of Jebel Simna, the track arrived at Bir Simna. At Bir Simna the route followed a northern track along the Wadi Abu Muraywat and, after following the Wadi Safaja for about 20 km, turned South towards the Jebel Wasif. Alternatively, a more direct southern track from Bir Simna crossing the hills around the Jabal Abu Aqarib and arriving to the Jebel Wasif could have been taken. From there, crossing another plateau around the Jebel Abu Juwa, Bir Abu Juwa and the upper Wadi Gasus could be attained, leading directly to the coast a few hundred meters North of the harbour of Mersa/Wadi Gawasis and, with a shortcut to the South-East, directly to the harbour of Wadi/Mersa Gawasis. Moreover, a possible southern track to the sea starts at Bir Simna, follows the Wadi Simna, Wadi Saqi and reaches the sea close to Quwayh.

Also consistent with the adopted theoretical model is the track starting in the area of Jebel Wasif, going southward and following the Wadi Abu Aqrib or the Wadi Simanh to the Bir as-Saqi and, from there, to the Wadi Abu Hammad, on the traditional route of the Hammamat leading to the coast close to present day Qosseir. A second possible North-South track connecting the above described route from Qena to the sea with the well-known route of the Hammamat starts at Bir Sirbakis, follows East or West the edge of the Jebel al-Aradyiyah to the Wadi at-Tella, Bir al-Kubbaniyyah, and, finally Bir al-Fawakhir. Other possible tracks from the Jabal al-Aradyiyah to Bir al-Fawakhir run parallel to this further East. It is very likely that these two more internal North-South tracks of the Wadi at-Tella and Bir as-Saqi were preferred to the ones closer to the sea because they offered better opportunity for watering, and wells with better quality water than those closer to the sea, which could be salty and undrinkable³¹.

²⁹ ROTHE *et al.* 1996, p. 77.

³⁰ *Ibid.* 1996, D15, p. 91, M 1, p. 97.

³¹ SIDEBOTHAM - ZITTERKOPF 1997, p. 222.

³² BRADBURY 1988, pp. 131-138.

To the South, as one would expect, the well-known track from Koptos to Laqitah, Wadi Hammamat, Bir al-Fawakhir, Wadi Abu Hammad and Qosseir also fulfills our requirements of the distance between wells.

Thus the results of the GIS elaborations based on the adopted theoretical model, i.e. on the location and distance of the water sources, go to confirm that two possible routes from the Nile Valley to the Red Sea could have been used in this region of the Eastern Desert, as already suggested by other scholars³², and give detailed information on the tracks which could have been followed.

3. TRACKS AND MINING REGIONS

The Egyptian maritime activities in the Red Sea and the exploitation of the mining resources of the Eastern Desert may have been related. Not only were these enterprises often led by the same officers, as in the case of the herald Ameny, who conducted the expedition to Punt organized by the vizier Antefoker in the reign of Senwusert I and a quarrying expedition in the Wadi Hammamat³³, but also because, as stated by Henu, on their way back to the Nile Valley the workers who had transported and launched the ships in the Red Sea were actively quarrying prized stone in the Wadi Hammamat³⁴. Therefore, it is more than reasonable to suggest that the expeditions to the quarries and mines and the ones to the Red Sea were using the same network of tracks crossing the Eastern Desert.

The overlapping of the routes emerging from our model and of the location of the main mining sites of the region, some of them certainly exploited in ancient times, confirms that the expeditionary corps directed to Mersa/Wadi Gawasis may have been involved in mining and quarrying activities in the Eastern Desert on their way back (*Fig. 5*).

Actually, apart from the well-known stone quarries in the area of the Wadi Hammamat-Bir al-Fawakhir, a concentration of gold mines which were exploited from the Old to the New Kingdom lie between the two main routes from the valley to the sea outlined by our GIS and, more specifically, in the region of the north-south route from Bir as Saqi along the Wadi Saqi, which joins the Wadi Hammamat route at Bir al-Fawakhir³⁵. Thus these mines may have been exploited in the same phases when Mersa/Wadi Gawasis was used as a harbour, perhaps even by members of the expeditions which were transporting the dismantled ships to the Red Sea coast and launching them from the harbour. Other gold mines dating to the Old and Middle Kingdom are also located South of the Wadi Hammamat³⁶, on the route leading to the region of Ras Banas on the Red Sea coast. Apparently this specific sector of the Eastern Desert was intensively exploited for gold extraction in the New Kingdom³⁷.

³³ FAROUT 1994.

³⁴ COUYAT - MONTET 1912, n. 114, p. 83, line 15.

³⁵ KLEMM *et al.* 2002, Fig. 2-3.

³⁶ *Ibid.*, Fig. 2.

³⁷ KLEMM *et al.* 2002, Fig. 3.

³⁸ COUYAT - MONTET 1912, pp. 2-9; GOYON 1957,

Thus these remarks seem to confirm once again the close relationship between the organization and management of the maritime expeditions and the exploitation of the Eastern Desert: the Egyptians exploited the mineral resources of the region they crossed to travel to the coast and the overland routes to the sea could follow at least some of those used to reach the mineral sources. In the meantime, it can be also suggested that the exploration of the different tracks leading to the Red Sea may from the start have been closely related to prospection for mineral resources.

4. TRACKS, MINES AND ROCK INSCRIPTIONS

The distribution of the rock inscriptions along the hypothetical tracks selected by the GIS, although, as previously stressed, not resulting from a systematic survey, seems to confirm that the network outlined on the basis of the adopted model was used in Pharaonic times (*Fig. 6*). Actually, the inscriptions are distributed along the two West-East routes of the Wadi Hammamat and of the Wadi Qena-Bir Al Jidami-Wadi Gasus as well as the North-South routes of Wadi Simanh and of Wadi at-Tella, and the routes South of the Wadi Hammamat towards the region of Mersa Alam and Ras Banas.

The dating of the inscriptions recorded close to the different routes may give insights into the periods when the different ways were used. Nevertheless, it should be stressed that possible preferences in the use of the routes in the different periods of Pharaonic history may be affected by differences in the intensity of archaeological exploration of the different sectors of the studied area. Therefore, in this respect the present remarks should be regarded as highly hypothetical.

The Wadi Hammamat route is characterized by the occurrence of rock inscriptions dating to all phases from the Old Kingdom at least in the part from the Nile valley to the Bir al-Fawakhir³⁸, while on the Wadi Qena-Bir Al Jidami-Wadi Gasus route only inscriptions dating to the Old Kingdom, mainly but not exclusively to the 5th and 6th Dynasties, and rock drawings of Protodynastic times are recorded up to Bir Sirbakis, where the Wadi at-Tella route leading to the Bir al-Fawakhir starts³⁹. Also in the southern sector of the Eastern Desert, on the tracks between Koptos and Edfu and the Red Sea, a large number of inscriptions seem to suggest a very intense frequentation and exploitation of the area⁴⁰, which is confirmed also by the Old Kingdom rock inscriptions occurring at Bir Minayh⁴¹ and along the Wadi Qash and Wadi Isa⁴².

In Middle Kingdom times the evidence of use of the Wadi Qena-Bir Al Jidami-Wadi Gasus route is limited to the 12th Dynasty stelae from the lower Wadi Gasus⁴³. Nevertheless, an indirect element supporting the hypothesis that also the western parts of this route were

pp. 12-16.

³⁹ GREEN 1909, pp. 320-322.

⁴⁰ ROTHE *et al.* 1996, pp. 103-104.

⁴¹ LUFT 2010, pp. 171-172.

⁴² BELL *et al.* 1984.

⁴³ ABDELMONEIM SAYED 1977, p. 146 with refer-

frequented may be represented again by the inscription by steward Henu, Hammamat 114, which clearly states that on the outbound journey a different route was taken from that of the Wadi Hammamat⁴⁴. On the basis of this text attempts at identifying the first part of the itinerary of Henu were made. It was suggested, also considering some modern place names in the area of the Wadi at-Tella which are in some way comparable to the ones quoted by the inscription, that the way from the Nile valley to the sea followed by Henu corresponds to the Wadi Qena-Bir Al Jidami-Wadi Gasus route, while on his way back Henu followed the Wadi Hammamat route which he attained precisely *via* the Wadi at-Tella⁴⁵. In this perspective, it is interesting to remark that the Wadi at-Tella route is characterized also by some 12th Dynasty rock inscriptions with the cartouche of Senwsert I⁴⁶. Nevertheless, alternative reconstructions suggesting that the route leading to the coast followed by Henu in the first part of his trip was located South of the Wadi Hammamat and may correspond to the later track from Koptos to Berenike⁴⁷ remain possible, as Middle Kingdom inscriptions were recorded on this route at Bir Minayh⁴⁸ and along the Wadi Isa⁴⁹, South of Bir al-Fawakhir, both areas which were more extensively archaeologically explored. In this region a Middle Kingdom site was discovered as well⁵⁰. For the moment, without new systematic explorations, it can be only remarked that the use in the Middle Kingdom of the northern route Wadi Qena-Bir Al Jidami-Wadi Gasus may be indirectly confirmed by the fact that in the first part of the 12th Dynasty the “Administrators of the Eastern Desert”, one of them to be perhaps identified with the Khnumhotep mentioned in the stela dating to the first regnal year of Senwsert II discovered at Wadi Gasus, were based in the Oryx nome⁵¹, easily connected to the region crossed by this route. Finally, also for the Middle Kingdom, there is abundant evidence of the frequentation of the Wadi Hammamat route at least up to the Bir al-Fawakhir⁵².

In the New Kingdom, except for the ones in the Bir al-Fawakhir area⁵³, the only recorded rock inscriptions are the one by Ramses III along the Wadi at-Tella route⁵⁴ and a further inscription of Ramses III on the route following the Wadi Simna and reaching the sea close to Quwayh⁵⁵. Moreover, it should be remarked that, if the number of inscriptions is considered, as is possible in the case of the largely explored Bir al-Fawakhir, apparently the Wadi Hammamat and surrounding region were not in their greatest vogue in the first part of the 18th Dynasty⁵⁶. In the southern sector of the Eastern Desert, on the tracks between Edfu and the Red Sea, the occurrence of some inscriptions seems to suggest that the area was frequented in the New Kingdom, perhaps mostly because of the exploitation of the gold resources⁵⁷.

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⁴⁴ COUYAT - MONTET 1912, pp. 81-84.

⁴⁵ BRADBURY 1988, pp. 135-138.

⁴⁶ GREEN 1909, pp. 321-322.

⁴⁷ COUYAT - MONTET 1912, pp. 20-21.

⁴⁸ LUFT 2010, pp. 171-172.

⁴⁹ BELL *et al.* 1984, p. 36.

⁵⁰ WRIGHT - HERBERT 1993, p. 4.

⁵¹ AUFRÈRE 2002b, p. 212.

⁵² COUYAT - MONTET 1912, pp. 9-16; GOYON 1957, pp. 16-22.

⁵³ COUYAT - MONTET 1912, pp. 16-18; GOYON 1957, pp. 22-26.

⁵⁴ GREEN 1909, pp. 321-322.

⁵⁵ MEREDITH 1952, p. 111.

⁵⁶ KELLY SIMPSON 1959, pp. 20-21.

⁵⁷ ROTHE *et al.* 1996, pp. 103-104.

⁵⁸ COUYAT - MONTET 1912, pp. 16-18; GOYON

Inscriptions of the Third Intermediate and Late Period were finally recorded in the Bir al-Fawakhir area where some 26th and 27th Dynasty inscriptions occur as well⁵⁸.

In general, it should be remarked that in all phases in this sector of the Eastern Desert the rock inscriptions seem to be limited to the West of the North/West-South/East line marked by the Wadi at-Tella route, which may have represented in some way the eastern limit of the area of the desert more directly controlled by the Egyptian state, perhaps also because of the mineral resources occurring there. A similar conclusion was suggested also for other sectors of the Eastern Desert South of the Wadi Hammamat, where it was proposed that at least in the Old Kingdom the area was systematically patrolled⁵⁹. It is interesting to note that rock engravings consisting in rows of notches, which are interpreted as made by people counting days who had been despatched to the stations giving logistical support to the caravans and controlling the territory in the Western Desert⁶⁰, also occur in the Eastern Desert (Fig. 7). This may suggest that a similar network of stations may have existed in the studied region and was perhaps related to the control of the territory and of the main tracks.

In the sector of the Eastern Desert included in our GIS, sites with inscriptions and evidence of occupation in Dynastic times are recorded close to the Red Sea coast only at Mersa/Wadi Gawasis and in its hinterland. At Mersa/Wadi Gawasis⁶¹ and in the Lower Wadi Gasus⁶² extensive evidence of Middle Kingdom occupation was recovered. So far, only scant evidence going back to the Old Kingdom and to the early 18th Dynasty times has been recovered at Mersa/Wadi Gawasis⁶³. Therefore, for the moment, the Old Kingdom inscriptions in the western part of the Wadi Qena-Bir Al Jidami-Wadi Gasus route should be regarded as related to the exploitation of the mineral resources of the Wadi at-Tella region and not to the access to the sea. Present evidence shows that in Old Kingdom times a harbour on the Red Sea was located North of the studied area, at Ayn Soukna⁶⁴, a site closer than Mersa/Wadi Gawasis to the Memphite area, where the Old Kingdom capital was located, and perhaps for this reason considered more suitable. It should be also stressed that the inscription of Pepinakht, dating to the reign of Pepi II, records the attack of beduins on an Egyptian expedition which was constructing a ship to reach the land of Punt⁶⁵. The beduins are there described as *ʿmw ḥryw šꜥ*, “Asiatic sand dwellers”, a name which is suitable for Asiatic groups and may confirm that the episode took place in the northern part of the Red Sea coast, where the presence of Asiatic groups is more likely. Nevertheless, other elements, like the occurrence of rock inscriptions of officers bearing titles related to the navy on the route from Edfu to the region of Mersa Alam on the Red Sea coast⁶⁶, may suggest that another Old Kingdom harbour may have been located in that area⁶⁷. In New Kingdom times, the scanty early 18th Dynasty evidence collected at

1957, pp. 26-30.

⁵⁹ BELL *et al.* 1984, p. 43.

⁶⁰ FÖRSTER 2007, p. 4, Fig. 18; KAPER - WILLEMS 2002, pp. 88-89, Fig. 8-10.

⁶¹ BARD - FATTOVICH 2007, pp. 241-242, see also notes 1-7.

⁶² See below section 5.

⁶³ BARD - FATTOVICH 2007, pp. 242-243.

⁶⁴ TALLET 2006, pp. 26-30.

⁶⁵ SETHE 1933, p. 134, line 16.

⁶⁶ ROTHE *et al.* 1996, pp. 103-104.

⁶⁷ BELL *et al.* 1984, p. 42.

⁶⁸ GRANDET 1994, Vol. I, p. 338, Vol. II, pp. 255-260; see also BONGRANI 1997.

Mersa/Wadi Gawasis and the lack of any element pointing to the use of the harbour in the 20th Dynasty, at the time of the expedition organized by Ramses III and described in the Papyrus Harris⁶⁸, combined with the distribution of the rock inscriptions of Ramses III, may suggest that the harbour(s) serving the land of Punt was located elsewhere on the route following the Wadi Simna and reaching the sea close to Quwayh⁶⁹. Moreover, the occurrence of rock inscriptions dating to the New Kingdom on the routes leading to the region of Mersa Alam and Ras Banas on the Red Sea coast, may suggest that other possible New Kingdom harbours could lay in that area.

5. FROM DONKEY TO CAMEL: THE TRACKS IN LATER TIMES

The map of the distribution of the Greek-Roman and Late Antique sites (*Fig. 8*) shows that many of these sites are located along or close to the hypothetical routes to the Red Sea which could have been used by donkey caravans in earlier times. Of course, this is not altogether surprising as some of them are coincident with wells which are still used or are at least known from the literature. Nevertheless, this coincidence suggests that the adoption of the camel did not cause radical changes in the itineraries which were followed in the Eastern Desert. Apparently, the same happened also in the Western Desert, where in the last century camels and donkeys were often found walking side by side in the same caravan⁷⁰. It should be remarked that also in more recent times the distance covered in a single day by a camel caravan in the Eastern Desert was about 30 km⁷¹, i.e., in our model, the distance covered in a day by a donkey caravan, while the average distance separating the Roman and Late Antique *praesidia* and *hydreumata* in this same sector of the Eastern Desert is a bit more than 23 km⁷², the distance which was presumably covered in a single day by a heavily loaded caravan.

If the tracks did not change radically from Pharaonic to later times, it may be also suggested that some sites where Roman stations are located may have been used in earlier times⁷³. This was proven for example in a specific sector of the Via Hadriana, close to Makhareg, West of Sheik Ibada (Antinoopolis), where the Roman remains were associated with concentrations of lithic tools and cores suggesting a prehistoric or Early Dynastic use of the sites⁷⁴. Also the proven reuse in Ptolemaic times of gold mines exploited in earlier periods⁷⁵ is consistent with such continuity. Interestingly, a further element pointing to the continuity in the frequentation of some sites and tracks of the Eastern Desert over a long period is represented by the occurrence in the same spot of Pharaonic rock inscriptions side by side with recent beduin signs marking the presence of a well⁷⁶.

⁶⁹ See note 55.

⁷⁰ WALZ 1978, p. 76.

⁷¹ AUFRÈRE 2002a, p. 242.

⁷² MURRAY 1925, p. 145-146.

⁷³ SIDEBOTHAM - ZITTERKOPF 1998, pp. 357-358.

⁷⁴ SIDEBOTHAM - ZITTERKOPF 1997, p. 222, note 6.

⁷⁵ KLEMM *et al.* 2002, p. 219.

⁷⁶ See e.g. ROTHE *et al.* 1996, M. 7b, p. 101.

In this perspective, the case of the Roman Station of *Ænum* in the Wadi Gasus is remarkable as two inscriptions dating to the reign of Senwsert II and Amenemhat II, found by Wilkinson and Burton respectively, were discovered there⁷⁷. It was suggested by the scholars who discovered the stelae, and by R. Weill who visited the site later on⁷⁸, that it could have been used since Middle Kingdom times, but Abdelmoneim Sayed, who started excavations at the site of the Roman Station looking for further evidence of Middle Kingdom date, stated that only remains of Roman date were unearthed there and, therefore, suggested that the two stelae were originally erected at the site of Mersa/Wadi Gawasis and several centuries later moved to the place where they were discovered⁷⁹. A recent visit to the site of Wadi Gasus allowed a closer observation of the ceramic materials visible on the surface of the site, scattered among the remains of the Roman buildings excavated up to the foundations by Abdelmoneim Sayed⁸⁰. The ceramic materials on the surface can be ascribed for more than 50% to the Middle Kingdom; moreover a large amount of the Middle Kingdom ceramics can be ascribed to typical Marl C and Marl A3 *zirs*⁸¹ (Fig. 9).

Of course, our previous remarks on the continuity of the use of several tracks in the region may suggest that also other Roman and Late Antique sites may overlap earlier Pharaonic remains, which are perhaps identifiable just on the basis of the ceramics occurring on the surface. It is highly unfortunate that so far very little attention has been paid to the systematic study of the pottery from these sites⁸².

Studies of the artefacts from these sites may also help to identify materials ascribable to the local people of the Eastern Desert, not only because we know that the Egyptians interacted with them and in their activities in this area, as stated in the inscription by Henu⁸³, but also because it was remarked that often the Egyptian rock inscriptions are associated with rock art presumably at least partially produced by the pre- and proto-historic local inhabitants of the region⁸⁴. Interestingly, possible artefacts related to the presence of non-Egyptian groups were recently identified in assemblages collected close to gold mines exploited in the Old and Middle Kingdom⁸⁵, but also in this respect further investigation is needed.

6. THE HARBOUR AND ITS SURROUNDINGS

The occurrence at the Roman station in the lower Wadi Gasus of a large amount of Middle Kingdom sherds, most of them to be ascribed to bag shaped jars typologically similar to the ones collected at Mersa/Wadi Gawasis and very suitable for the storage of liquids, is remark-

⁷⁷ For the references see NIBBI 1976, pp. 46-47.

⁷⁸ AUFRÈRE 2002a, p. 256.

⁷⁹ ABDELMONEIM SAYED 1977, p. 146.

⁸⁰ The site was visited in January 2010 on the day off by A. Manzo, H. Wellmann, and C. Hein, members of the Italian-America Expedition at Mersa/Wadi Gawasis.

⁸¹ The ceramic materials were recorded and identified by A. Manzo and the classification was later on confirmed by S. Wallace-Jones, ceramic analyst of the Expedition.

⁸² As remarked also by BELL *et al.* 1984, p. 46.

⁸³ COUYAT - MONTET 1912, n. 114, p. 83, line 12.

⁸⁴ BELL *et al.* 1984, p. 43.

able not only with respect to the reconstruction of the network of inland tracks leading to the harbour. Actually this may suggest that the well at the site of the Roman station in the lower Wadi Gasus may have been used in Middle Kingdom times. A proper investigation of that site may identify remains of a well similar to the well-known examples in the desert West of Thebes⁸⁶ and in the Toshka area⁸⁷. This may help us to solve an important problem in our reconstruction of the organization of the expeditions to the land of Punt, i.e. how the water supply of the harbour was assured. Actually, the Roman station in the lower Wadi Gasus is within a 10 km radius of Mersa/Wadi Gawasis (*Fig. 10*), a distance which according to our theoretical model could be covered in half a day by a heavily loaded caravan of donkeys. This means that a caravan could go there and be back at the harbour with its water supply within a single day. This made the well in the lower Wadi Gasus a very suitable water source for the harbour. Of course a second well occurs within a 10 km radius of the site, but it is situated rather further away than the Wadi Gasus one.

Interestingly, in the same 10 km radius the hinterland of the harbour appears to be very rich in terms of mineral resources, such as sources of galenite, amethyst, lead and copper mines, while a gold mine which was exploited since Early Dynastic times is located at Wadi Simna, ca. 40 km to the southwest of Mersa/Wadi Gawasis⁸⁸. The richness in terms of mineral resources of the area may have been a further factor favouring the use of the site as a harbour. Actually, this may have also led to its discovery by Egyptian prospectors. Later on, the occurrence of possible sources of mineral resources highly appreciated in the Middle Kingdom close to the harbour may have been considered convenient in order to organize expeditions with a twofold aim, the exploitation of the mines and quarries and the launching of maritime enterprises in the Red Sea, as was often the case⁸⁹.

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⁸⁵ KLEMM *et al.* 2002, p. 216.

⁸⁶ DARNELL - DARNELL 2002, p. 148, Fig. 22.

⁸⁷ Ian Shaw personal communication.

⁸⁸ KLEMM *et al.* 2002, p. 216, Fig. 1.

⁸⁹ See section 3.

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SUMMARY

Le indagini a Mersa/Wadi Gawasis, il porto della 12ma Dinastia sul Mar Rosso da cui partivano le spedizioni verso la Terra di Punt, riattivate nel 2001 nell'ambito del progetto Congiunto tra l'Università di Napoli "L'Orientale" e l'Università di Boston, hanno raccolto nuovi dati sulle spedizioni marittime degli Egizi verso il Mar Rosso finora sconosciute. Gli spostamenti dei corpi di spedizione che attraversavano il Deserto Orientale per raggiungere il Mar Rosso costituivano un aspetto importante di ogni spedizione verso la Terra di Punt e per questo rappresentano una componente importante dell'indagine, non solo riguardo al modo in cui tali spostamenti venivano organizzati, ma anche quanto ai percorsi che venivano seguiti. In considerazione di ciò è stato progettato un GIS tendente a un duplice scopo: in primo luogo per raccogliere in forma sistematica tutti i dati disponibili riguardo a questa parte del Deserto Orientale e, in secondo luogo, per favorire future indagini nell'area. I maggiori condizionamenti che poterono influire sulla scelta dei percorsi da seguire da parte dei corpi di spedizione furono senz'altro la disponibilità di acqua corrente e le distanze percorribili giornalmente dagli asini. Un modello teorico della rete di comunicazioni che poteva essere stato utilizzato per raggiungere il porto è stato elaborato avendo in mente tali necessità.

Figure 1 – Satellite image with location of the site.

Figure 2 – Map of ancient and traditional routes in the Eastern Desert.

Figure 3 – Location of ancient and traditional water sources along the routes.

Figure 4 – Ancient and traditional routes along which the water sources were located at a distance of less than 30 km from each other and thus could be suitable for a donkey caravan, dotted lines mark routes with water sources at a distance between 30 and 35 km from each other.

Figure 5 – Hypothetical routes and mines: ■ Gold, ▲ Amethyst, ✕ Galenite, △ Lead, * Copper, ■ Recent mines.

Figure 6 – Inscriptions and routes selected by the GIS on the basis of the theoretical model. ● Archaic period and Old Kingdom, ● Middle Kingdom, ● New Kingdom, ◆ Third Intermediate and Late Period inscriptions.

Figure 7 – On the right of the inscription engraved in the Wadi Hammamat, a row of notches. It may be interpreted as a “mute account” of days by officers despatched in the Eastern Desert to give logistical support to the caravans and to control the territory.

Figure 8 – Roman sites and hypothetical routes to Mersa/Wadi Gawasis.

Figure 9 – Middle Kingdom ceramics from the Roman Station in the Wadi Gasus. Top row rim of a Marl C *zir*, lower row rim of a Marl A3 *zir*.

Figure 10 – Location of water sources (▲), inscriptions (● Archaic period and Old Kingdom, ● Middle Kingdom, ● New Kingdom, ◆ Third Intermediate and Late Period), and mineral resources (■ Gold, ▲ Amethyst, ✕ Galenite, △ Lead, * Copper) in the region of Mersa/Wadi Gawasis, the shadowed area marks a 10 km radius of the site.