

SOME REMARKS ON THE VISITORS IN THE NILE DELTA IN THE 4TH MILLENNIUM BC

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1. INTRODUCTION

In the 4th millennium BC the Nile Delta was settled by a group of people described by archaeologists as the Lower Egyptian culture. Most of the sites belonging to this cultural unit have been recorded in the central and eastern part of northern Egypt (Fig. 1). The western and northern parts of this region is still poorly recognized, however, the occupation of the Lower Egyptian culture has been already attested at some sites, *e.g.* Buto and Sais (VON DER WAY 1997; KÖHLER 1993; 1998; WILSON 2006; *this volume*).

The origins of the Lower Egyptian culture are not clearly known, but they should be linked probably with the first agricultural communities inhabiting the region, *i.e.* Merimde and el-Omari cultures (LEVY & VAN DEN BRINK 2002: 10; MIDANT-REYNES 1992: 206; 2003: 53).

The Lower Egyptian culture was the first fully agricultural community in Egypt. In the 4th millennium BC northern Egypt in general and the Nile Delta in particular offered very favourable conditions for farming and animal breeding. Periodic inundations of the Nile irrigated and fertilized the soil, while warm and humid climate was conducive to vegetation. Agriculture and herding were the basic forms of food production in the region. Hunting and gathering seem to have been of lesser importance as compared to the earlier times (MACZYŃSKA 2013: 101-106).

The production of tools and other items in Lower Egypt relied mostly on locally available material (clay, flint, stone, bone), and it did not involve any sophisticated techniques. The resources were obtained from the Delta area and possibly from its direct vicinity. The dominant group of Lower Egyptian artefacts consists of strictly practical household items. Specialisation in Lower Egypt can be observed only with regard to selected areas



Figure 1. The most important sites of the Lower Egyptian culture.

of manufacturing where particular skills were required (*e.g.* stone vessel production; beer production), whereas simple objects and implements were made on a household basis (MACZYŃSKA 2013: 112-178; *in press a*).

The Lower Egyptian culture was not an isolated society. The communities inhabiting northern Egypt maintained contacts with Naqadans from the south and the Late Chalcolithic/Early Bronze I societies from the east. Upper Egyptian and Southern Levantine imports registered at Lower Egyptian sites clearly attest the exchange of goods and information between the regions in question (MACZYŃSKA 2004: 435-437; 2006: 945-957; 2008: 761-779; 2013).

2. INTERACTIONS BETWEEN THE SOUTHERN LEVANT AND THE NILE DELTA

The small distance between the Nile Delta and the Southern Levant was probably one of the factors that influenced the character of contacts between the two regions (HAYES 1965: 122; WETTERSTROM 1993: 200). The early traces of these relations can be found in the early Neolithic material recorded at the sites of Lower Egypt, *i.e.* Fayum, Merimde and Wadi Hof; however, these finds are not easy to interpret (MACZYŃSKA 2008: 765-766; SHIRAI 2010). In the beginning of the 4th millennium BC the Lower Egyptian and the Late Chalcolithic Southern Levantine communities entered probably a new phase of contacts. The Lower Egyptian culture was perhaps the first one with such a significant number of Southern Levantine imports recorded at its sites. The quantity of Lower Egyptian items from this period found in the Southern Levant, however, is not so considerable (BRAUN & VAN DEN BRINK 2008; MACZYŃSKA 2008: 769-770; 2013: 181-200).

Due to the scarcity of records, the early relations between the Nile Delta and the Southern Levant are hardly discussed by scholars. The interpretations concerning this problem are often limited to the notions about the sporadic character of contacts. However, most authors are of the opinion that the early relations between both the regions involved the exchange of goods and ideas (LEVY & VAN DEN BRINK 2002: 18-19; DE MIROSCHEDJI 2002: 39-40; BRAUN & VAN DEN BRINK 2008: 644-650; GUYOT 2008: 709-714; BRAUN 2011: 107-108). According to P. DE MIROSCHEDJI (2002: 39-40) and F. GUYOT (2008: 714) the party in charge of organising this exchange were the Southern Levantines. In P. DE MIROSCHEDJI'S view the first Southern Levantines appeared in Lower Egypt in order to recognise the resources occurring in this region. In the opinion of F. GUYOT (2008: 714) the Lower and Upper Egyptian societies took part in the exchange rather than organised it. However, some changes in the character of contacts can be observed in the middle of Naqada II period. In the opinion of the author at that time the local societies not only took part in, but probably also organised the exchange of goods and ideas in an active way. Moreover, they benefited from these contacts, adopted new techniques and raw materials, *i.e.* mudbrick architecture, beer production, the use of copper (MACZYŃSKA *in press e*).

Although the organisation of exchange itself is still a subject of discussion, we cannot exclude that the inhabitants of the Southern Levant came to Lower Egypt. Since the character of contacts between the two regions involved mostly trade activities, the visitors were probably in large part traders or intermediaries.

2.1. ARCHAEOLOGICAL EVIDENCE

Archaeological evidence for the interaction between the societies of the Nile Delta and the Southern Levant consists mostly of imports and imitations registered at Lower Egyptian sites, including pottery, flints, stone and copper items. Additionally, special attention should be paid to the material recorded at 3 sites: Maadi, Buto and Minshat Abu Omar, indicating the presence of Southern Levantines in the region (RIZKANA & SEEHER 1987; 1989: 49-55; WATRIN 2000; FALTINGS 2002; HARTUNG *et al.* 2003).

2.1.1. Maadi

According to I. RIZKANA and J. SEEHER (1987: 31) Southern Levantine pottery makes up less than 3% of the material recorded at Maadi settlement. Its eastern origin has been confirmed by petrographic analyses carried out by N. PORAT (PORAT & SEEHER 1988: 215-228). The dominant form of the Levantine pottery recorded at Maadi is represented by round jars with wide, flat bases, high and well discernible shoulders, and roughly distinguished tabular or conical necks constituting approx. 1/3 of the vessel's height. The bottom part of the vessel is usually V-shaped, and the largest diameter is immediately under the neck. Jars of this kind were most probably used for storing goods brought in from the Southern Levant. Nearly all imported jars had lug or ledge handles (RIZKANA & SEEHER 1987: 53, pls. 72-77). Plastic knobs were fitted to jar handles as decoration. The imported pottery recorded at Maadi includes also a fragment of a jar decorated with rows of short, incised strokes and a fragment with a roughly vertical, parallel painted lines (RIZKANA & SEEHER 1987: 52-54, pls. 39:2, 77:5,7; TUTUNDŽIĆ 1993: 33-55; WATRIN 1999).

Flint tools assemblage registered at Maadi includes items showing close links to the Southern Levantine tradition, such as tabular scrapers and Canaanian sickle blades (RIZKANA & SEEHER 1985: figs. 7, 10). Both kinds of tools were made of high quality flint, probably in specialized workshops. The origin of the raw material can be identified only in the case of scrapers. It appears that they were made from flint extracted in the western part of the Negev Desert. Analogous scrapers were quite common in the Levant. The manufacturing technology of Canaanian blades, on the other hand, was much more widespread in terms of territorial range. They have been found not only at the Early Bronze sites in the Southern Levant and Lebanon, but also in Syria, Iraq and Kazakhstan (RIZKANA & SEEHER 1985: 237-254).

The most remarkable stone items imported from Canaan to Maadi include basalt discs (RIZKANA & SEEHER 1985: fig. 11; 1988: pl. 95). According to N. PORAT, who carried out a petrographic analysis of these items, the raw material bears characteristics of basalt extracted at the Negev Desert, and used in the Chalcolithic and the Early Bronze I in the Southern Levant. However, the scholar noticed that similar resource occurs also in the area of the Golan Heights, in Galilee and in Jordan, and it is thus possible that the material came from one of those locations.

Cedar wood artefacts are yet another group of items most likely imported from the east. The objects found at Maadi include a cedar vessel lid and several small cedar sticks, probably used as incense. It has not been determined whether they were manufactured locally or imported to the Delta as ready-made products (RIZKANA & SEEHER 1989: 25). Among other objects of the Southern Levantine origin are nine bone spatulas found in a cache (RIZKANA & SEEHER 1989: 22, pl. 8:4-15). Similar spatulas made of calf ribs are known from Chalcolithic sites such as Teleilat Ghassul, where they were commonly used as weaving tools (MALLON *et al.* 1934: 77). Imports from the Levant include also giant shells of *Tridacna maxima* and *Tridacna squamos*, native to the Bay of Suez and the Red

Sea (RIZKANA & SEEHER 1989: 21), which were used at Maadi as a kind of containers. A turquoise bead recorded at the site is another artefact considered to have been of eastern origin. The raw material in this case could have been mined in the southern Sinai (RIZKANA & SEEHER 1989: 109).

Important material of eastern origin recorded at Maadi was undoubtedly copper. At the site it occurs in a variety of forms, including finished tools, semi-finished products and ore (RIZKANA & SEEHER 1989: pls. 3-4). However, no metallurgical workshop was recorded at the site. The description of such a workshop had been included in a report from excavation works carried out in Egypt, published in 1936 by K.H. DITTMAN, who referred to oral information by M. AMER (DITTMANN 1936: 158), but this mention was probably a preliminary interpretation that was subsequently abandoned and removed from the final research report. Mineralogical analysis of the raw material have indicated that copper recorded at Maadi was obtained from deposits located in Timna and Feinan in the Sinai (RIZKANA & SEEHER 1989: 78-79).

The presence of imports at Maadi clearly points towards the existence of interactions between the Lower Egyptians and Southern Levantines. Some of the foreign items appeared probably at Maadi in effect of trade exchange (*e.g.* copper, or vessels used as containers). Some others, however, may have been personal equipment of traders or intermediaries from the east (*e.g.* flint implements or bone spatulas).

A significant evidence attesting the presence of the Levantines at Maadi are oval subterranean dwellings unearthed in the northern part of the explored area, which differ from the well-known, traditional above-ground structures registered commonly at the site (RIZKANA & SEEHER 1989: figs. 15-18). I. RIZKANA and J. SEEHER (1989: 55) have concluded that these oval dwellings were analogous in terms of construction to the subterranean structures recorded at the Beersheba Valley. The researchers have interpreted this similarity as the evidence for the presence of the Levantine traders or metallurgists at Maadi. This assertion is further supported by the discovery of a cluster of pit houses, isolated from the remaining buildings, in the northern part of the settlement (RIZKANA & SEEHER 1989: 80; FALTINGS 1998: 374; WATRIN 1998: 1218). In the 1990s the expedition from the El-Azhar University headed by F.A. BADAWI unearthed a pit house differing from the earlier ones by the use of stone (WATRIN 2000: fig. 6). In the years 1999-2002, the German Archaeological Institute (DAI) carried out an excavation project at Maadi, during which another subterranean dwelling was discovered, similar to those known from the publication of I. RIZKANA and J. SEEHER (HARTUNG 2004).

In the recent years the existence of clear connection between Maadi and Bersheba dwellings has been questioned by some scholars (COMMENGE & ALON 2002: note 14). E. BRAUN and E.C.M. VAN DEN BRINK (2008: 649-650) suggest even that the chronology of Maadi structures is later (EB I). According to U. HARTUNG (2004), all known subterranean structures recorded at Maadi indicate the gradual development of the settlement's architecture, associated with increasingly vast experience of builders and the use of a new

building material (stone) in constructing residential structures. This could point towards the longer presence of the visitors from the east at the site, or their regular visits at Maadi.

Maadi cemetery, unlike Maadi settlement, did not contain vessels either linked to Southern Levantine traditions or imported from the Southern Levant (RIZKANA & SEEHER 1990: 26). The graves of another necropolis at which Maadians probably buried their dead, *i.e.* Wadi Digla, contained vessels whose decorations or fabric only followed the eastern traditions. Such vessels were found in graves from the younger stage of the cemetery. The paste used for manufacturing those pottery items was tempered with crushed limestone, in some cases added in great amounts. However, petrographic analyses have shown that the key component of the paste was local Nile clay.

Wadi Digla vessels bearing the Levantine characteristics include three red burnished jars with lug-handles on the neck (RIZKANA & SEEHER 1990: pls. 4; 34, 47). According to I. RIZKANA and J. SEEHER (1990: 87), they most probably imitate stone vessels that were fairly common in the Southern Levant. Another group of finds of the Levantine origin consists of five jars not covered with a red slip, with high amount of crushed stone temper, three of which had knobs and impressed dots.

Flint items are very uncommon for the cemeteries of the Lower Egyptian culture and they are rarely found in its graves. A single tabular scraper recorded at Wadi Digla (grave WD401) in terms of material and form resembles scrapers well known from Maadi, where they are interpreted as Canaanite imports or their imitations (RIZKANA & SEEHER 1990: 90).

Almost complete absence of imports in the graves of Maadi cemetery may have resulted from the lack of tradition of equipping the dead in a large quantity of valuable offerings in this early period. Despite the fact that the inhabitants of the settlement at Maadi possessed objects of special character, including imports from the east, they equipped burials mostly with one or two locally made ceramic vessels, sometimes imitating the imported jars.

2.1.2. Buto

Southern Levantine pottery is present in Buto inventories from phases I and II. In phase I, pottery similar to Chalcolithic vessels makes up approx. 30% of the entire material (FALTINGS 1998: 367; FALTINGS 2002). Vessels from phase Ia are characterised by a typically Southern Levantine fabric, form and decorations, while in phases Ib and IIa there appear vessels made of local material, whose forms and decoration types are linked to the Levantine pottery. According to E.CH. KÖHLER (1993) and D. FALTINGS (2002), the changes in the features of pottery were associated with the presence at the site of a group of immigrants from Canaan who must have assimilated into the local community, adopting local cultural traditions including pottery production. This merger of the Levantine and local ceramic styles resulted in the production of so-called hybrid vessels. Over time, technological innovations introduced by the immigrants from the Southern Levant (such as the use of the turning device), were discarded, possibly due to the lack of specialized pottery workshops and the prevailing household mode of production.

Vessels similar to the Chalcolithic Levantine pottery are represented by V-shaped bowls with a painted rim decoration of white stripes, vessels with a pie-crust rim and fenestrated bowl-stands. This group includes also holemouth jars (fairly numerous in Buto) and large storage jars with white painted bands on the shoulder or a white strip applied on the upper part (FALTINGS 1998: 367; 2002: 165-168; FALTINGS *et al.* 2000: 135-136). Additionally, on the basis of fragments of bases, bodies and rims, T. VON DER WAY (1997: 106-107, Taf. 44:16) reconstructed a Levantine jar with a cylindrical neck, simple rim and oval body, with a characteristic cream-colored surface. The petrographic analysis has shown that this vessel was made of typical Canaanite marl clay, characteristic for EB I, found *e.g.* at Azor site. In terms of morphology the reconstructed jar resembles Maadi jars, classified by I. RIZKANA and J. SEEHER (1987: 73) as the Southern Levantine imports. Foreign origin is also attributed to two fragments of flat bases made of ceramic paste tempered with crushed bones. Other Southern Levantine elements include characteristic handles, knobs and a fragment of a churn or a bird vessel, again similar to a piece found at Maadi (VON DER WAY 1997: 106; FALTINGS 1998: 367; FALTINGS *et al.* 2000: 135-136).

Imitations of imported vessels such as V-shaped bowls and holemouth jars appeared at Buto first in phase Ib. Although vessel shapes remained unchanged, their manufacturing technology was gradually adapted to local conditions. Potters began to use locally available clay and replace mineral temper with increasing amounts of straw and chaff.

V-shaped bowls with spiral reserved decoration form another group of artefacts useful for investigating the contacts of Buto inhabitants with Canaan. They include 13 fragments of at least 10 different bowls. Although a controversial hypothesis on their Mesopotamian origin had once been presented, the said fragments eventually came to be considered as imports from the Chalcolithic Southern Levant, where they are found quite commonly, for instance in the vicinity of Beersheba and the northern Sinai (FALTINGS 1998: 367-371). Also clay nails recorded at Buto should be linked probably with characteristic ceramic forms, *i.e.* cornets, known from nearly all Beersheba sites (FALTINGS 1998: 374-375).

The presence of the Levantine pottery imports at Buto was confirmed by petrographic and chemical analyses. In the result of the research by N. PORAT (1997), only five samples are classified as Canaanite imports. It turned out that the pottery was made of calcareous clay tempered with well sorted sand and quartz, and in some cases with calcite. Precise identification of the origin of this clay proved impossible, because sources of calcareous clay can be found all over Canaan. Similar petrographic and chemical features have been observed *e.g.* in the pottery from Azor. According to N. PORAT (1997: 231), it goes beyond reasonable doubt that the analysed samples came from vessels manufactured in the Southern Levant.

Moreover, the petrographic analysis has proved that clay of local ceramics showing typological similarities to the Levantine vessels was tempered with phosphorite and had high concentrations of P and Ca. This type of pottery was unknown in the early and middle Predynastic period either in Egypt or in the area of today's Israel. Buto was

thus the only place where this technology was used. According to N. PORAT (1997: 229), phosphorites could have been added to clay in order to preserve the the bright surface colour. As a result, vessels resembled Levantine pottery not only in terms of shape, but also in terms of colour. The fact that on the basis of analysis Buto pottery was classified as the Levantine one shows that the local potters had been quite successful.

As far as flint inventories are concerned, the links between Buto and the Southern Levant are rather unimpressive. K. SCHMIDT (1987: 253, Abb. 5:6-7, 10-11) mentions two bifacial sickle blades with flat surface retouch. He sees their origins in the Chalcolithic Canaan, where such artefacts are fairly common. Another findings associated with the Chalcolithic period in Canaan are microlithic endscrapers from Buto, with distinctive little retouch on their working edges (SCHMIDT 1986: 204; 1993: 275). Eastern origin can also be attributed to flat tabular scrapers made of characteristic flat flint nodules. The scrapers were oval and had cortex on the dorsal surface. According to K. SCHMIDT (1988: 297-306, Abb. 9.1-3; 1996: 270), they should be considered as imports from the Levant, where their manufacturing traditions are dated from the Chalcolithic to EB III (ROSEN 1983: 79-86; 1997: 75; *this volume*). In the light of recent analyses, there is no doubt that the obsidian recorded at Buto was also of eastern origin (BAVAY *et al.* 2004).

Apart from ceramic vessels and flint implements, imports recorded at Buto include items made of other kinds of material. In the assemblage of basalt vessels T. VON DER WAY (1997: 109, Taf. 48-51, 54) identified a fragment of a bowl with a characteristic swelling of the walls between the rim and the base. The origin of the basalt material has not been fully confirmed in this case, even after petrographic analyses. In terms of shape the bowl resembles the vessels found in EB I contexts in the Southern Levant (VON DER WAY 1997: 110, footnote 623). The artefacts of the Lower Egyptian culture found at Buto include also three copper artefacts: a fishing hook, a wire and a piece of unknown function. Just like copper items found at Maadi, these objects were made of the raw material that came from the area of Feinan and Timna in the Sinai (PERNICKA & SCHLEITER 1997: 219-222).

To sum up, the archaeological data recorded at Buto indicate that the majority of imports dated to phase Buto I, including pottery vessels, flint implements and stone vessels may have appeared at the site together with a group of foreigners from the east as their equipment. In later periods, after the assimilation of immigrants with local communities, the imports could have reached the site in the effect of trade exchange with the east.

2.1.3. Minshat Abu Omar

Grave offerings from the necropolis at Minshat Abu Omar include 20 Southern Levantine vessels. Most of them were found in the oldest graves, dated to Naqada IIc-d (KROEGER 1989). One of the most intriguing artefacts is a jar with ledge handles used as a coffin for a fetal burial (grave 316). The jar was made of yellowish clay with ceramic and mineral temper. It had a flat bottom, wide body, rounded shoulders, concave neck and rounded, overhanging rim. Its surface shows traces of red paint and also a diagonal strip decorated in a rope-like

pattern. Vessels similar in terms of form and fabric are known from Maadi (KROEPER 1989: 407-410, fig. 2a). In grave 840 the bottom part of a similar vessel with ledge handles was found; however, in this case, a fragment of a loop handle was preserved in the upper part of its body. Due to the vessel's incompleteness, one cannot preclude that on its opposite side there was another loop handle (KROEPER 1989: 410, fig. 3). Loop handles are also present on a fully preserved vessel from grave 799, which is additionally characterised by a horizontal strip of clay between the handles, deeply scored vertically (see also CZARNOWICZ *this volume*). Both vessels represent one of the most frequent vessel types known from EB I sites in the Southern Levant, e.g. in Arad, Ai and Jericho (KROEPER 1989: 411).

Another interesting group of vessels consists of 2 spouted jars. The first of them, found in grave 303, have a broad, flat base, a round body and probably a conical neck. The spout was located in the upper part of the vessel, at the body-to-neck transition. At the same height two loop handles were attached. The other jar was smaller, had a round body, a very short neck and a simple, slightly everted rim. The spout was located in the upper part of the body. K. KROEPER (1989: 416) mentions the Southern Levantine parallels from Fâr'ah and Jericho for both of those jars.

Vessels known as churns come from graves 787 and 313. The first one is a small oval vessel with a spout at the top, flanked by two upright loop handles. The other vessel had an oval body and an asymmetrical spout flanked by two loop handles. Its top was decorated with impressed parallel rows of small circles. Both vessels are characterised by a remarkable – brittle and flaky – fabric (KROEPER 1989: 416-417, figs. 8a, 9a). Churns similar to vessels from Minshat Abu Omar have been found in the Southern Levant, but even there they are considered rare. Thus far, 11 such specimens have been collected, e.g. in Azor, Gezer, Jericho, Palmahim Quarry, Tel Erani and Horvat Ilin Tahtit (BRAUN & VAN DEN BRINK 1998: 82; CZARNOWICZ 2012b: 248-249). Other eastern imports recorded at Minshat Abu Omar include a small jar with two lugs found the grave 221 (KROEPER 1989: 412, fig. 5a).

All the vessels presented above were classified as imports by K. KROEPER (1989). However, detailed studies showed that in the case of two ones, *i.e.* the keg or churn-type vessel from grave 313 and the ledge handles jar from grave 840, clay bears rather local Egyptian than Canaanite characteristics. According to J. RIEDERER (1992) the calcite temper present in these two vessels came from the Eocene Theban formation extending between Cairo and Esna. In the opinion of K. KROEPER (1992: 30) both vessels could be made locally, but by means of a new technology involving the use of crushed limestone and calcite as tempers. The scholar claims that this new technology may have been shown to the local population by foreign potters, but did not gain popularity due to the low firing temperature required for the process.

Copper items were found in several of the oldest graves of the necropolis. Noteworthy is a harpoon with a single barb (grave 761) and a bracelet made of thin twisted copper wire (grave 806) (KROEPER & WILDUNG 1994: 151, Taf. 41; 2000: 30). Copper beads were found in two graves: grave 755, containing 2 cylindrical beads made of copper sheet, and grave 663, containing a small round bead (KROEPER & WILDUNG 1994: 49, Taf. 8:17). Graves 224,

231 and 323 comprised strongly corroded needle or needle-shaped objects. Thus far no information has been published about the origin of copper material used to manufacture the items from Minshat Abu Omar. Due to the vicinity of the necropolis to the Sinai it is reasonable to assume that copper came from the deposits occurring in this region. In some graves malachite was found, the resource whose origin could be strongly linked to copper.

The imports from the east recorded at Minshat Abu Omar together with local ceramics attest the existence of trade relations between the Southern Levantines and the communities inhabiting the settlement located in the vicinity of Minshat Abu Omar cemetery. This settlement was probably situated on trade routes and its location in the eastern Nile Delta facilitated the transfer of goods further to the east and south. Imports recorded in graves of Minshat Abu Omar do not point directly towards the presence of foreigners from the east. However, due to specific location of the site such a possibility cannot be excluded. Puzzling in this case is the temper of Egyptian origin in two vessels indentified as imports. According to excavators, they may be the evidence of the presence of foreign potters at the site.

2.1.4. Other sites

At other sites of the Lower Egyptian culture the number of imports from the east is not so considerable. At the cemetery of Heliopolis, which is partly contemporary to Maadi settlement, only three jars were probably of the Southern Levantine origin. According to F. DEBONO and B. MORTENSEN (1988: 30-31), they are similar in terms of fabric to the vessels from the Southern Levant recorded at Maadi. Most likely they were made of calcareous clay with numerous limestone inclusions becoming cream or pink after firing. Occasional red or reddish-to-brown inclusions had the same structure as the paste and could have been fine fragments of either pottery or ochre.

In terms of shape, there is not much differentiation among Heliopolis vessels. One of the jars has a round body, a wide and high conical neck with a straight rim and a wide, flat base (DEBONO & MORTENSEN 1988: pl. 8/13:1). Similar Levantine vessels are known from Maadi, however, their necks are longer. In addition, jars of this kind have lug handles or knobs. The other jar is incomplete – only the base part has been preserved. It is characterised by a knob typical for Canaanite pottery. The third vessel of probably the Southern Levantine origin found at Heliopolis is a round jar with a wide base, a high neck and a straight rim. Similar jars with handles are known from Maadi. F. DEBONO and B. MORTENSEN (1988: 34) are of the opinion that although the Southern Levantine vessels from Heliopolis are dated to the beginning of EB IA, they show more similarity to the Chalcolithic, rather than to EB I pottery.

The trait of pottery recorded at Heliopolis that may point towards the eastern influence is the coating of light, beige or cream wash, which was possibly applied in order to make local vessels similar to the Southern Levantine cream ware (DEBONO &

MORTENSEN 1988: 34). Apart from pottery, unidentified copper items, a single fragment of a copper bracelet (grave 34) and small fragments of malachite were found at Heliopolis (DEBONO & MORTENSEN 1988: 16, 36).

At younger Lower Egyptian sites the quantity of imports is higher, but still relatively small as compared to the inventories of Maadi and Buto. However, it should be emphasized that some of those sites are still excavated and new discoveries can change our view in this matter.

In the case of Tell el-Farkha, thus far the exploration of Lower Egyptian layers has yielded only a handful of the Levantine imports, mostly vessel fragments with characteristic ledge handles. This type of handles, commonly referred to as “folded” ledge handles, first appeared in the Southern Levant in EB IA (BRAUN 1996: 93; CZARNOWICZ 2012b; MACZYŃSKA 2013: pl. 10). Handles of this kind are well known from numerous locations at Site H (ROSCHWALB 1981: fig. H.7:5) Taur Ikhbeineh III-IV (OREN & YEKUTIELI 1992: 337, fig. 12:11) and Azor (GOLANI & VAN DEN BRINK 1999: fig. 12.9).

Pottery imported from the Levant was recorded also during explorations of earlier layers at Tell el-Farkha. Noteworthy is a large jar, almost completely preserved, made of light, creamy clay with coarse mineral temper making the walls rough. In terms of form (a broad, oval body, narrow, slightly everted rim, two ledge handles in the lower part of the body and a narrow base) it resembles jars known from EB I sites in the southern Israel, such as Site H, Afridar Quarter of Ashqelon (MACZYŃSKA 2003; 2013: pls. 22-23; CZARNOWICZ 2012b: 246-247).

Other finds recorded at Tell el-Farkha include a partially preserved copper knife (triangular, rounded-tip blade) found in the Lower Egyptian residence (CHŁODNICKI & GEMING 2012: 98; MACZYŃSKA 2013: pl. 17). No analogous findings from other Lower Egyptian sites are known. Similar artefacts were recorded at Ashqelon site in Israel dated to the EB IA2 period, corresponding to the period in which Tell el-Farkha’s Lower Egyptian residence had been developed (CZARNOWICZ 2012a: 351; see also for Ashqelon GOLANI *this volume*). The analysis of chemical composition has confirmed that the knife was made of copper derived from the Sinai (for details see REHREN & PERNICKA *this volume*).

Lower Egyptian layers at Tell el-Iswid yielded 95 fragments of vessels believed to have been imported from the Southern Levant and Upper Egypt. However, no detailed information about those imports is available (VAN DEN BRINK 1989: 67, note 14). Similarly, no details have been published so far about pottery imported from Canaan, found in phase 7 layers at the site of Tell Ibrahim Awad (VAN DEN BRINK 1988: 65-84; 1992: 43-68).

It is worth to mention here that the excavations carried out at Tell el-Iswid by the French Institute of Oriental Archaeology (IFAO) in Cairo revealed fragments of the Southern Levantine vessels. They were made of loess clay tempered with coarse quartz and sand mixed with crushed calcite. Due to their bad state of preservation the identification of vessels forms is in most cases impossible. Only in one instance a ledge could be identified (GUYOT *in press*: 2-3, 17, fig. 11.5)

Flint inventory from Tell el-Iswid and Tell el-Farkha bears all the characteristics of the Lower Egyptian culture. Traces of contacts with the east are very scarce. The only foreign, eastern find in this assemblage is obsidian of Anatolian origin (PERNICKA 1996: 286). At both the sites obsidian knives made according to the technology characteristic of Upper Egypt were recorded. It is likely that the material reached southern Egypt via the colonies of the Uruk culture in northern Syria, and subsequently via the Levant and Lower Egypt. In the form of a finished product it was traded between the Naqada culture centers and the northern settlements (SCHMIDT 1989: 90-91; 1992: 34).

In the case of Tell el-Farkha and Tell el-Iswid archaeological evidence indicates clearly the existence of trade relations/contacts with Canaan. However, the data we have do not allow us to either attest or exclude the presence of visitors from the east at those sites.

2.2. SUMMARY

Imports recorded at Lower Egyptian sites can be divided into two groups (Tab. 1). The first one includes items that attest the presence of the Levantine people in Lower Egypt, and the other comprises finds which, although not precluding the presence of foreigners, are clear evidence of trade exchange between the two regions. To the first group belongs the material found at Buto, where apart from local communities, a group of foreigners was settled. Initially the migrants maintained their cultural identity, but over time they assimilated into regional conditions and culture. These people brought with them their own equipment, including pottery or flint implements, which differed from locally manufactured objects. The second group consists of artefacts that appeared in Lower Egypt in the result of trade exchange. They were probably exchange goods, and possibly in part also personal equipment of traders/foreigners. The example in this case is the site at Maadi, which was visited by traders from the east. The presence of typical eastern subterranean building structures at the site points towards long and probably frequent stays of the traders at the settlement. Some imports, *e.g.* spatulas, tabular scrapers or Caananian blades may have been their personal equipment.

The chronology of analysed artefacts of both groups indicates that foreigners from the east came first to Buto in the late Chalcolithic period, which was contemporary to Naqada I, the time of crucial cultural changes in the Southern Levant. Imports from other sites are dated already to EB I and they are associated with the intensification of trade exchange between the regions in this period. Even the suggested presence of foreign potters at Minshat Abu Omar would have been related to the location of the site on trade routes connecting the Southern Levant with Lower and Upper Egypt, and to trade activities taking place at the settlement.

Interesting finds are the local imitations of eastern products. They also can be divided into two groups. The first one includes all the artefacts that were manufactured at Buto by the migrants with the use of local resources. These items were made probably as the „expression of identity” (*cf.* BAUER 2008: 90). It is worth noting that not only forms,

Table 1. Southern Levantine imports and imitations on the Lower Egyptian sites.

CHARACTER OF FINDS	DESCRIPTION OF FINDS	MAADI	MAADI CEMETERY	WADI DIGLA	HELIOPOLIS	BUTO	MAO	TELL EL-FARKHA	TELL EL-ISWID	TELL IBRAHIM AWAD
Imports	equipment of foreigners	x				x				
	exchange items	x			x	x	x	x	x	x
	flow of ideas	x								
Imitations	made by foreigners					x	?			
	made by locals	x		x	x	x				

but to some extent also the technology of the foreign items was copied. For instance, adding a large amount of phosphorites gave the pottery vessels bright colour, making them similar to imported ceramics.

The second group of imitations consists of objects, which were manufactured by Lower Egyptians, and bore characteristics of foreign items in terms of technology, forms and/or decorations. The reasons for producing such items is difficult to explain, since they may have been associated with some factors elusive today for archaeologists. Possibly the imitations of this kind were manufactured due to high value of original imports, their limited accessibility or some local conditions. In the assemblage of Lower Egyptian imitations very difficult to classify are two vessels found in graves 312 i 840 at Minshat Abu Omar. Made probably in Egypt, they imitated Southern Levantine technologies and forms. According to K. KROEPER they were manufactured by foreign potters in Egypt. However, the reason for producing such items is not clear. At present it is not possible to determine whether these vessels were the „expression of identity” of potters, or whether they were made at the site in response to high demand. Minshat Abu Omar, located on a trade route leading from the east to south, was probably a place of intensive trade exchange.

3. UPPER EGYPTIANS IN THE NILE DELTA

The relations between the Nile Delta and Upper Egypt prior to Naqada IIC period seem to have been sporadic. The distance between these two regions certainly did not facilitate the contacts. It is believed that the Naqadans began to take more interest in the north at the end of Naqada I, the period of social changes in the south. Social differentiation process fuelled the demand for prestigious items that denoted special status of their owners. And this, in turn, must have led to the intensification of interregional contacts (KÖHLER 2010: 39-40). Lower Egypt was one of the areas where the sought-after items were available. Typical Lower Egyptian objects were innumerable at southern sites, as the Naqadans were probably interested mostly in items imported by the local communities from the Southern

Levant. Naqada I and the first part of Naqada II were the periods in which the demand for prestigious objects had just emerged, and hence the scale of exchange was not large, which can be attested by a small number of imports recorded in the materials from Upper and Middle Egypt dated to these times (*cf.* WATRIN 2003: 568-570). In return for the eastern goods Lower Egyptians could obtain Upper Egyptian items.

The second half of Naqada II period witnessed more intensive contacts between the societies of Lower and Upper Egypt. The number of Upper Egyptian imports, especially pottery, increased in the Nile Delta, *e.g.* at Tell el-Farkha and Buto (MACZYŃSKA 2004: 435, 438-439; JUCHA 2005: 55-56). This period, referred to as the Lower Egyptian-Naqadian transition, was the time in which the Lower Egyptian and the Naqada culture underwent changes. The middle of Naqada II period is often associated with one more term, *i.e.* Naqada expansion. The most important reasons for the suggested expansion are attributed to the Naqadans' desire for Lower Egypt wealth and control over trade with Southern Levant (SIEGEMUND 1999; WILKINSON 1999: 311; BARD 2000: 58; CIAŁOWICZ 2001; CAMPAGNO 2004). The majority of authors who use this term assume that there must have been a movement of people and an arrival of Upper Egyptians to Lower Egypt (*e.g.* KAISER 1964; 1985; 1987; 1990; WILKINSON 1999: 17; CIAŁOWICZ 2001: 209-210; MIDANT-REYNES 2003: 45; KEMP 2006: 88). Since the Naqadans are seen as the dominant party in this process, their culture is believed to have influenced or even replaced the local one (*e.g.* BARD 2000: 58-59; BUCHEZ & MIDANT-REYNES 2007; 2011). Although the data obtained in the excavations carried out in recent years have called into question the Naqadian expansion to the north, the problem is still widely discussed (KÖHLER 2008; *this volume*; BUCHEZ & MIDANT-REYNES 2007; 2011; MACZYŃSKA 2011; *in press c*).

3.1. ARCHAEOLOGICAL EVIDENCE

Imports from Upper Egypt are not numerous at the sites in the Nile Delta. They are comparable in terms of quantity to imports from the Southern Levant, and include mostly pottery, flint tools, stone items. It is also believed that the use of mudbrick and beer production were ideas taken from Upper Egypt.

3.1.1. Maadi

Maadi is a site with the highest number of Upper Egyptian items dated to Naqada I and the first part of Naqada II periods found in the north.

Interesting group of imports recorded only at Maadi includes pottery with a characteristic black rim zone. In Upper Egypt blacktopped vessels make up over 50% of pottery assemblages in Naqada I period (HENDRICKX 2006: 71). At Maadi a total of 12 fragments of imported vessels was registered. They were made of Nile clay with mineral temper of sand and crushed stone. Vessel surface was covered with slip, either dark red, plum or red brown. The rim zone was colored black, both inside and outside.

Break color in the rim zone is also black, and it changes to red brown with a black core in the other parts of the vessel. The entire surface was polished very well, either vertically or diagonally, with a hard object¹.

Blacktopped ware of Maadi includes jars, beakers and bowls (RIZKANA & SEEHER 1987: pls. 68-71). The majority of jars are quite small, and the most characteristic ones have a squat body and a straight ogival rim. S-profile beakers constitute a fairly homogenous group. One of the forms is characterized by a diameter increasing gradually from base to rim, giving the vessel a tulip-like profile. The relative small number of bowls as compared to jars and beakers is in line with the general scarcity of these forms at the entire site (RIZKANA & SEEHER 1987: 5).

In Upper Egypt blacktopped pottery was usually deposited as grave offerings. However it seems that in the north the function of such vessels was different. No graves containing vessels of this kind were found at the contemporary cemeteries of Maadi or Wadi Digla. It seems that such vessels were used by the inhabitants of the settlement, rather than offered as grave goods.

Additionally, Maadi settlement contained local imitations of blacktopped vessels. Small quantity of these items may suggest their high value and probably some limits in their accessibility. Local imitations of blacktopped ware differ from imported originals by the presence of organic temper, and by the character of the black rim zone. In vessels manufactured locally only the outer surface is black, while break color is light brown or red brown. Furthermore, only the outer surface of the vessel is covered with slip. Imitations of blacktopped ware are not crafted as carefully as originals, but in terms of form they resemble the foreign original items.

The inhabitants of Maadi possessed also vessels made of other kinds of material. Interesting finds are 3 ostrich shell vessel fragments (RIZKANA & SEEHER 1989: pl. 5), which were used probably only for specific purposes. They are decorated with engraved ornamentation inlaid with black pigment. The main decoration motif is a row of alternating hatched triangles. In addition, the base of one of the shells features an engraved circle with two zigzag lines inside. Similar decorated shells are known from Predynastic assemblages of Upper Egypt, *e.g.* from Naqada cemetery (grave 1480), where an ostrich shell with two engraved deer was substituted for the skull of a deceased (PETRIE & QUIBELL 1896: 28). A geometric decoration motif of hatched triangles and zigzag lines can also be observed on Upper Egyptian wooden ostrich shell model of unknown chronology, on one of clay ostrich shell models from Abadiyeh – grave B101 – SD 34 (PETRIE 1901: 33, pl. V), and on the Naqadian pottery (PETRIE 1921: pls. XXIII 74; XXIV 32; XXVI 32; XXVII 67). Shell vessels may be considered as imports from the south.

Also the assemblage of flint tools registered at Maadi includes imports from the south. Two knives are particularly remarkable, as they are distinct from local items by the form and manner of manufacturing. One of them is finished with a fish tail edge, and

¹ For more details about the methodology of obtaining black rims of this kind see RIZKANA & SEEHER 1987: 27; LUCAS & HARRIS 1962: 380; DAVIES 1962; HENDRICKX *et al.* 2000: 171-187; BABA & SAITO 2004.

the edge of the other knife is pointed. Both knives are treated as Upper Egyptian imports characteristic of the southern flint tradition of Naqada I and II periods (RIZKANA & SEEHER 1985: 238, fig. 8:1-2).

Other remarkable objects recorded at Maadi, important in the context of Lower Egyptian-Naqadian relations, include carefully crafted slate rhomboidal palettes with polishing on both surfaces. More than a dozen items, preserved mostly in fragments, were unearthened at the site. They should be considered as imports from the south, as palettes of this kind were very characteristic finds at the sites of Naqada I culture (RIZKANA & SEEHER 1984: 244).

Other Upper Egyptian imports recorded at Maadi, mentioned by I. RIZKANA and J. SEEHER (1984), include 4 two sided square combs (3 made of horn and one of bone) and 6 disc maceheads. In the case of stone vessels the identification of imports is difficult. In the opinion of I. RIZKANA and J. SEEHER (1984: 244) the majority of vessels of this kind recorded at Maadi, particularly basalt ones, were produced in the south. However, according to the present state of knowledge they are considered to have been produced in specialised workshops in the north (MALLORY 2000; MALLORY-GREENOUGH 2002; KÖHLER *in press*; MACZYŃSKA *in press a*).

In contrast to Maadi settlement, Maadi and Heliopolis cemeteries do not contain any Upper Egyptian imports. Among grave offerings at Wadi Digla burial ground, at which the inhabitants of Maadi buried their dead, only a fine specimen of a rhomboid slate palette was registered (RIZKANA & SEEHER 1984: 251).

3.1.2. Minshat Abu Omar

Minshat Abu Omar is another important site for the study of contacts between Upper and Lower Egypt. The oldest graves (group I) have long been treated by scholars as burials of a Naqadian cemetery, and consequently presented as the evidence for the Naqadian expansion in the north (*i.e.* CIAŁOWICZ 2001: 92; KAISER 1985; 1987; MIDANT-REYNES 1992: 178, 206; 2003: 163; WENGROW 2006: 84). Burial customs identified at the site were interpreted for many years as ones of a typically Upper Egyptian character. This view was largely influenced by the observable resemblance between the oldest graves from Minshat Abu Omar and the graves from cemeteries regarded as the most northern Naqadian sites, *i.e.* Gerzeh and Harageh, and also by the fact that most scholars emphasised the differences in equipment between the graves of groups I and II and ones from other Lower Egyptian cemeteries, *i.e.* Maadi, Wadi Digla and Heliopolis.

The cultural identification of the oldest graves from Minshat Abu Omar was first questioned by E. CH. KÖHLER (2008: 528). The scholar indicated that ca. 55% of vessels found in graves dated to MAO I can be classified as PETRIE's type R65-69 (*i.e.* lemon and bag shaped jars). She also attested the presence of fibrous temper in some Red polished jars that she investigated in the collection of the Munich Museum. All the above information has led her to conclude that the graves of group I from Minshat Abu Omar are entirely Lower Egyptian in character. Moreover, KÖHLER's view is followed by

the author (MACZYŃSKA *in press d*). The archaeological evidence represented by ceramic assemblages and burial custom points to a local character of burials. The graves of group I from Minshat Abu Omar should no longer be treated as the Naqadian ones (see also DEBOWSKA-LUDWIN *this volume*).

Offerings recorded in the oldest graves of group I include, beside local pottery, also Upper Egyptian D-ware and W-ware. Group I includes 5 graves containing D-ware and 14 graves containing Wavy handles vessels. In the case of D-ware noteworthy are 4 small, squat, lug handles jars corresponding to PETRIE'S D9c type. 2 of them are painted with a dark red spiral motif. The decoration of other vessels consists of wavy, parallel, horizontal lines; additionally, in one case wavy lines on the body are interrupted by a line of horizontally arranged 'ZZ' pattern. Particularly interesting is an oval, lug-handles jar showing the representation of 2 painted boats with 2 cabins in the middle. Between the ships, immediately below them, are placed 2 trees and a mountain's cape made up of 5 triangles. Additionally, between the trees there are 2 rows of 'S' lines. All of D-ware vessels from the cemetery are dated to Naqada IIc-d period (KROEPER 1985: 12-14, figs. 1-4; 1986/87: figs. 3-5; 1988: figs. 23-25, 57-61).

Wavy handles jars were identified by K. KROEPER in 33 graves, of which only 14 belong to group I. All W-ware vessels from Minshat have been divided into 4 groups, representing chronological sequence of the development of this form during Naqada IIc-d2 (HENDRICKX 2006: 78-80). The first group includes the oldest vessels, characteristic of protruding, well modeled wavy handles. The two most numerous groups contain smaller and slimmer jars with two handles, and slimmer jars with continuous wavy bands around the shoulder. The last group consists of almost cylindrical jars decorated with continuous wavy band typical for younger graves of the site. According to K. KROEPER (1986/87: 74) the majority of Upper Egyptian pottery items were made of marl clay fabric A1 according to the Vienna system.

Apart from D-ware and W-ware ceramics, graves of group I include also other vessels of Upper Egyptian origin, made both of marl and Nile clay. Among the items made of marl clay were: a squat jar found in grave 148, similar in shape to PETRIE'S D9c type without painted decoration, a small jar from grave 194, resembling bag shaped jars, and a jar found in grave 175, with one preserved lug handle similar in shape to vessels of PETRIE'S D7-8 type. As far as pottery finds made of Nile clay are concerned, some of them might have been imports from the south or local imitations of the Upper Egyptian forms. Grave 123 contained a Red polished jar with an oval body, everted rim, concave base and two lug handles. In terms of shape the jar resembles stone vessels known from the graves of group I. In grave 341 a smaller jar with lug handles was recorded, made of fine Nile clay (NIB2). In grave 865 a small jar was found made of fabric NIB1, similar in shape to PETRIE'S types D20 or D26-27.

Grave offerings of group I at Minshat Abu Omar include also items made of other kinds of material. Small part of them are imports from the Naqada culture, similarly as in the case of pottery. They include: a flint knife (grave 224) with one surface

characterised by ripple flaking retouch, 3 slate palettes (graves 63, 305, 816), each of a different shape: a crescent, a fish and a bird's head, and a pear-shaped macehead of red breccia (grave 224).

3.1.3. Other sites

Although imports from the south have been recorded also at other sites of the Lower Egyptian culture, *i.e.* Buto, Tell el-Farkha or Tell el-Iswid, they were much less numerous as in the case of Maadi and Minshat Abu Omar. Sherds of D-ware jars with painted decoration, as well as W-ware jars were found at all those sites. However, their number is relatively small in comparison to local ceramics assemblages.

At Buto, imported pottery registered in the strata of phases 2 makes up between 0.6 and 2.3% of all ceramic items (KÖHLER 1992a: tab. 1, fig. 9). These are mostly sherds of D-ware and fragments of fine marl vessels. Pottery fragments with painted decoration recorded at the site characterised by spiral and wavy lines motifs (KÖHLER 1992a: fig. 6:3-6; VON DER WAY 1997: 106, Taf. 49). Particularly noteworthy is a deposit of 5-7 jars with wavy handles of PETRIE's type W22 and W24 made of marl clay (VON DER WAY 1997: 104; Taf. 45-46). In ceramics of Naqada culture T. VON DER WAY (1997: 105; Taf. 4:7-15) identified also 5 vessels of W-ware class, with symbolically marked handles on their shoulders. Jars of PETRIE'S R76 made of Nile clay are considered to have been imports. However, their origin is not clear. It cannot be determined whether they were produced in the north or were brought to Buto as containers for imported commodities from the south. In phase Buto IIIa a higher quantity of imports can be observed. Sherds of marl clay make up ca. 2,7% of all pottery fragments (KÖHLER 1992a: fig. 9; 1992b: 10-13). They are represented mostly by closed vessels, which served probably as containers.

At Tell el-Farkha, similarly as in the case of Buto, imports from the south include mainly fragments of D-ware, W-ware, and other jars made of marl clay. In phases 1 and 2 on all koms painted pottery was recorded with spiral, „ss”, an aloe and wavy lines patterns (MACZYŃSKA 2004; 2013: fig. 15:1-5,10, pls. 18-19; JUCHA 2005: 65-66; SOBAS 2012). However, the number of imported pottery is small in comparison to locally produced ceramics, as it makes up ca. 1% of all the registered material (JUCHA 2005: 30, fig. 20; MACZYŃSKA 2011; *in press* b).

Excavations of the French Institute of Oriental Archaeology (IFAO) at Tell el-Iswid attested the presence of imports from the south at this site. Pottery made of marl clay makes up 1,6% of all the registered sherds, and consists mostly of jars with short necks and rims in the shape of a lip. Fragments of D-ware were found at the site as well (GUYOT *in press*: fig. 11).

In flint assemblages from Buto, Tell el-Farkha and Tell el-Iswid, apart from items manufactured locally or imported from the Levant, a small number of bifacial tools of southern origin were registered. Among them noteworthy is a fragment of a ripple-flake knife found at Buto in the deposit of Upper Egyptian vessels with wavy handles (SCHMIDT

1992: 33-34; 1987: 253). Flint imports recorded at Tell el-Farkha include: a fragment of an obsidian knife probably of southern origin (KABACIŃSKI 2003: fig. 26), and a fragment of Upper Egyptian ripple flake knife found in the Lower Egyptian residence (CHŁODNICKI & GEMING 2012: 98, fig. 17). At Tell el-Iswid, in the layers of Phase A, two knives with bifacial surface retouch were discovered. According to K. SCHMIDT (1989: 88-91), one of them has analogies with Upper Egyptian knives with ripple flaking retouch, and is similar to a bifacial knife found in phase II of Buto. Interesting is also the other knife from Tell el-Iswid, made of obsidian (VAN DEN BRINK 1989: fig. 15:11). In terms of technology, it resembles Gebel el-Arak type knives with their characteristic ripple flaking retouch. In the opinion of K. SCHMIDT (1989: 90-91; 1992: 34), the knife should be considered as an import from Upper Egypt.

The raw material for manufacturing obsidian knives does not occur naturally in Egypt. The analysis carried out by E. PERNICKA (1996: 286) showed that the obsidian recorded at Tell el-Iswid came either from Anatolian or Ethiopian deposits. Eastern origin was attested for the obsidian from Buto. Analysis made by L. BAVAY *et al.* (2004) indicated the Nemrut Dag volcano as a place of origin of the raw material. K. SCHMIDT believes that obsidian reached the south via Uruk culture colonies in the northern Syria, Levant and the Delta. The finished products could have been subsequently exchanged between the Naqadans and Lower Egyptians.

At the site of Tell el-Farkha, among other southern imports, two fragmentarily preserved tags have been recorded. Both have deep undercuts, and their surface is smooth and polished (CIAŁOWICZ 2012b: 237, fig. 40). Probably also golden beads and two pear shaped maceheads made of basalt and bone found at Tell el-Farkha were imported from the south (CHŁODNICKI & GEMING 2012: fig. 13) .

Contacts between Lower and Upper Egypt involved not only exchange of goods, but also the exchange of information. Probably the production of beer was adopted by the Lower Egyptian communities via Upper Egypt. The earliest structure associated with beer production in the north was discovered at Tell el-Farkha in layers dated to NIIB period. Exploration of the site revealed that the breweries were built slightly later than appeared the first settlers who built the earliest structures from organic materials directly on a gezira. So far, 7 breweries on the Western and Central Koms have been discovered (ADAMSKI & ROSIŃSKA-BALIK *this volume*). All of them seem to have been very well planned structures that enabled the brewing of beer just after the completion of construction works (CIAŁOWICZ 2012a). The oldest breweries in Egypt dated to NIB-IIA had been recorded in the south, at the sites which are considered the most important centres of the Naqada culture, *i.e.* Mahasna, Abydos and Hierakonpolis (PEET & LOAT 1913: 3-4; GELLER 1992; TAKAMIYA 2008). The breweries at Tell el-Farkha were built later. Their complex structure and organisation indicate that the idea of beer production had been copied from the region of its origin, *i.e.* Upper Egypt (for details see ADAMCZYK & ROSIŃSKA-BALIK *this volume*).

Beer production required the use of some special vessels: big vats used in bonfires and vessels for beer storage. According to S. HENDRICKX *et al.* (2002: 293-294) the early beer jars are represented by PETRIE's jars R81, R84 and later L30, which were quite common in Upper Egypt in Naqada II and appeared at Lower Egyptian sites towards the end of this period. The only exception is the site at Tell el-Farkha, where jars R81 and R84 were recorded in the material dated to Naqada IIC, contemporary to the breweries (MACZYŃSKA 2011: 890; *in press c*). Their early appearance at the site could be explained by their function. If the idea of beer production originated in the south, the idea of its storage could also have come from the same region (MACZYŃSKA *in press e*).

Upper Egyptian origin is attributed also to the idea of erecting walls from mudbricks (*cf.* VON DER WAY 1992: 3; WILKINSON 1996: 95; WENGROW 2006: 82). One of the oldest mudbrick walls in Egypt, dated to the end of NIIC period, was recorded on the Central Kom at Tell el-Farkha. It was a part of a big structure referred to as the Lower Egyptian residence, situated in a well organised area divided into zones of different functions. Initially the residence was surrounded by a double fence made of wood, but later the wooden fence was replaced by a mudbrick wall, 1.6m thick at the base and 1.2-1.3m at the top, with slightly oblique sides (CHŁODNICKI & GEMING 2012: 92-97, figs. 8-10; Chłodnicki *this volume*, figs. 2-4). A similar wall surrounding the brewery center was registered on the Western Kom (CIAŁOWICZ 2012a: 161). The discoveries in Lower Egypt have shown that the use of mudbrick was known the earliest in Lower Egypt, at the sites of Maadi (RIZKANA & SEEHER 1989: 55-56) and Tell el-Farkha (CHŁODNICKI & GEMING 2012). According to some authors, this is the reason why it is more reasonable to link the appearance of the mudbrick technique in Lower Egypt with the influences from the Levant rather than from Upper Egypt (TRISTANT 2004: 120; SIEVERTSEN 2008: 794). The idea of erecting mudbrick walls could have expanded southwards from Lower Egypt, in the same way as the flint tradition (BUCHEZ & MIDANT-REYNES 2007; 2011).

3.2. SUMMARY

Analysing imports from Upper Egypt one can observe that they are quite uniform as compared to imports from Canaan. The majority of these items appeared in Lower Egypt in the result of trade exchange (Tab. 2). Some of them may have also been personal equipment of traders/intermediaries who came from the south to the place of exchange. Furthermore, it seems that also the representatives of other professions visited the Delta region. Although we are lacking direct archaeological evidence, we can assume that Tell el-Farkha may have been visited by specialists from the south, who passed on their knowledge of beer production to local communities.

Imports from the south did not serve a typically utilitarian function, and they were not indispensable in household activities. They include mostly items distinguished in terms of form, decoration, and quality, such as pottery vessels with painted decoration, sophisticated flint knives or unique shell vessels. Their relatively small number suggests that they were in the possession of a small group of people. On the basis of archaeological

Table 2. Upper Egyptian imports and imitations on the Lower Egyptian sites.

CHARACTER OF FINDS	DESCRIPTION OF FINDS	MAADI	MAADI CEMETERY	WADI DIGLA	HELIOPOLIS	BUTO	MAO	TELL EL-FARKHA	TELL EL-ISWID	TELL IBRAHIM AWAD
Imports	equipment of traders/visitors									
	exchange items	x		x		x	x	x	x	x
	flow of ideas							x		
Imitations	made by visitors									
	made by locals	x					?			

material we are not able to determine what rules regulated the access to the imports. Limited availability of foreign items can be attested in the case of Minshat Abu Omar, the cemetery at which objects of this kind were placed as offerings only in a small number of the richest graves.

In the opinion of the author there is no doubt that the available data do not indicate the presence in the north of a large number of visitors from Upper Egypt that would suggest the Naqadian expansion. More probably, Naqadians visited Lower Egypt repeatedly for trade-related purposes. In the material recorded in the south, *e.g.* at Hierakonpolis or Adaima, we can observe only a limited number of Lower Egyptian imports (ADAMS & FRIEDMAN 1992: 322-325; FRIEDMAN 1994; BUCHEZ 2007a: 123-124; 130, 132; 2007b: fig. 3/96:1). Hence, it seems that the underlying reason of the relations with Lower Egypt was the Upper Egyptians' desire for Southern Levantine items or products. In return, Naqadian items were offered to the local society.

In the case of imitations of Naqadian objects we can distinguish only those items, which were made by Lower Egyptians. Good examples here are blacktopped vessels recorded at Maadi. Although Maadians used vessels imported from the south and imitated them, they did not adopt the southern idea of their use as grave goods. No grave at Maadi or Wadi Digla contained blacktopped vessels, as those items were probably used only at the settlement (MACZYŃSKA *in press* d). Interesting object is a stone imitation of a bone vessel found at Tell el-Farkha (PRYC 2012). Although in the south the original items of this kind were produced from the material that was easy to process, the vessel found at Tell el-Farkha was made from basalt, the material which requires extensive working skills. Taking into account that the production of stone vessels was a specialised craft in the north, we can assume that this vessel was produced by a local specialist, who imitated a foreign specimen in local raw material (MALLORY 2000; MALLORY-GREENOUGH 2002). Important in this case is the context of discovery of this vessel. It was unearthed within

the Lower Egyptian residence, together with several items of foreign origin, namely the fragments of the Naqadian and Levantine pottery, pear-shaped maceheads, stone and golden beads and a copper knife. Since the function of the residence was probably associated with exchange, the presence of imports or imitations in this place should not be surprising.

Focusing on the Lower-Upper Egyptian relations we cannot forget about the certain common features of the flint industry observable along the entire Nile Valley in the said period. According to K. SCHMIDT (1996: 279), one such feature is the technology of manufacturing twisted blades, shared by the north and the south of Egypt towards the end of Naqada I and in the beginning of Naqada II. K. SCHMIDT view is based on the assumptions of D.L. HOLMES (1992: 313), who proposed that this peculiar blade manufacturing technique involved heat treatment, leaving a trace in the form of glossy surface. Blades with traces of heat treatment are found in large quantities on Middle and Upper Egyptian sites, *e.g.* in Mostagedda. According to D.L. HOLMES, who had an opportunity to personally examine flints from Maadi, the numerous twisted blades were removed from heat treated cores. Both K. SCHMIDT and D.L. HOLMES agree that the twisted blades industry is a common feature across the entire early Predynastic Egypt. D.L. HOLMES believes that most similarities exist between inventories of the Lower Egyptian culture and those from Mostagedda in Middle Egypt. She even assumes that flint knappers from Mostagedda adopted certain technical solutions from their northern neighbors from Maadi. In his turn, K. SCHMIDT (1996: 280) refers to the inventory from Mostagedda as the southern counterpart of the Lower Egyptian industry. In his opinion, flint industry producing twisted blades with traces of heat treatment was common in NI and in early NII. Subsequently, in late Naqada II it disappeared altogether, both in Lower and Upper Egypt. The common features of Maadi and Mostagedda are visible also among Hemamija B knives. In the south, knives of this type were found on sites dated to Naqada II in Hemamija, Mostagedda, Badari and Naqada. K. SCHMIDT is of the opinion that the tradition of making these knives originated in Lower Egypt and then spread along the entire Nile Delta in Naqada II. The same situation occurred in the case of Badari knives, found in the south in Predynastic layers dated to early Naqada I to Naqada II. According to K. SCHMIDT, Badari knives in the south are a counterpart of Hemamija knives from Lower Egypt.

In 2006 N. BUCHEZ and B. MIDANT-REYNES (2007; 2011) concluded the earlier discussions on the flint tradition of the Upper and Lower Egypt in the 4th millennium BC. According to the researchers, the Nile Valley in the 4th millennium BC saw two flint traditions: the northern one in the Maadi-Delta region with strong Levantine influences, characterized by the presence of twisted blades and heat treatment of cores, and the southern one exemplified by the assemblages of el-Tarif and Maghar-Dendera based on flakes and some bifacial pieces of outstanding quality. During Naqada IIB-IIC/D the northern tradition reached Middle Egypt, followed by Upper Egypt, as proven by flint

inventories from Adaima and Hierakonpolis. Another change occurred in early Naqada III, when assemblages with regular standardized blades replaced those with twisted blades in the entire Nile Valley.

4. CONCLUSION

Imports from the Southern Levant and Upper Egypt indicate the existence of rather complex relationships between Lower Egypt and those regions in the 4th millennium BC. In the first place they involved trade contacts associated with exchange of goods and information. Archaeological evidence shows that Lower Egypt, particularly the Delta, was the place of trade exchange. The majority of scholars are of the opinion that until the middle of Naqada II period this exchange was sporadic in character. On the other hand, Maadi settlement, dated to Naqada I and the first half of Naqada II, is characterised by a relatively large number of imports from the east and south (as compared to other sites from the duration period of the Lower Egyptian culture). Maadi seems to have been a settlement visited by traders from both the south and east. This must have been an important place for the traders/visitors from the east, as they built there their own subterranean structures. In the case of Upper Egyptians we do not have such direct evidence of their stay at the site.

Currently it is difficult to determine exactly what goods were exchanged. It is believed that Upper Egyptians were interested in luxury items of the eastern origin. However, the archaeological data from the south and Canaan reveal only a limited number of imports that may have been the subject of exchange. In Naqada I and II imports in graves are relatively rare, with their slight increase in the second half of Naqada II (ANDELKOVIĆ 1995; HENDRICKX & BAVAY 2002). Likewise, in the Southern Levant Naqadian objects are scarce in this period (ANDELKOVIĆ 1995; BRAUN & VAN DEN BRINK 2008; MACZYŃSKA 2013: 181-200).

Resources that reached the south from the east included probably: copper, obsidian, turquoise and lapis lazuli (HENDRICKX & BAVAY 2002: 72). Also the goods that did not preserve in archaeological material, such as food or organic items, may have been exchanged. The exchange of goods was accompanied by the exchange of information and skills (processing of copper and flint, or beer production). Undoubtedly the flow of ideas took place in both directions. From the north to south came the idea of the production of twisted blades (HOLMES 1992; SCHMID 1996; BUCHEZ & MIDANT-REYNES 2007; 2011). Due to the exchange with the north the Naqadans knew the vessels with wavy handles, which they subsequently began to produce.

There is no doubt that trade exchange that took place in the Delta, including Maadi, involved the engagement of local community. High value of objects from the Southern Levant and Upper Egypt that reached the north encouraged local craftsmen to produce copies of these items. Imports and their imitations were in the hands of a limited number of people, and access to them may have been regulated by the rules, which are elusive for archaeologists.

We cannot forget at the same time the representatives of the Chalcolithic culture from the Southern Levant appeared in the northern Delta and settled at Buto, within the settlement inhabited by members of the Lower Egyptian culture. Initially the foreigners maintained their cultural identity, producing items (including pottery) from local material according to their own traditions, thereby expressing their identity. Over time, they adapted completely to the local culture and conditions.

According to the view widely accepted by scholars the middle of Naqada II period witnessed the revival of contacts with the south and east, and the intensification of exchange between these regions. This was to be reflected by the growing number of imports from both the regions. However, in the opinion of the author the quantity of imports in the north in this period was similar and sometimes even lower than in the earlier times. On the other hand, there is no doubt that the number of sites with imports is higher than before. In Naqada I and the beginnings of Naqada II imports are present at Maadi, Buto, and in small numbers also in the graves of Wadi Digla and Heliopolis. In the second half of Naqada II items of foreign origin are still found at Buto, but they appear also at other sites, namely Tell el-Farkha, Tell el-Iswid and Minshat Abu Omar. The location of the last three sites in the eastern Nile Delta is not irrelevant in this context. They were probably situated on trade routes and served as the places facilitating the exchange.

The organisation of exchange itself remains unclear. Traders came to Lower Egypt probably through all the duration period of the Lower Egyptian culture. The sites located in the eastern Nile Delta could have been meeting places for trade partners of different origins, such as Southern Levantines and Egyptians. Initially the exchange may have been a „private” activity of a single settlement centre, *e.g.* Maadi. In the second half of Naqada II, when in the eastern Delta existed several settlements engaged in the exchange, the situation may have changed; particularly if we assume that some of the settlements were specialised in the production of specific goods, *e.g.* pork meat and beer at Tell el-Farkha. The logistics of exchange, including transport, may have been carried out jointly by several settlements/parties. The local societies took part in, and probably organised the exchange of goods and ideas in an active way. Moreover, they benefited from these contacts.

In the result of trade northern communities possessed items distinct in terms of material, shape and decoration, whose value was probably much higher than that of local objects. In most cases imports from Canaan were placed in graves containing several offerings, interpreted as richer ones. These may have been burials of people engaged in trade or persons of a special social status (MACZYŃSKA *in press c*). The concentration of imports within and in the vicinity of the Lower Egyptian residence at Tell el-Farkha may have also been the evidence of a limited access to imports.

According to some scholars the end of Naqada II period was the time of a so called Naqadian expansion, the term associated with the domination of the Naqada culture in the north that led to the assimilation and, finally, the decline of the Lower Egyptian culture. One unit, the Naqada culture, appeared along the Nile. Interestingly, archaeological material recorded at the sites in the Nile Delta does not show any cultural change in this

period. At Buto or Tell el-Farkha sites we cannot observe any evidence of the Naqadans exercising authority over these settlements or any other traces of their dominance at the sites in this early period. On the contrary, the continuation of occupation and production can be observed (KÖHLER 2008; MACZYŃSKA 2011: 897; *in press cde*). Undoubtedly this was the period of cultural change encompassing not only the north, but all the Nile Valley. Currently we can observe a growing number of opinions questioning the homogeneity of the Naqada culture and indicating its large internal differentiation (*cf.* FRIEDMAN 1994; KÖHLER 2008; *this volume*).

The beginning of Naqada II was not only the period of changes in the relations between Lower and Upper Egypt. Also the character of contacts between Egypt and the Southern Levant became different at that time. According to P. DE MIROSCHEDJI (2002: 41-42) in EBI B contemporary to Naqada IIIA1 and Buto III “a massive expansion of Egypt to the east” and even “colonization of east-western Canaan” by Egyptians can be observed. However in the opinion of E. BRAUN (2002: 181-183; *this volume*) archaeological records are not sufficient to permit a hypothesis on Egyptian presence in the Southern Levant. The scholar also underlines the fact that the nature of interactions between Egyptians and Southern Levantines was complex and their intensity changed over time. Nonetheless, there is no doubt that relations between both the regions were much more intensive than before and they were additionally associated with the Egyptian presence in the Levant.

The relations between Upper Egypt, the Delta and the Southern Levant in the 4th millennium BC appear to be a complex problem. Our knowledge is often based on hypotheses developed dozens years ago with the use of a limited data. However, comparing the archaeological evidence on the relations between Lower and Upper Egyptians (Tab. 2) with the evidence concerning the contacts of the Lower Egyptians with the Levantines (Tab. 1), it is difficult to observe the differences that would justify the interpretations indicating the expansion of foreign culture in the former case, and only trade exchange in the latter one. At this point it is important to note that while we have data indicating the presence of the Levantines in the north, we are lacking such evidence in the case of the Naqadans.

The problem of relations between Upper Egypt, the Delta and the Southern Levant requires further research. Our knowledge is expanding due to current excavation works carried out at the northern and southern sites. Each year they provide new data (including imports and imitations), which often allow for redefining the way we understand this complex issue.

BIBLIOGRAPHY:**ADAMS B. & FRIEDMAN R.F.,**

- 1992 Imports and influences in the Predynastic and Protodynastic settlement and funerary assemblages at Hierakonpolis, in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th-3rd Millennium B.C.*, Tel Aviv: 317-338.

ANDELKOVIĆ B.,

- 1995 *The Relations between Early Bronze Age I Canaanites and Upper Egyptians*, Belgrade.

BABA M. & SAITO M.,

- 2004 Experimental studies on the firing methods of Black-topped pottery in Predynastic Egypt, in: S. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ & M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”, Kraków, 28th August – 1st September 2002*, OLA 138, Leuven: 575-589.

BARD K.A.,

- 2000 The Emergence of the Egyptian state (c. 3200–2860 BC), in: I. SHAW (ed.), *The Oxford History of Ancient Egypt*, Oxford: 57–82.

BAUER A.A.,

- 2008 Import, Imitation, or Communication? Pottery Style, Technology and Coastal Contact in the Early Bronze Age Black Sea, in: P.F. BIEHL & Y.YA. RASSAMAKIN (eds.), *Imports and Imitation in Archaeology*, Langenweißbach: 89-104.

BAVAY L., FALTINGS D., ANDRÉ L. & DE PUTTER T.,

- 2004 A bladelet core from Tell el-Fara'in – Buto and the origin of obsidian in the Buto-Maadi culture of Lower Egypt, in: S. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ & M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”, Kraków, 28th August – 1st September 2002*, OLA 138, Leuven: 607-619.

BRAUN E.,

- 1996 *Cultural Diversity and Change in the Early Bronze I of Israel and Jordan. Towards an Understanding of the Chronological Progression and Patterns of regionalism in Early Bronze I Society*, Unpublished Ph.D. Thesis, Tel Aviv University.
- 2002 Egypt's first sojourn in Canaan, in: E.C.M. VAN DEN BRINK & T.E. LEVY (eds.), *Egypt and the Levant. Interrelations from the 4th through the early 3rd Millennium B.C.E.*, London & New York: 173-189.
- 2011 Early interaction between peoples of the Nile Valley and the Southern Levant, in: E. TEETER (ed.), *Before Pyramids. The Origins of Egyptian Civilization*, Chicago: 105-122.

BRAUN E. & VAN DEN BRINK E.C.M.,

1998 Some comments on the late EB I sequence of Canaan and the relative dating of tomb Uj at Umm el Ga`ab and graves 313 and 787 from Minshat Abu Omar with imported ware: views from Egypt and Canaan, *Egypt and the Levant* 7: 71-94.

2008 South Levantine Early Bronze Age chronological correlations with Egypt in light of the Narmer serekhs from Tel Erani and Arad: new interpretation, in: R.F. FRIEDMAN & P.N. FISKE (eds.), *Egypt at its Origins 3. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, London, 27th September – 1st August 2008, OLA 205, Leuven: 975-1001.

BUCHEZ N.,

2007a *Chronologie et transformations structurelles de l'habitat au cours du prédynastique. Apports des mobiliers céramiques funéraires et domestiques du site d'Adaiima (Haute-Egypte), vol. 1*, Unpublished Ph.D. Thesis, University of Toulouse.

2007b *Chronologie et transformations structurelles de l'habitat au cours du prédynastique. Apports des mobiliers céramiques funéraires et domestiques du site d'Adaiima (Haute-Egypte), vol. 3*, Unpublished Ph.D. Thesis, University of Toulouse.

BUCHEZ N. & MIDANT-REYNES B.,

2007 Le site prédynastique de Kom el-Khilgan (Delta Oriental). Données nouvelles sur les processus d'unification culturelle au IV^{ème} millénaire, *BIFAO* 107: 43-70.

2011 A tale of two funerary traditions: the Predynastic cemetery at Kom el-Khilgan, Eastern Delta, in: R.F. FRIEDMAN & P.N. FISKE (eds.), *Egypt at its Origins 3. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, London, 27th September – 1st August 2008, OLA 205, Leuven: 831-858.

CAMPAGNO M.,

2004 In the Beginning was the War. Conflicts and the Emergence of the Egyptian State, in: S. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ & M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, Kraków, 28th August – 1st September 2002, OLA 138, Leuven: 689–703.

CHŁODNICKI M. & GEMING M.,

2012 Lower Egyptian settlement on the Central Kom, in: M. CHŁODNICKI, K.M. CIAŁOWICZ & A. MACZYŃSKA (eds.), *Tell el-Farkha I. Excavations 1998-2011*, Poznań–Kraków: 89-104

CIAŁOWICZ K.M.,

2001 *La naissance d'un royaume. L'Égypte dès la période prédynastique à la fin de la Ière dynastie*, Kraków.

2012a Lower Egyptian settlement on the Western Kom, in: M. CHŁODNICKI, K.M. CIAŁOWICZ & A. MACZYŃSKA (eds.), *Tell el-Farkha I. Excavations 1998-2011*, Poznań–Kraków: 149-162.

- 2012b Early Egyptian objects of art, in: M. CHŁODNICKI, K.M. CIAŁOWICZ & A. MACZYŃSKA (eds.), *Tell el-Farkha I. Excavations 1998-2011*, Poznań–Kraków: 201-243.

COMMENGE C. & ALON D.,

- 2002 Competitive involution and expanded horizons: exploring the nature of interaction between Northern Negev and Lower Egypt (c. 4500-3600 BCE), in: E.C.M. VAN DEN BRINK & T.E. LEVY (eds.), *Egypt and the Levant. Interrelations from the 4th through the early 3rd Millennium B.C.E.*, London & New York: 139-153.

CZARNOWICZ M.,

- 2012a Copper tools, in: M. CHŁODNICKI, K.M. CIAŁOWICZ & A. MACZYŃSKA (eds.), *Tell el-Farkha I. Excavations 1998-2011*, Poznań–Kraków: 345-355.
- 2012b Southern Levantine imports and imitations, in: M. CHŁODNICKI, K.M. CIAŁOWICZ & A. MACZYŃSKA (eds.), *Tell el-Farkha I. Excavations 1998-2011*, Poznań–Kraków: 245-265.

DAVIES P.O.A.L.,

- 1962 Red and Black Egyptian pottery, *JEA* 48: 22.

DE MIROSCHEDJI P.R.,

- 2002 The socio-political dynamics of Egyptian-Canaanite interaction in the Early Bronze Age, in: E.C.M. VAN DEN BRINK & T.E. LEVY (eds.), *Egypt and the Levant. Interrelations from the 4th through the early 3rd Millennium B.C.E.*, London & New York: 39-57.

DEBONO F. & MORTENSEN B.,

- 1988 *The Predynastic Cemetery at Heliopolis. Season March-September 1950*, Mainz.

DITTMANN K.H.,

- 1936 Bericht über archaologische Unternehmungen in Ägypten 1934-36. Maadi bei Kairo, *MDAIK* 6: 158-159.

FALTINGS D.,

- 1998 Recent excavation in Tell el-Fara'in/Buto: new finds and their chronological implication in: C.J. EYRE (ed.), *Proceedings of the Seventh International Congress of Egyptologists, OLA* 82, Leuven: 365-375.
- 2002 The chronological frame and social structure of Buto in the fourth millennium BCE, in: E.C.M. VAN DEN BRINK & T.E. LEVY (eds.), *Egypt and the Levant. Interrelations from the 4th through the early 3rd Millennium B.C.E.*, London & New York: 163-170.

FALTINGS D., BALLETT P., FÖRSTER F., FRENCH P., INDE CH., SAHLMANN H., THOMALSKY J. & WODZIŃSKA A.,

- 2000 Zweiter Vorbericht über die Arbeiten in Buto von 1996 bis 1999, *MDAIK* 56: 131-167.

FRIEDMAN R.F.,

- 1994 *Predynastic Settlement Ceramics of Upper Egypt: a Comparative Study of the Ceramics of Hemehieh, Naqada and Hierakonpolis*, Unpublished Ph.D. Thesis, University of California, Berkeley.

GELLER J.R.,

- 1992 From prehistory to history: beer in Egypt, in: R.F. Friedman & B. Adams (eds.), *The Followers of Horus. Studies dedicated to Michael Allen Hoffman, 1949-1990*, Oxford: 19-26.

GOLANI A. & VAN DEN BRINK E.C. M.,

- 1999 Salvage excavations at the Early Bronze Age IA settlement of Azor, *’Atiqot* 28: 1-49.

GUYOT F.,

- 2008 The origins of the “Nagadan Expansion” and the interregional exchange mechanisms between Lower Nubia, Upper and Lower Egypt, the South Levant and north Syria during the first half of the 4th millennium B.C., in: B. MIDANT-REYNES & Y. TRISTANT (eds.), J. ROWLAND & S. HENDRICKX (ass.), *Egypt at its Origins 2. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, Toulouse (France), 5th-8th September 2005, OLA 172, Leuven: 707-740.

in press *Tell el-Iswid (Delta du Nil). Le matériel céramique du IV^e millénaire avant notre ère.*

HARTUNG U.,

- 2004 Rescue excavations in the Predynastic settlement at Maadi, in: S. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ & M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, Kraków, 28th August – 1st September 2002, OLA 138, Leuven: 337-356.

HARTUNG U., ABD EL-GELIL M., VON DEN DRIESCH A., FARES G., HARTMANN R., HIKADE T. & IHDE C.,

- 2003 Vorbericht über neue Untersuchungen in der prädynastischen Siedlung von Maadi, *MDAIK* 59: 149-198.

HAYES W.C.,

- 1965 *Most Ancient Egypt*, Chicago.

HENDRICKX S.,

- 2006 Predynastic-Early Dynastic chronology, in: E. HORNUNG, R. KRAUSS & D.A. WARBURTON (eds.), *Ancient Egyptian Chronology*, Leiden: 55-93.

HENDRICKX S. & BAVAY L.,

- 2002 The relative chronological position of Egyptian Predynastic and Early Dynastic tombs with objects imported from the Near East and the nature of interregional contacts, in: E.C.M. VAN DEN BRINK & T.E. LEVY (eds.), *Egypt and the Levant*.

Interrelations from the 4th through the early 3rd Millennium B.C.E., London & New York: 58-80.

HENDRICKX S., FALTINGS D., OP DE BEECK L., RAUE D. & MICHIELS CH.,

2002 Milk, Beer and Bread Technology during the Early Dynastic Period, *MDAIK* 58: 277-304.

HENDRICKX S., FRIEDMAN R.F. & LOYENS F.,

2000 Experimental archaeology concerning Black-Topped pottery from Ancient Egypt and the Sudan, *CCE* 6: 171-187.

HOLMES D.L.,

1992 The evidence and nature of contacts between Upper and Lower Egypt during the Predynastic: a view from Upper Egypt, in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th-3rd Millennium B.C.*, Tel Aviv: 301-316.

JUCHA M.,

2005 *Tell el-Farkha II. The Pottery of the Predynastic Settlement (Phases 2-5)*, Kraków-Poznań.

KABACIŃSKI J.,

2003 Lithic industry, in: M. CHŁODNICKI & K.M. CIAŁOWICZ, Polish Excavations at Tell el-Farkha (Ghazala) in the Nile Delta. Preliminary Report 1988-2001, *Archeologia* LIII: 99-105.

KAISER W.,

1964 Einige Bemerkungen zur ägyptischen Frühzeit 3: Die Reichseinigung, *ZÄS* 89: 86-125.

1985 Zur Südausdehnung der vorgeschichtlichen Deltakulturen und zur frühen Entwicklung Oberägyptens, *MDAIK* 41: 61-87.

1987 Zum Friedhof der Naqada-kultur von Minshat Abu Omar, *Annales du service des Antiquités de l'Égypte* 71: 119-126.

1990 Zur Entstehung des gesamtägyptischen Staates, *MDAIK* 46: 287-299.

KEMP B.J.,

2006 *Ancient Egypt: Anatomy of a Civilization*, London.

KÖHLER E.CH.,

1992a The Pre- and Early Dynastic Pottery of Tell el-Fara'in (Buto), in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th-3rd Millennium B.C.*, Tel Aviv: 11-22.

1992b Problems and Priorities in the Study of Pre- and Early Dynastic Pottery, *CCE* 3: 7-15.

1993 *Tell el-Fara'in – Buto: Die Keramik der Schichten III bis VI. Untersuchungen zur Töpfereiproduktion einer frühen Siedlung des Nildeltas*, Unpublished Ph.D. Thesis, University of Heidelberg.

1998 *Tell el-Fara'in. Buto III*, Mainz.

2008 The interaction between and the roles of Upper and Lower Egypt in the formation of the Egyptian State. Another review, in: B. MIDANT-REYNES & Y. TRISTANT (eds.), J. ROWLAND & S. HENDRICKX (ass.), *Egypt at its Origins 2. Proceedings*

- of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”, Toulouse (France), 5th-8th September 2005, OLA 172, Leuven: 515-544.*
- 2010 Theories of state formation, in: W. WENDRICH (ed.), *Egyptian Archaeology*, 36-54. Oxford: 36-55.
- in press The development of social complexity in Early Egypt – settlements, technology and craft specialization, in: G. STEIN, A. ALIZADE & Y.M. ROWAN (eds.), *Pathways to Power*, Oriental Institute Chicago.
- KROEPER K.,**
- 1985 Decorated ware from Minshat Abu Omar (Eastern Delta) (Munich East-Delta Expedition), *Bulletin de Liaison du Group International d'Étude de la Céramique Égyptienne* X: 12-17.
- 1986/87 The ceramic of the Pre/Early Dynastic cemetery of Minshat Abu Omar, *BES* 8: 73-94.
- 1988 The excavation of the Munich East-Delta Expedition in Minshat Abu Omar, in: E.C.M. VAN DEN BRINK (ed.), *The Archaeology of the Nile Delta. Problems and Priorities*, Amsterdam: 11-46.
- 1989 Palestinian ceramic imports in Pre- and Protohistoric Egypt, in: P.R. DE MIRO-SCHEDJI (eds.), *L'urbanisation de la Palestine à l'âge du Bronze ancien: Bilan et perspectives des recherches actuelles. Actes du colloque d'Emmamiis (20-14 Octobre 1986)*, BAR IS 527, Oxford: 407-422.
- 1992 Shape + Matrix = Workshop? Ceramic from Minshat Abu Omar, *CCE* 3: 23-31.
- KROEPER K. & WILDUNG D.,**
- 1994 *Minsbat Abu Omar I. Ein vor- und frühgeschichtlicher Friedhof im Nildelta. Gräber 1-114*, Mainz.
- 2000 *Minsbat Abu Omar II, Ein vor- und frühgeschichtlicher Friedhof im Nildelta. Gräber 115-204*, Mainz
- LEVY T.E. & VAN DEN BRINK E.C.M.,**
- 2002 Interaction models, Egypt and the Levantine periphery, in: E.C.M. VAN DEN BRINK & T.E. LEVY (eds.), *Egypt and the Levant. Interrelations from the 4th through the early 3rd Millennium B.C.E.*, London & New York: 3-38.
- LUCAS A. & HARRIS J.R.,**
- 1962 *Ancient Egyptian Materials and Industries*, London.
- MAĆZYŃSKA A.,**
- 2003 Lower Egyptian culture on Central Tell at Tell el-Farkha, in: L. KRZYŻANIAK, K. KROEPER K. & M. KOBUSIEWICZ (eds.), *Cultural Markers in the Later Prehistory of Northeastern Africa and Our Recent Research*, Poznań: 213-226.
- 2004 Pottery tradition at Tell el-Farkha in: S. HENDRICKX, R.F. FRIEDMAN, K.M. CIAŁOWICZ & M. CHŁODNICKI (eds.), *Egypt at its Origins. Studies in Memory of Barbara Adams. Proceedings of the International Conference “Origin of the State. Predynastic and*

- Early Dynastic Egypt*”, Kraków, 28th August–1st September 2002, OLA 138, Leuven: 421–442.
- 2006 Egyptian-Southern Levantine interaction in the 4th and 3rd millennium B.C. A view from Tell el-Farkha, in: K. KROEPER, M. CHŁODNICKI, M. KOBUSIEWICZ (eds.), *Archaeology of the Early Northeastern Africa. In Memory of Lech Krzyżaniak*, Poznań: 945-957.
- 2008 Some remarks on Egyptian-Southern Levantine Interrelations in the first half of 4th Millennium B.C., in: B. MIDANT-REYNES & Y. TRISTANT (eds.), J. ROWLAND & S. HENDRICKX (ass.), *Egypt at its Origins 2. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, Toulouse (France), 5th-8th September 2005, OLA 172, Leuven: 763-781.
- 2011 Lower Egyptian–Nagadian transition. A view from Tell el-Farkha, in: R.F. FRIEDMAN & P.N. FISKE (eds.), *Egypt at its Origins. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, London, 27th September – 1st August 2008, OLA 205, Leuven: 879-908.
- 2013 *Lower Egyptian Communities and Their Interactions with Southern Levant in the 4th Millennium BC*, Studies in African Archaeology 12, Poznań.
- in press a Lower and Upper Egypt in 4th millennium BC. The development of craft specialisation and social organisation of the Lower Egyptian and Naqada cultures, in: *Proceedings of the International Symposium “Origin and Early Development of Food Producing Culture in Northeastern Africa – 30 years later”*, Poznań 3-7 July, 2011, Poznań.
- in press b Naqadan-Lower Egyptian interactions during the 4th millennium B.C. A comparative study of pottery dated to Naqada II period from the sites at Adaïma and Tell el-Farkha, in: *Egypt at its Origins 4. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”*, New York, 26th-30th July 2011, OLA, Leuven.
- in press c Pottery as a Source for Studying Cultural Changes. The Problem of Lower Egyptian-Naqadian Transition, in: B. BADER, CH.M. KNOBLAUCH & E.CH. KÖHLER (eds.), *Vienna 2. Ancient Egyptian ceramics in the 21st century. Proceedings of the International Conference held at the University of Vienna 14th-18th of May, 2012*, OLA, Leuven.
- in press d Some remarks on the chronology of the oldest graves from Minshat Abu Omar, in: *The Jubilee Volume of K.M. CLAŁOWICZ*, Kraków.
- in press e The Nile Delta as a center of cultural interactions between Upper Egypt and Southern Levant in the 4th millennium B.C., in: *Proceedings of 6th Central European Conference of Egyptologists. Egypt 2012: Perspectives of Research, Kraków, 5th-7th July 2012*, Kraków.

MALLON A., KOEPEL R. & NEUVILLE R.,

1934 *Teleilat Ghassul I*, Rome.

MALLORY L.M.,

2000 *Predynastic and First Dynasty Egyptian Basalt Vessels*, Unpublished Ph.D. Thesis, University of Toronto.

MALLORY-GREENOUGH L.M., GORTON M.P. & GREENOUGH J.D.,

2002 The source of basalt vessels in Ancient Egyptian archaeological sites: a mineralogical approach, *The Canadian Mineralogists* 40/4: 1025-1045.

MIDANT-REYNES B.,

1992 *Prehistoire de l'Égypte. Des Premiers Hommes aux Premiers Pharaons*, Paris.

2003 *Aux Origines de L'Égypte*, Fayard.

OREN E.D. & YEKUTIEL Y.,

1992 Taur Ikhbeineh - earliest evidence for Egyptian interconnections, in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th-3rd Millennium B.C.*, Tel Aviv: 361-384.

PEET T.E. & LOAT W.L.S.,

1913 *The Cemeteries of Abydos. Part III. 1912-1913*, London.

PERNICKA E.,

1996 Analyse eines prädynastischen Obsidianmessers aus Unterägypten, in: L. KRZYŻANIAK, K. KROEPER & M. KOBUSIEWICZ (eds.), *Interregional Contacts in the Later Prehistory of Northeastern Africa*, Poznań: 286-287.

PERNICKA E. & SCHLEITER M.,

1997 Untersuchung der Metallproben, in: T. VON DER WAY, *Tell el-Fara'in. Buto I*, Mainz: 219-222.

PETRIE W.M.F.,

1901 *Diospolis Parva. The Cemeteries of Abadiyeh and Hu*, London.

1921 *Corpus of Prehistoric Pottery and Palettes*, London.

PETRIE W.M.F. & QUIBELL J.E.,

1896 *Nagada and Ballas*, London.

PORAT N.,

1997 Petrography and composition of the pottery, in: T. VON DER WAY, *Tell el-Fara'in. Buto I*, Mainz: 223-231.

PORAT N. & SEEHER J.,

1988 Petrographic analyses of pottery and basalt from Predynastic Maadi, *MDAIK* 44: 215-228.

PRYC G.,

2012 Stone vessels, in: M. CHŁODNICKI, K.M. CIAŁOWICZ & A. MACZYŃSKA (eds.), *Tell el-Farkha I. Excavations 1998-2011*, Poznań–Kraków: 297-314.

RIEDERER J.,

1992 The microscopic analysis of calcite tempered pottery from Minshat Abu Omar, *CCE* 3: 33-37.

RIZKANA I. & SEEHER J.,

- 1984 New light on the relation of Maadi to the Upper Egyptian cultural sequence, *MDAIK* 40: 237-252.
- 1985 The chipped stones at Maadi: preliminary reassessment of a Predynastic industry and its long-distance relations, *MDAIK* 41: 237-254.
- 1987 *Maadi I: The Pottery of the Predynastic Settlement*, Mainz.
- 1989 *Maadi III: The Non-Lithic Small Finds and the Structural Remains of the Predynastic Settlement*, Mainz.
- 1990 *Maadi IV: The Predynastic Cemeteries of Maadi and Wadi Digla*, Mainz

ROSCHWALB A.,

- 1981 *Protohistory in the Wadi Ghazzeḥ: A Typological and Technological Study Based on the Macdonald Excavations*, Unpublished Ph.D. Thesis, University of London.

ROSEN S.A.,

- 1983 Tabular scraper trade: a model of material cultural dispersion, *BASOR* 249: 79-83.
- 1997 *Lithics after the Stone Age. A Handbook of stone Tools from the Levant*, Walnut Creek-London-New Delhi.

SCHMIDT K.,

- 1986 Die lithischen Kleinfunde, in: T. VON DER WAY, Tell el-Fara'in - Buto 1. Bericht, *MDAIK* 42: 201-212.
- 1987 Die lithischen Kleinfunde, in: T. VON DER WAY, Tell el-Fara'in - Buto 2. Bericht, *MDAIK* 43: 250-257.
- 1988 Die lithischen Kleinfunde, in: T. VON DER WAY, Tell el-Fara'in - Buto 3. Bericht, *MDAIK* 44: 297-306.
- 1989 Die lithischen Kleinfunde, in: E.C.M. VAN DEN BRINK, A Transitional Late Predynastic-Early Dynastic Settlement Site in the Northeastern Nile Delta, Egypt, *MDAIK* 45: 82-94.
- 1992 Tell el-Fara'in/Buto and Tell el-Iswid (south): the lithic industries from the Chalcolithic to the Early Old Kingdom, in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th- 3rd Millennium B.C.*, Tel Aviv: 31-42.
- 1993 Comments to the lithic industry of Buto-Maadi Culture in Lower Egypt, in: L. KRZYŻANIAK, M. KOBUSIEWICZ & J. ALEXANDER (eds.), *Environmental Change and Human Culture in the Nile Basin and Northern Africa until the Second Millennium B. C.*, Poznań: 267-277.
- 1996 Lower and Upper Egypt in the Chalcolithic period. Evidence of the lithic industries: a view from Buto, in: L. KRZYŻANIAK, K. KROEPER & M. KOBUSIEWICZ (eds.), *Interregional Contacts in the Later Prehistory of Northeastern Africa*, Poznań: 279-289.

SIEGEMUND R.H.,

- 1999 *A critical review of theories about the origin of the ancient Egyptian state (Cultural evolution)*, Unpublished Ph.D. Thesis, University of California, Los Angeles.

SIEVERTSEN U.,

- 2008 Niched Architecture in Early Mesopotamia and Early Egypt, B. MIDANT-REYNES & Y. TRISTANT (eds.), J. ROWLAND & S. HENDRICKX (ass.), *Egypt at its Origins 2. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”, Toulouse (France), 5th-8th September 2005*, OLA 172, Leuven: 783-805.

SOBAS M.,

- 2012 Pottery from the Western Kom, in: M. CHŁODNICKI, K.M. CIAŁOWICZ & A. MAĆZYŃSKA (eds.), *Tell el-Farkha I. Excavations 1998-2011*, Poznań–Kraków: 181-197.

TAKAMIYA I.,

- 2008 Firing installations and specialization: a view from recent excavations at Hierakonpolis Locality 11C, in: B. MIDANT-REYNES & Y. TRISTANT (eds.), J. ROWLAND & S. HENDRICKX (ass.), *Egypt at its Origins 2. Proceedings of the International Conference „Origin of the State. Predynastic and Early Dynastic Egypt”, Toulouse (France), 5th-8th September 2005*, OLA 172, Leuven: 187-202.

TRISTANT Y.,

- 2004 *L'habitat prédynastique de la Vallée du Nil. Vivre sur les rives du Nil aux V^e et IV^e millénaires*, BAR IS 1287, Oxford.

TUTUNDŽIĆ S.P.,

- 1993 A consideration of differences between the pottery showing Palestinian characteristics in the Maadian and Gerzean cultures, *JEA* 79: 33-55.

VAN DEN BRINK E.C.M.,

- 1988 The Amsterdam University Survey Expedition to the northeastern Nile Delta (1984-1986), in: E.C.M. VAN DEN BRINK (ed.), *The Archaeology of the Nile Delta, Egypt: Problems and Priorities*, Amsterdam: 65-84.
- 1989 A transitional late Predynastic-Early Dynastic settlement site in the northeastern Nile Delta, Egypt, *MDAIK* 45: 55-108.
- 1992 Preliminary report on the excavations at Tell Ibrahim Awad, seasons 1988-1990, in: E.C.M. VAN DEN BRINK (ed.), *The Nile Delta in Transition: 4th-3rd Millennium B.C.*, Tel Aviv: 43-68.

VON DER WAY T.,

- 1992 Indication of architecture with niches at Buto, in: R.F. FRIEDMAN & B. ADAMS (eds.), *The Followers of Horus, Studies dedicated to Michael Allen Hoffman, 1949-1990*, Oxford: 218-226.
- 1997 *Tell el-Fara'in. Buto I. Ergebnisse zum frühen Kontext. Kampagnen der Jahre 1983-1989*, Mainz.

WATRIN L.,

- 1998 The relationship between the Nile Delta and Palestine during the fourth millennium: from early exchange (Naqada I-II) to the colonisation of southern

- Palestine (Naqada III), in: C.J. EYRE (ed.), *Proceeding of the Seventh International Congress of Egyptologists*, OLA 82, Leuven: 1215-1226.
- 1999 *Le Quartier Occidental du Village Préhistorique de Maadi (Égypte). Projet de Fouille Archeologique*, Paris.
- 2000 Copper drops and buried buildings: Ma'adi's legacy as a Predynastic Delta trade capital, *Bulletin de la Société de Géographie d'Égypte* 73: 163-184.
- 2003 Lower-Upper Egyptian interaction during Pre-Naqada period: From initial trade contacts to the ascendancy of southern chiefdoms, in: Z. HAWASS & L.P. BROCK (eds.), *Egyptology at the dawn of the Twentyfirst Century. Proceedings of the Eighth International Congress of Egyptologists. Cairo, 2000. Vol. 2. History, Religion*, Cairo-New York: 566-581.

WENGROW D.,

- 2006 *The Archaeology of Early Egypt: Social Transformation in North-East Africa, 10,000 to 2650 BC*, Cambridge.

WETTERSTRÖM W.,

- 1993 Foraging and farming in Egypt: the transition from hunting and gathering to horticulture in the Nile valley, in: T. SHAW, P. SINCLAIR, B. ANDAH & A. OKPOKO (eds.), *The Archaeology of Africa. Food, Metals and Towns*, London and New York: 165-226.

WILKINSON T.A.,

- 1996 *State Formation in Egypt. Chronology and Society*, BAR IS 651, Oxford.
- 1999 *Early Dynastic Egypt*, London & New York.

WILSON P.,

- 2006 Prehistoric settlement in the Western Delta: a regional and local view from Sais (Sa el-Hagar), *JEA* 92: 75-126.