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Wild Goat style ceramics at Troy and the impact of Archaic period colonisation on the Troad

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Abstract

The establishment of colonies along the Hellespont by inhabitants of Ionia, Athens and Lesbos is well-known from historical texts. Recently, stratified contexts at Troy as well as other surveys and excavations have yielded new information about the chronology and material markers of Archaic period settlements in the Troad and the Gallipoli peninsula. The archaeological evidence for colonisation in this region is not clearly seen until the late seventh to early sixth century BC when there is a dramatic change in the material culture. Destruction evidence from Troy indicates that the new settlers probably entered a weakened and depopulated region in the second half of the seventh century BC. The Ionian colonists transplanted their pottery traditions and started production of East Greek style ceramics in the Troad. Neutron Activation Analysis of Wild Goat style ceramics found at Troy offers further confirmation for the existence of Hellespontine Wild Goat style ceramic production centres. The Wild Goat style examples from Troy help to define the characteristics of the Hellespontine group, as well as the chronology and impact of colonisation in this area.

Özet

Ionia, Atina ve Midilli sakinleri tarafından Çanakkale Boğazı boyunca kolonilerin kurulmuş olduğu yazılı kaynaklardan iyi bilinmektedir. Yakın zamanda, diğer yüzey araştırmaları ve kazılarda olduğu gibi Troia'daki stratigrafik kontekstler, Troas ve Gelibolu Yarımadası'ndaki Arkaik Dönem yerleşimlerinin kronolojisi ve materyalleri hakkında yeni bilgiler sağlamıştır. Bu bölgedeki kolonileşmeye ait arkeolojik kanıtlar, materyal kültürde belirgin bir değişiklik olan geç 7. yy – erken 6. yy'a kadar iyi bir şekilde görülememektedir. Troia'daki yıkım kanıtları, M.Ö. 7. yy'ın ikinci yarısında yeni yerleşimcilerin muhtemelen zayıf düşmüş ve nüfusu azalmış bir bölgeye girdiklerine işaret etmektedir. İonia kolonistler seramik geleneklerini aktarmışlardır ve Troas'da Doğu Yunan stili seramiklerin üretimine başlamışlardır. Troia'da bulunan Yaban Keçisi stili seramiklere ait nötron aktivasyon analizleri, Çanakkale Boğazı'nda Yaban Keçisi stili seramik üretim merkezlerinin olduğuna ait ek kanıtlar önermektedir. Troia'daki Yaban Keçisi stili seramik örnekleri Hellespont Grubu karakteristiğini, aynı zamanda bu bölgedeki kronoloji ve kolonileşme etkisini tanımlamaya yardım etmektedir.

In the Middle Archaic period (625–550 BC), the material culture at Troy underwent a striking and seemingly sudden change, which can be attributed to the political and cultural landscape that developed in the Troad (northwestern Anatolia) following the establishment of new settlements. Historical sources (details below) inform that inhabitants from Miletos, Athens, Erythrai and Lesbos established colonies along both sides of the Hellespont. Troy is currently the only location in the region where we can study the impact of the new colonies on an older, established settlement. By the

Archaic period, Troy was no longer situated near the sea because of river silting (Kayan 1995: 221; Kayan et al. 2003: 395–401) and its geo-political importance had probably been eclipsed by the settlements located near the coast on either side of the Hellespont (fig. 1). Nevertheless, Troy continued to have religious importance, probably because of its legendary status. The effects of the colonisation movement can be seen in the archaeological material at Troy in the introduction and local production of Attic and East Greek style vessels, as well as in changes in ritual practices and religious architecture.

Fig. 1. Map of the Troad in the Archaic period (courtesy of the Troia Project, prepared by G. Bieg)

The new ceramics introduced to Troy in this period include Wild Goat style – a distinctive East Greek type usually decorated with animals and floral motifs (Cook, Dupont 1998: 32–46; Kerschner, Schlotzhauer 2007: 295–300). It used to be thought that the East Greek ceramics at Troy, such as Wild Goat style, were imports from workshops in Ionia or southern Aeolis (Fisher 2000: 87–88, 97). Neutron Activation Analysis (NAA) has recently led to the modification of this hypothesis; it will be shown below that many of the Wild Goat style ceramics at Troy were made with local clay. Concurrently, scholars conducting NAA studies of Wild Goat style and other East Greek ceramics at Black Sea sites, as well as at Naukratis, have also identified imports from the Troad (TRO-B and TRO-D paste groups) and have posited Hellenistic production of East Greek style ceramics (Kerschner 2006: 148–51; Mommsen et al. 2006a: 70; 2006b: 165–67; Posamentir, Solovyov 2006: 114–17; 2007: 196–201; Dupont 2008: 14; Posamentir et al. 2009: 36–46; Dupont, Lungu 2010: 99, 128; Aytacılar, Kozanlı 2012: 28–33). Considering what is known of the

history of the Troad at this time, it is likely that potters associated with the Ionian colonies at Abydos or Parion were producing East Greek style ceramics, which were both distributed within the Troad and exported abroad (Posamentir, Solovyov 2006: 115; 2007: 182–83; Dupont 2008: 14; Posamentir et al. 2009: 45). It appears that a range of East Greek ceramics was produced within the Troad, including Ionian cups, Eye bowls and Rosette oinochoai (Dupont 2008: 6–7; Aytacılar, Kozanlı 2012: 34–41, 73–74), but this article will focus on the analysis of Wild Goat style. As scholars have previously noted, most of the Wild Goat style ceramics produced in the Troad are stylistically similar to southern Ionian Middle Wild Goat style II/III or SiA 1d, IIa (610–560 BC; Posamentir, Solovyov 2006: 113–15; 2007: 195–99; Dupont 2008: 11; Posamentir et al. 2009; Aytacılar, Kozanlı 2012: 44–54; for terminology, see Kerschner, Schlotzhauer 2007: 300, 309–11), although there are also some pieces at Troy that do not seem to fit with these styles and indicate an even wider range of production types.

Troy and the Troad in the Late Geometric/Early Archaic period (750–650 BC)

The pieces of Wild Goat style pottery found at Troy form just one of the many lines of evidence indicating a turning point in the cultural composition of the Troad in the late seventh to early sixth century BC. To understand the significance and scale of the changes, we first need to examine the situation at Troy in the preceding period (750–650 BC). Judging from the large amount of ceramics found from the Late Geometric/Early Archaic phase, we can conclude that the settlement at Troy experienced a growth in population (Blegen et al. 1958: 253–55; Fisher 1996: 121–24; Aslan 2002: 86–87, 92–93, nos 40–47, 71–82; 2009a: 33, 39; 2011: 388–91, nos 1–14; Hertel 2008a: 121–73; 2008b: 19–71). At least two cult buildings were in use, one at the Place of Burning (quadrant vw3; Aslan 2011: 382–409) and the other in the West Sanctuary (figs 2, 3; Basedow 2007: 51–53; 2009: 139; Aslan 2011: 412–16). The cult building in the West Sanctuary partially reuses walls from a Late Bronze Age building known as the Terrace House, which may have been a Late Bronze Age cult building (Becks et al. 2006: 79–80; Becks 2008: 63–64, 69–71). Another cultic installation in the West

Sanctuary is a set of stone-paved circles, located on a 4–5m-high platform directly in front of a segment of the Late Bronze Age Citadel Wall (fig. 3; Blegen et al. 1958: 274–75; Basedow 2007: 52; 2009: 139; Aslan 2011: 412–16). Together, this evidence indicates an increasing interest in performing ritual activities near the Late Bronze Age remains of the site (Aslan 2011: 420–25). Although we do not know when exactly Troy became identified as the city of the Homeric epics, it is likely that this identification was firmly established at least by the early seventh century BC or perhaps even earlier.

In this phase (750–650 BC), the material culture at Troy was predominantly northeastern Aegean in character; there is only a little evidence for wider trade connections. The majority of the ceramics is either locally-produced painted G2/3 ware or Anatolian Grey ware (Fisher 1996: 120; Mommsen et al. 2001: 196–98; Aslan 2002: 86–87; 2009a: 44–45; 2009c: 270; 2011: 388–91; Ilieva 2009: 114–15). There are also smaller amounts of cooking ware and wheel-made coarse ware (Aslan 2002: 108–10). Excavators have found only a modest number of recognisable imports, including a few probable Chian jars (Aslan 2009a: 36, 42–43) and bird kotylai. At least 22

Fig. 2. Plan of Troy. Remains from the Protogeometric to Archaic phases shown in relation to the Late Bronze Age citadel wall (courtesy of the Troia Project, prepared by P. Hnila)

Fig. 3. Plan of the West Sanctuary in the Late Geometric/Early Archaic phase (750–650 BC) (courtesy of the Troia Project, prepared by P. Hnila)

bird kotylai or bird bowls have been discovered at Troy, including those found by Heinrich Schliemann, Carl Blegen and in the recent Tübingen/Cincinnati excavations (Schmidt 1902: 185, nos 3758–61; Blegen et al. 1958: 256; Fisher 2000: 92; Hertel 2008a: 160, nos 99–102, fig. 46). Some of the bird kotylai uncovered during Blegen's excavations were excavated from Late Geometric/Early Archaic contexts along with G2/3 and Anatolian Grey ware (Blegen et al. 1958: 256, 290–91, fig. 308, nos 14–18, 299, fig. 312, nos 10–11). All the other examples were found in later or mixed contexts or derive from unknown contexts. Bird kotylai have also recently been found in Geometric contexts at the site of Madytos, located close to Troy on the opposite side of the Hellespont (Göksel Sazcı, personal communication). According to NAA, northern Ionian workshops probably produced the majority of bird kotylai and the vessels are one piece of evidence for early contact between the two regions (Kerschner et al. 1993: 198–99, 208–09; Cook, Dupont 1998: 26–27; Kerschner 2002: 63–68; Coldstream 2008: 478–79).

Only one other site in the Troad has characteristic material from this phase – the cemetery at Antandros (Polat, Polat 2007: 1–2, 11). Surveys and excavations in

the region have not identified any other settlements from this period, although it is likely that they existed (Cook 1973: 360–63; Brown 2008: 183–88; Arslan 2008; 2009; Arslan, Bakan 2011). There are several other places in the nearby Aegean area with G2/3 ware pottery, including Lesbos, Tenedos, Thasos, Samothrace and Lemnos (Ilieva 2009: 110–15).

Distant historical information about this period in the Troad comes from Strabo (*Geography* 13.1.22), who writes that the Milesians asked the Lydian king Gyges for permission to set up a colony at Abydos in the northern part of the Troad. The reference to Gyges would seem to date the foundation of this colony to the second quarter of the seventh century (Cogan, Tadmor 1977: 84; Spalinger 1978; Berndt-Ersöz 2008: 7). The foundation date cannot yet be confirmed archaeologically because of the lack of excavation at Abydos. Surveys in the area have not found ceramics from the first half of the seventh century (Cook 1973: 56–57; Arslan 2008: 333–34). Likewise, although Eusebius (*Chronicles*) gives a foundation date for Parion of 709 BC, the earliest pottery found at Parion is from the late seventh century (Tavukçu 2006: 212–13, 358–59, pls 33, 34; Parion excavation website: reports for 2010 and 2011).

The discrepancy between historical foundation dates and the earliest pottery or other finds is an issue for many other colonies in the Black Sea (Gorman 2001: 64–66; Petropoulos 2005: 15–43). Although it is tempting to associate the bird kotylai at Troy and Madytos with northern Ionians penetrating the region, we should remember that such kotylai were widely exported, and these ceramics may simply indicate a broadening of trade networks. As mentioned above, the kotylai form only a very small percentage of an assemblage at Troy that otherwise is composed primarily of northeastern Aegean ceramic types.

Troy and the Troad in the Middle to Late Archaic periods (625–480 BC)

Despite hints of possible earlier contacts with Ionia, the evidence for colonists in the Troad does not emerge clearly until the late seventh to early sixth century. At this point, newcomers to the area would have found the settlement at Troy in ruins, the result of a destruction event in the middle of the seventh century. Evidence of this destruction consists of layers of rubble found in several areas of the site (Aslan 2009a: 37–38). In each area the rubble covers layers containing G2/3 ware and Anatolian Grey ware. The cause of this destruction is unknown. Troy is in a seismically active area, and in other periods earthquakes have disrupted or destroyed the city (Rose 1994: 91; 1996: 98–99, fig. 1; Yılmaz 2003: 60–61). Although the widespread rubble debris suggests an earthquake as the cause of the destruction, enemy attack is another possibility. The destruction cannot be precisely dated, but the ceramic evidence points to sometime within the period of 650–625 BC.

The destruction at Troy appears to have been severe, and the evidence suggests that a period of either very low population or a hiatus in occupation followed the event. G2/3 ware does not occur in the levels above the rubble debris, indicating that G2/3 ware production stopped with the destruction. It is only after the destruction that the first pieces of Attic, Corinthian and East Greek style vessels such as Wild Goat style, Ionian cups and Rosette bowls appear at Troy. Although some potters continued to produce local Grey ware, the numbers of such vessels in the assemblage began to decrease, and, as the sixth century BC progressed, more and more painted pottery in East Greek, Corinthian and Attic (Black Figure and Black Glaze) styles entered the assemblage, attesting to the changing ceramic culture of the Troad.

Various lines of evidence indicate that colonisation in the Troad intensified in the late seventh to early sixth century, and indeed one sees a proliferation of new sites in the region (Isaac 1986: 160–66, 198–201; Ehrhardt 1988: 32–37; Tenger 1999: 121–26; Rose 2008: 415–19). Based on the evidence at Troy, it is likely that the colonists found

a depopulated and weak region, which may have made it easier as well as more attractive for them to settle there. Historical sources tell us that Miletos, Erythrai, Athens and Lesbos provided the main colonisers, but, as Alan Greaves cautions (2010: 132–34), we should not be too literal in assuming that the founding metropolis was the main source of population for specific colonies and it is likely that there were mixed populations at any particular settlement. The use of the words ‘colony’ and ‘colonisation’ can also be problematic, carrying assumptions and modern-day meanings (Greaves 2007: 10–11). We will retain the terms here, since they are commonly used in the scholarship. The colonisation movement to the Troad does manifest itself materially in the form of many new settlements, the local manufacture of ceramics in the styles of the founding areas and the introduction of new cult practices. In this case there does seem to have been a significant population movement, creating new settlements and transplanting elements of their culture, and therefore, in this respect, the term ‘colony’ may be appropriate.

One of the closest colonies to Troy would have been Sigeion. Herodotus (*Histories* 5.94.1) and Strabo (*Geography* 13.1.38–39) record a war that was fought between the Mytileneans of Lesbos and the Athenians over control of Sigeion. This war likely took place towards the end of the seventh century and resulted in Athenian control of the site (Leaf 1923: 187–88; Page 1955: 152–58; Isaac 1986: 162–63; Rose 2008: 418; Tiverios 2008: 121–22). Recent excavations and a survey at Sigeion have revealed Archaic pottery of the late seventh to sixth century BC (Cook 1973: 179; Bieg, Aslan 2006: 142; Schäfer 2008a: 5, 11; 2008b; 2011: 410; Körpe, Yavuz 2009a: 230). Some limited NAA study of a Black Figure group called Swan style, which is very common at Troy, indicates local manufacture in the Troad (Mommensen et al. 2001: 198–99, no. 44). This suggests that there was also production of Attic style pottery in the region, in addition to East Greek style.

In addition to the Athenians at Sigeion, the Ionians also had an important presence in the Troad. The Milesians focused their attention on the northern Troad along the Hellespont (Ehrhardt 1988: 32–37; Gorman 2001: 70–71) and Strabo records them as the founders of Abydos, Arisbe and Paisos, as well as the co-founders of Parion along with Erythraians and Parians (*Geography* 13.1.14, 14.1.6). Pausanias (*Description of Greece* 9.27) mentions only people from Erythrai as the founders of Parion. As mentioned, recent archaeological investigations at Parion have revealed Archaic ceramics dating from the late seventh to the sixth century BC. The historical colonisation date of 709 BC from Eusebius cannot yet be confirmed (Tavukçu 2006: 212–13, 358–59, pls 33, 34; Parion excavation website: reports for 2010 and 2011; Başaran et al. 2011: 22–23; Aytaçlar, Kozanlı 2012: 81–

Fig. 4. Plan of the West Sanctuary in the Middle Archaic phase (625–550 BC) (courtesy of the Troia Project, prepared by P. Hnla and L. Riorden)

87). Other Archaic sites in the Troad that have ceramic evidence from the late seventh or sixth century include Assos (Utili 1999: 143–44), Rhoiteion (Cook 1973: 80–81; Brown 2008: fig. 39a), Achilleion (Kossatz 1988: 398), Paisos (Arslan 2005a: 11, 13–14; 2005b: 319; Arslan, Bakan 2011: 456), Neandria (Cook 1973: 206–07; Akarca 1977: 8), Perkote (Arslan 2008: 335; 2009: 80–82; Arslan, Bakan 2011: 456, fig. 4), Arisbe (Arslan 2008: 334; Arslan, Bakan 2011: 455–56), Lampsakos (Arslan, Bakan 2011: 461), Ophryneion (Cook 1973: 75–77), Thymbra/Hanay Tepe (Cook 1973: 120–21), Ballı Dağ (Cook 1973: 137), Antandros (Polat, Polat 2007: 2–3) and Dardanos (Cook 1973: 57–59; Reyhan Körpe, personal communication).

Likewise, on the opposite side of the Hellespont on the Gallipoli peninsula, the sites of Elaiou (Isaac 1986: 192–93; Waiblinger 1999) and Aigospotamoi (Körpe, Yavuz 2009b: 226–27) also provide some supporting archaeological evidence of habitation in the sixth century. Also on the Gallipoli peninsula, Sestos and Madytos are said to have been founded by colonists from Lesbos (Strabo, *Geography* 7, fragments; Isaac 1986: 161). Excavations at Madytos (Kilisetepe) have produced Geometric ceramics, including the bird kotylai mentioned

above, as well as some late seventh- to sixth-century Archaic ceramics (Sazcı 2011: 405–06; Göksel Sazcı, personal communication). Some sixth-century Archaic material is also known from Sestos (Reyhan Körpe, personal communication).

The coastal cities of Sigeion, Abydos and Parion must have replaced Troy in geo-political importance. Troy's continuing significance was surely based on its legendary status, which would have been of interest to the colonists (Rose 2008: 418–19). The city may have become primarily a religious centre in this period, either specifically associated with the nearby Athenian settlement of Sigeion or as a gathering place for a wider region. Its heroic past may have featured in rituals and festivals, as well as in customs such as the Lokrian maidens serving at an Archaic period Temple of Athena as atonement for the crime of the maidens' ancestor Ajax (Polybius, *Histories* 12.5; Huxley 1966; Rose 2008: 417). The Archaic temple dedicated to Athena has not survived, but its existence can be surmised from historical texts (Rose 2003: 31–34). Most of our archaeological evidence for the Middle and Late Archaic periods at Troy comes instead from the religious activities that took place within the West Sanctuary.

Rebuilding efforts began in the sacred area of the West Sanctuary in the late seventh to early sixth century BC (fig. 4). The cult installations of the previous period, including the earlier cult buildings in the West Sanctuary, the Place of Burning and the set of stone-paved circles, were not rebuilt or reused. Instead, the builders constructed new altars (Altars A and B) and a new stone temple in the West Sanctuary (Blegen et al. 1958: 259–63; Rose 1995: 85–88; 1997: 76–86). The area of the earlier (Geometric to Early Archaic) cult building remained an open space throughout the Roman period. Although the sacred character of this part of the site was still recognised, the earlier buildings and ritual practices had either lost their meaning or were deliberately not reused. Instead, it appears that the worship of a new deity was introduced – an as yet unnamed goddess, one associated with swans, as evidenced by hundreds of swan-decorated vessels (Black Figure, Swan style) deposited in an area called the Lower Sanctuary (Aslan 2009b: 54–55, 60). Much of the Wild Goat style and other East Greek, Corinthian, Black Figure and Black Glaze ceramics were brought to Troy as votive dedications for the West Sanctuary and were deposited in the Lower Sanctuary.

Archaeological contexts and stratigraphy of Wild Goat style ceramics at Troy

Approximately 100 Wild Goat style fragments have been found at Troy; these include both published examples from earlier excavations and those found in the recent Tübingen/Cincinnati excavation campaigns (Schliemann 1881: 614, no. 1436, 615, nos 1439–40, 1445–46; Schmidt 1902: 186–88, nos 3778–92; Blegen et al. 1958: 255–56, figs 293, 295, 296, no. 20, fig. 305, no. 17, figs 307, 315; Fisher 2000: 97–104, nos 69–105; Aslan 2002: 93, nos 110, 129–40, 196–99, pls 17, 26, 28; Hertel 2008a: 144, fig. 36). Many of the Wild Goat style pieces at Troy were deposited around a structure called Altar B – a rectangular stone podium within the Lower Sanctuary (fig. 5). First to excavate part of the area near Altar B was Dorothy Rawson from Blegen’s team (Blegen et al. 1958: 262–63); further excavations by the Tübingen/Cincinnati excavation team took place in 1994, 1996 and 1998 (Rose 1995: 88–89; 1997: 85–86; 1999: 49–50).

Regarding stratigraphy, Wild Goat style pieces were first found associated with a plaster surface around Altar B. Based on its elevation, the surface was probably laid down close in time to when Altar B was first constructed. The other ceramics associated with the surface include

Fig. 5. Lower Sanctuary, view looking southwest. Altar B is the smaller stone podium in the centre (courtesy of the Troia Project, TRDia25506)

some Middle Corinthian pieces, Ionian cups with a short rim (Boardman, Hayes 1966: 112, type V; Aytaçlar, Kozanlı 2012: 34–39) as well as Anatolian Grey ware, local banded coarse ware and cooking ware. Together, the evidence supports a date in the late seventh to early sixth century BC. One of the Wild Goat style vessels from this level was included in the NAA study (cat. no. 7) and the results indicate that it was made from local clay, suggesting that local production had started by this phase.

Archaic votives continued to be deposited in this area, forming strata separated by periodic renewals of the surfaces. The latest pottery can be dated to ca 480 BC, based on Attic parallels. After 480 BC, deposits stopped in the West Sanctuary until the late Classical period. This break can be associated with Xerxes, who led his army through the Troad (Herodotus, *Histories* 7.43), which must have caused various problems in the area. Wild Goat style ceramics can be found in all the Middle to Late Archaic strata around Altar B – even in the highest levels dating to 500–480 BC. It is likely both that local manufacture of Wild Goat style ceramics continued until at least the middle of the sixth century, and perhaps even later, and also that the highly decorated Wild Goat style dishes were kept as display pieces much later than their manufacture date.

This stratigraphic situation in the Lower Sanctuary is similar to that of deposits unearthed in quadrant D9 on the southern side of the site, where ceramics of the Middle to Late Archaic period were found in a surface level and terrace fills. It is possible that the fills were brought from elsewhere or that some pottery fell or was dumped from the citadel mound to this lower-lying area. The lowest Archaic stratum in this area contained a fragment of Wild Goat style in the same context as an Ionian cup and Rosette bowl fragment (Aslan 2002: 87–88, nos 110–12, pl. 17), in a similar assemblage as the Middle Archaic plaster surface in the Lower Sanctuary. This Wild Goat style fragment was tested with NAA and fits the local chemical profile (cat. no. 2). Stylistically it is similar to a class of metope/protome dishes that are common in this region and can be seen as typical of the local Wild Goat style production (Aytaçlar, Kozanlı 2012: 42–43). Again, the stratigraphy in D9, as in the Lower Sanctuary, suggests that local production had already been established in the late seventh to early sixth century. As was also the case in the Lower Sanctuary, in D9 Wild Goat style fragments were found throughout the above-lying Archaic strata, even in the uppermost layer containing ceramics dating to the early fifth century BC.

Some stray finds of Wild Goat style pottery were found in other areas, but not in stratified Archaic contexts, including quadrants I9, K4/5 and D8. Presumably the pieces excavated by Schliemann were from the citadel mound. So far, only one piece is known from the area of the Lower City (Jablonka, Pernicka 2009: 21, fig. 24).

When Wild Goat style pottery first appears at Troy, it is always alongside other new ceramic types, including Middle Corinthian, Ionian cups (Tocra type V) and Rosette bowls. The Middle Corinthian helps to indicate a date at the beginning of the sixth century BC (595/590–570 BC; Amyx 1998: 428). The type V Ionian cups have been dated to the late seventh to early sixth century BC at Toca (Boardman, Hayes 1966: 12, 112). There is good evidence that this type of Ionian cup was also made within the Troad (Dupont 2008: 6, 9–10; Aytaçlar, Kozanlı 2012: 29, 32, 34–39). As mentioned, Wild Goat style ceramics continue to occur in contexts at Troy throughout the sixth century and even until 480 BC. No chronological patterns could be discerned regarding earlier or later types of Wild Goat style within the Trojan contexts.

Description of Wild Goat style ceramics at Troy

An examination with the naked eye shows two visual fabric groups within the local Trojan material. Since NAA results (see below) indicate that both types fit the chemical profile of Troad clay sources, they can be seen as two variations of local production, perhaps different workshops or production areas. The NAA results do not show discernable chemical differentiation patterns between the two visual groups.

Visual fabric Type 1 can be described as tan with a pink hue or pink/orange. There are small white and brown or grey inclusions and a little mica. The colour of the decoration varies widely, ranging from dark-black with added maroon details to red/brown paint. A creamy-white slip forms the ground. Visual fabric Type 2 ranges from very pale yellow to light brown or tan. There are some white inclusions and a little mica. The vessels with Type 2 fabric tend to have very thick walls. The colour of the decoration can be orange, brown or black with added maroon, and sometimes they are misfired, producing a mottled effect. The background slip is light yellow or light tan.

All of the local vessels are wide dishes (fig. 6; cat. nos 1–11), an observation that is in accordance with other studies (Dupont 2008: 2; Posamentir et al. 2009: 37; Aytaçlar, Kozanlı 2012: 41). Usually the full profile is not preserved (fig. 7). Some dishes have a ring base (cat. no. 6); others may have had a high pedestal stand (fruit-stand) but only one pedestal stem has been found in the recent excavations. One type has very thick walls and a tall, thick, ledge-like rim, which often has projecting lugs or attachments (cat. nos 9, 10). Only a few fragments from closed vessels have been found. In the NAA study described below, all the closed vessels tested had non-local clay (fig. 8; cat. nos 12–15). There is one dish that is an NAA single (fig. 9; cat. no. 16).

Fig. 6. Wild Goat style, Troy NAA local group (courtesy of the Troia Project)

Fig. 7. Wild Goat style, Troy NAA local group: rim shapes (courtesy of the Troia Project)

Fig. 8. Wild Goat style, NAA non-local group (courtesy of the Troia Project)

Fig. 9. Wild Goat style, NAA single (courtesy of the Troia Project)

Several main decorative schemes have previously been identified for the Hellespontine Wild Goat style workshops, and which are also represented in the local Trojan material (Posamentir, Solovyov 2006: 113–15; 2007: 195–99; Dupont 2008: 2; Posamentir et al. 2009: 37, 43; Aytaçlar, Kozanlı 2012: 41–44). One of the most common types is the protome/metope dish where metopes formed from ray motifs alternate with areas containing heads or larger illustrations of humans, animals or birds (cat. nos 1, 4, 11). Catalogue number 6 may be a slightly different version with petals instead of rays. Another common decorative scheme is a wide frieze containing alternating abstract lotus flowers, buds and other abstract floral motifs (no. 5). Other dishes seem to consist primarily of bands of decoration (cat. no. 2) often including the stopped meander pattern.

Other local pieces from Troy do not fit easily into these previously defined types. Catalogue numbers 7 and 8 seem to have as their closest comparanda dishes from Klazomenai (Aytaçlar 2005: pl. 36, nos K.139, K.140), which is noteworthy because most of the other types show the strongest influence of southern Ionian Wild Goat style. Catalogue number 3 is an odd piece and we have been unable to find close comparanda to the rectangle filled with dots motif. Catalogue numbers 9 and 10 represent a type of dish that is fairly common at Troy, but similar pieces have not been illustrated in other studies of the Hellespontine workshops. These dishes are notable for their very thick walls and the lugs or spool-shaped attachments on the rim. The rim attachments have comparanda with Aeolian dishes (aTs II) illustrated by Kaan Iren (2003: 65–68, pls 26, 27, nos 223–27), but the examples from Troy are less carefully painted.

NAA study of Wild Goat style ceramics at Troy

For the NAA study, samples were taken from 16 pieces of Wild Goat style ceramics from Troy. Samples came from both visual fabric groups, from both open and closed vessels, and from different variations of the open dishes. Most pieces were found in the West Sanctuary and quadrant D9. The analytical methodology employed is described in detail in Knacke-Loy (1994). The only differences are the neutron irradiation that took place in the TRIGA reactor of the Institut für Kernchemie at the University of Mainz and the measurements of the gamma emissions in the Curt-Engelhorn-Zentrum Archäometrie

in Mannheim. The concentrations of 25 elements were determined (see table 1), and 21 of these were used for cluster analysis using standardised squared Euclidian distances and group average as a clustering method. A similar result was obtained using single linkage as a

clustering method, indicating that the grouping is rather robust. This was further corroborated by using a smaller set of variables and including the sum of the rare earth elements (REE), the Sm/Eu ratio and the La/Lu ratio, i.e. Co, Cr, Cs, Hf, Rb, Sc, Ta, Th, U, Σ REE, Sm/Eu, La/Lu.

<i>Lab. no.</i>	<i>Na %</i>	<i>K %</i>	<i>Sc</i>	<i>Cr</i>	<i>Fe %</i>	<i>Co</i>	<i>Zn</i>	<i>As</i>	<i>Rb</i>	<i>Zr</i>	<i>Sb</i>	<i>Cs</i>
MA-090821	0.90	2.9	21.7	266	5.73	27.9	85.9	3.9	127	184	0.40	7.88
MA-090822	1.27	4.0	14.4	141	4.29	17.9	66.0	17.2	211	258	1.39	12.80
MA-090823	1.11	3.6	14.8	162	4.49	18.8	63.9	29.8	192	287	0.79	12.7
MA-090824	0.98	2.8	17.5	227	4.44	21.9	69.0	17.0	107	144	1.07	7.49
MA-090825	0.98	3.2	15.2	145	4.58	17.9	71.7	25.5	209	251	0.84	13.40
MA-090826	0.97	3.1	15.0	137	4.48	17.7	69.7	22.3	196	166	1.57	13.10
MA-090827	0.88	2.2	14.1	188	3.13	16.3	54.4	14.9	94	165	0.55	6.53
MA-090828	1.17	2.7	13.9	225	3.25	17.4	54.9	14.4	75	161	0.81	6.12
MA-090829	0.93	2.2	14.2	221	3.58	18.1	59.1	13.7	97	168	0.47	6.20
MA-090830	0.91	2.3	16.2	204	3.96	18.3	63.6	52.4	99	202	0.90	6.86
MA-090831	0.78	2.1	15.3	214	3.25	22.5	60.2	17.4	88	312	0.59	6.99
MA-090832	0.88	2.4	21.7	415	6.07	47.2	81.2	9.32	111	221	0.72	7.96
MA-090833	0.79	2.8	15.2	359	3.63	44.9	74.2	25.0	92	253	0.65	7.05
MA-090834	0.97	2.9	21.8	373	5.78	41.8	83.7	8.27	105	239	0.66	7.64
MA-090835	1.12	2.9	16.6	792	4.95	106.0	68.5	17.0	83	248	0.39	5.48
MA-090836	0.93	2.5	14.7	391	3.57	42.1	65.7	21.9	81	447	0.81	5.84

<i>Lab. no.</i>	<i>Ba</i>	<i>La</i>	<i>Ce</i>	<i>Nd</i>	<i>Sm</i>	<i>Eu</i>	<i>Tb</i>	<i>Yb</i>	<i>Lu</i>	<i>Hf</i>	<i>Ta</i>	<i>Th</i>	<i>U</i>
MA-090821	440	30.0	61	24	5.42	1.21	0.69	2.61	0.40	4.04	1.05	11.9	2.80
MA-090822	654	51.8	106	36	9.17	1.63	1.28	4.20	0.52	5.55	2.14	25.3	5.10
MA-090823	656	49.4	98	43	8.64	1.44	1.24	3.32	0.50	5.51	2.11	24.2	4.75
MA-090824	635	31.2	62	27	5.55	1.30	0.72	2.45	0.36	4.44	1.05	12.6	3.02
MA-090825	633	53.5	110	33	9.70	1.56	1.38	3.79	0.52	5.14	2.13	25.9	4.83
MA-090826	617	52.8	108	45	9.53	1.52	1.35	4.29	0.55	4.98	2.08	25.4	4.79
MA-090827	736	29.5	60	22	5.37	1.21	0.69	2.34	0.32	4.50	1.16	12.3	2.69
MA-090828	646	27.5	56	20	5.14	1.10	0.63	2.42	0.34	4.44	0.99	11.3	2.86
MA-090829	759	25.6	54	21	4.99	1.15	0.75	2.13	0.34	4.73	0.93	10.5	4.40
MA-090830	1231	27.6	58	28	5.25	1.18	0.81	2.25	0.34	4.80	1.09	11.6	3.34
MA-090831	995	31.0	61	25	5.70	1.30	0.79	2.58	0.39	4.86	1.04	13.3	3.22
MA-090832	505	30.5	63	52	5.67	1.33	0.81	2.59	0.36	4.06	1.16	12.5	3.06
MA-090833	866	30.8	61	25	5.82	1.41	0.79	2.31	0.30	4.40	1.29	12.2	3.25
MA-090834	490	29.8	60	40	5.27	1.39	0.78	2.80	0.38	4.11	1.07	11.6	2.85
MA-090835	640	26.5	54	72	5.13	1.18	0.73	2.27	0.25	5.14	1.04	10.1	2.76
MA-090836	629	26.1	51	43	5.00	1.20	0.75	2.39	0.33	5.17	0.81	10.5	2.83

Table 1. Concentrations of elements determined in the pottery samples. All figures are given in mg/kg except where stated otherwise. The precision of the data is better than 5% for Na, Sc, Fe, Cs, La, Sm, Hf and Th, and better than 10% for all other elements, with the exception of Zr, Sb and Nd

Fig. 10. Average-link cluster analysis of the analysed Wild Goat style sherds

Fig. 11. Average-link cluster analysis of the Wild Goat style sherds together with pottery groups and sediments that are related to the Karamenderes in the Troad. The sediments of the Karamenderes river on the left of the dendrogram are most closely related to eight analysed sherds. A sub-group of Karamenderes sediments (Kara 11 and Kara 21) is related to three more analysed sherds. These are considered as locally produced. Sample MA-090835 is loosely related to a variant of Dümrek samples (Sed 24), which is otherwise different from all other analysed samples (Troia A1 to Troia D1 in the diagram). There are also several Karamenderes sediments (Troia B1, T-A3, Su-A3) that form a sub-group of their own and another sediment sample from Karamenderes that is an outlier (C-TROY5). The remaining four analysed sherds are not consistent with any of the sediment samples

The reason for this modification is that the REE are strongly correlated, which would put too much weight on them on clustering. The two ratios are indicative of the REE pattern and thus are geochemically significant. The reason for disregarding the other elements is either generally poor analytical precision or high variability in the natural clay sources. Again, the same clustering result was obtained. Three groups and a single sample (MA-090835) were recognised. The results are illustrated in the form of a dendrogram (fig. 10).

Concerning the question whether these were locally produced or imported, we can conclude that the majority of the analysed samples matches the sediments of the Karamenderes in the Troad quite well and should, therefore, be considered local products (fig. 11). A group of four samples (MA-090822, MA-090823, MA-090825 and MA-090826, cat. nos 12–15) is consistently different and forms a separate cluster in all runs. Consequently, we consider these imports. Furthermore, one sample (MA-09835, cat. no. 16) is different from all the grouped samples. NAA study of pottery and clay sediments at Troy has revealed two main local paste groups, one relating to sediments of the Karamenderes river and the other from the Dümrek riverine (Knacke-Loy 1994; Knacke-Loy et al. 1995: 171; Mommsen et al. 2001: 173–78; Mountjoy, Mommsen 2006: 98; see also Grave et al. 2013 for a third group). The five samples of unknown origin do not match either clay source. Finally, it should also be noted again that the differences in clay visible with the naked eye do not correlate with the NAA results.

Conclusions

The analysis of Wild Goat style samples from Troy helps to confirm the existence of Hellespontine ceramic workshops for Wild Goat style ceramics. Nezi̇h Aytaçlar and Candan Kozanlı (2012: 44–54) have conducted a stylistic study of ceramics produced in these Hellespontine workshops. They include both known pieces with the NAA signature for the Troad, but also other pieces from the Troad and Parion that appear to fit stylistically into the Hellespontine group. Many of the pieces in our catalogue fit with their stylistic groupings, but some do not and probably represent additional variations of local production, including catalogue numbers 9 and 10, which come from very thick-walled dishes with lugs or spool-shaped attachments on the rim. This sub-group was not included in Aytaçlar and Kozanlı's study, but should be added to the Hellespontine repertoire. Also interesting are catalogue numbers 7 and 8, which appear similar to northern Ionian types of pedestal dishes. As these examples show, the range of production types may be wider than previously thought.

The archaeological evidence from Troy shows that local production of Wild Goat style started in the late seventh to early sixth century. This is the same period when the material culture at Troy begins to show the effects of the colonisation movement, which also seems to be true of other sites in the region. A destruction event at Troy in the middle of the seventh century may have been part of wider problems that left the region depopulated and politically weak, opening the area to colonists in the late seventh to early sixth century.

Catalogue of vessels sampled for NAA

Abbreviations

D. = diameter

Max. p. dim. = maximum preserved dimension

Th. = thickness

Local group

1. Wild Goat style dish (figs 6, 7).

D9.1904:1. Study Collection I–3a.

1/16 of rim. Estimated D. rim 32cm.

Interior has the back part of a goat surround by filling motifs (filled triangle, filled quarter circle, cross).

Dark grey/brown paint (5YR 4/2) with hints of added maroon on the hindquarters of the animal and a band along the rim. Cream ground (10YR 8/3).

Exterior has brown bands.

Fabric: brown with a pink hue (2.5YR 5/4), with somewhat more grey in the core, white inclusions.

Context: quadrant D9, mixed Archaic to Roman.

2. Wild Goat style dish (fig. 6).

D9.2923:2.

Body fragment. Max. p. dim. 5cm. Wall Th. 1.0–1.3cm.

Orange (2.5YR 5/8) ray pattern on white ground (10YR 8/3). Filled quarter-circle motif against one of the rays. Exterior has brown bands (10YR 3/4) on a white/grey ground (10YR 7/3).

Fabric: pink/brown (5YR 7/4), grey core, white and black inclusions, a small amount of mica.

Previously published: Aslan 2002: 111, no. 110, pl. 17.

Context: quadrant D9, phase 5, 625–600/575 BC.

3. Wild Goat style dish (fig. 6).

z7.7:4. Study Collection I–3g.

Body fragment. Max. p. dim. 3.8cm.

Interior has dots in the centre, followed by a band that is maroon paint over black. Above the band are rays, also with added maroon over one of them. Light tan/pink ground (5YR 7/3). Exterior is undecorated.

Fabric: light-brown core (2.5YR 6/4) with pink/orange edges (2.5YR 6/6), a few white inclusions.

Context: West Sanctuary, mixed context.

4. Wild Goat style dish (figs 6, 7).

D9.1520:1. Study Collection I–3i.

1/16 of rim. Estimated D. rim 24cm.

Interior has a band of a dot and billet motif and horizontal lines and bands of various widths. Near the break is a band of stopped meander pattern. Brown/black paint (10YR 3/1) on yellow ground (2.5Y 8/4). Dark-brown bands on exterior.

Fabric: light brown with a pink hue (2.5YR 6/4), a few white inclusions.

Context: quadrant D9, mixed context.

5. Wild Goat style dish (fig. 6).

A8/9.128:8.

Body fragment. Max. p. dim. 4cm.

Part of a lotus bud and a dotted star. Black paint (10YR 3/1) with added maroon. Light-yellow ground (2.5Y 8/2).

Fabric: pink/orange (2.5YR 6/8), white and grey inclusions, mica.

Context: Lower Sanctuary, stone fill, mixed Archaic and Hellenistic.

6. Wild Goat style dish (fig. 6).

D9.2915:7.

Body fragment with part of the broken ring foot. Max. p. dim. 16.5cm. Wall Th. 0.04–1cm. Three joining fragments.

Centre has a radiating petal design. The middle register has a stopped meander motif and the top register has petals alternating with swastikas. Interior has black paint (10YR 3/1) with maroon details (10R 3/4) on a cream ground (10YR 8/3). Exterior has brown/black bands (5YR 3/2) on a tan background (7.5YR 7/4).

Fabric: cream/yellow (10YR 8/3), small black inclusions, some white inclusions that break through the surface, mica.

Previously published: Aslan 2002: 113, no. 133, pl. 28.

Context: quadrant D9, phase 6, 600/575–550 BC.

7. Wild Goat style dish (figs 6, 7).

A8/9.97:14, A8/9.40.

1/4 of rim. Estimated D. rim 21cm. Ten fragments, three sections.

Stopped meander pattern along the rim. Floral motif in the centre. Bands on exterior. Dark-brown paint (10R 2.5/1) does not cover the ground completely. Added maroon in the centre of the petals. Tan ground (7.5YR 7/4).

Fabric: light brown (7.5YR 6/4), white and grey inclusions, some large inclusions that break through the surface, a little mica.

Context: Lower Sanctuary, first surface, Middle Archaic, 625–550 BC.

8. Wild Goat style dish (fig. 6).

z7.106:12. Study Collection I–3e.

Body fragment. Max. p. dim. 6cm. Wall Th. 0.05cm.

Lotus motif. Black/brown paint (2.5Y 3/1) on a tan/cream ground (10YR 7/3) with added maroon. Exterior has brown bands.

Fabric: light yellow (2.5Y 8/2), grey inclusions, no visible mica.

Context: West Sanctuary, mixed context.

9. Wild Goat style dish (figs 6, 7).

D9.521:1. Study Collection I–3h.

Less than 1/16 of rim. Estimated D. rim 22cm (of interior edge). Wall Th. 1.0–1.2cm.

Thick ledge rim with chevron pattern along the top.

Interior has one band of a stopped meander pattern.

There is also a vertical band of the stopped meander pattern forming a frame for a larger scene that is not preserved. Exterior has worn black/brown bands.

Fabric: pale tan (7.5YR 7/3), no visible inclusions.

Context: quadrant D9, mixed Archaic to Roman.

10. Wild Goat style dish (figs 6, 7).

D9.2898:9.

1/16 of rim. Estimated D. rim 30cm. Wall Th. 0.09–1cm.

Very thick, with a projecting ledge handle. Unevenly fired areas of orange and black paint. Along the edge of the rim are squares alternating with vertical strokes. The upper register within the dish has dot rosettes in cream/white on a black band and the lower register has a stopped meander pattern. The ground is tan/pink (5YR 7/6). Exterior is decorated with orange bands.

Fabric: tan (7.5YR 7/4) with a grey core (7.5YR 7/1), mica and a few grey inclusions.

Previously published: Aslan 2002: 120, no. 197, pl. 26.

Context: quadrant D9, phase 7, 550–500/480 BC.

11. Wild Goat style dish (fig. 6).

A8/9.66:4, A8/9.140:4.

1/16 of rim. Estimated D. rim 27cm. Two non-joining fragments.

Hole drilled before firing. Upper register has rectangular outlines with dots inside, possibly part of a larger pattern. The next register has a stopped meander band over a plain red band. Probably a floral motif in the centre. Red/brown paint (2.5YR 4/6) on a pink/cream ground (7.5YR 8/3). Red/brown band on exterior.

Fabric: pink/orange (2.5YR 6/8), brown and grey inclusions, mica.

Context: Lower Sanctuary, sub-phase b, Late Archaic, 550–480 BC.

Non-local group

12. Wild Goat style oinochoe (fig. 8).

K3.14:1. Study Collection I–3k.

Body fragment. Max. p. dim. 6cm.

Lotus bud motif. Brown/black paint (10YR 3/1) on a cream ground (10YR 8/3). No paint on interior.

Fabric: red/brown (2.5YR 5/6), a few white inclusions.

Context: quadrant K3, mixed context.

13. Wild Goat style oinochoe (fig. 8).

z6/7.211:2. Study Collection I–3c.

Body fragment. Max. p. dim. 4.2cm.

Body of a goat over a filling ornament. Dark-brown paint (7.5YR 3/2) with added maroon on hindquarters of goat. Pink ground (7.5YR 8/2). No paint on interior.

Fabric: tan (5YR 6/6), a few white inclusions.

Context: West Sanctuary, mixed fill.

14. Wild Goat style oinochoe (fig. 8).

D9.2915:10.

Body fragment. Max. p. dim. 7.6cm. Wall Th. 0.05–0.06cm. Three joining fragments.

The preserved decoration includes part of a goat's legs in dark-brown paint (2.5YR 3/2). Vertical ray is perhaps a separate motif from the animal.

Fabric: orange/brown (5YR 6/6) with a grey core, mica and white inclusions.

Previously published: Aslan 2002: 114, no. 135, pl. 28.

Context: quadrant D9, phase 6, 600/575–550 BC.

15. Wild Goat style closed vessel (fig. 8).

D9.2915:12.

Body fragment. Max. p. dim. 8.1cm. Wall Th. 0.05–0.07cm. Three joining fragments.

Decoration includes part of a goat. Filling motifs include filled triangles and semicircles and floral motifs. Black paint (Gley 1 3/N) on white ground (10YR 8/4), added details in red.

Fabric: orange/brown (5YR 6/6) with a grey core, mica and some small black and white inclusions.

Previously published: Aslan 2002: 114, no. 134, pl. 28.

Context: quadrant D9, phase 6, 600/575–550 BC.

NAA single

16. Wild Goat style dish (fig. 9).

D9.2907:10.

Body fragment. Max. p. dim. 9cm. Wall Th. 0.06–0.07cm. Two joining fragments.

Ray pattern in inner register, tongue pattern in upper register, separated by a band of dotted squares. Small floral motif occurs in both registers. Interior has brown paint (2.5YR 3/4) on a light tan/pink background (7.5YR 8/2). Brown bands on exterior.

Fabric: orange/brown (5YR 6/6), some white and grey inclusions, mica.

Previously published: Aslan 2002: 113, no. 132, pl. 28.

Context: quadrant D9, phase 6, 600/575–550 BC.

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