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University of Colorado / University of Kentucky Excavations at Monte Palazzi, Passo Croceferrata (Grotteria, Calabria): The 2005, 2007, and 2008 Field Seasons

*Paolo Visonà**

Introduction

The existence of Greek forts in Southern Italy has been known since the historian Thucydides recorded two Athenian attacks against a Locrian outpost on the Halex River in 426 and 425 B.C., during the Peloponnesian War (Thucyd. 3.99; 3.115.7). That the South Italian Greeks built permanent fortifications as early as the archaic period was first documented by the British School's excavations at Cozzo Presepe, in the *chora* of Metapontum, in the late 1960s[1]. Yet, only recently have Greek masonry forts been uncovered in the toe of Italy. In the last twenty five years, in particular, remains of fortified outposts datable to the late archaic and classical periods have been located at Serro di Tavola (S. Eufemia), San Salvatore (Bova), Monte Palazzi (Grotteria), and Monte Gallo (Caulonia), in south-central Calabria[2]. At least three of them have been partially investigated thus far, and may be described as upland or mountain forts because of their elevation and geomorphic setting (Fig. 1). Coastal forts represent yet another group of Greek outposts in this area of Calabria, whose location near the sea can be inferred from the historical record and from actual finds[3].

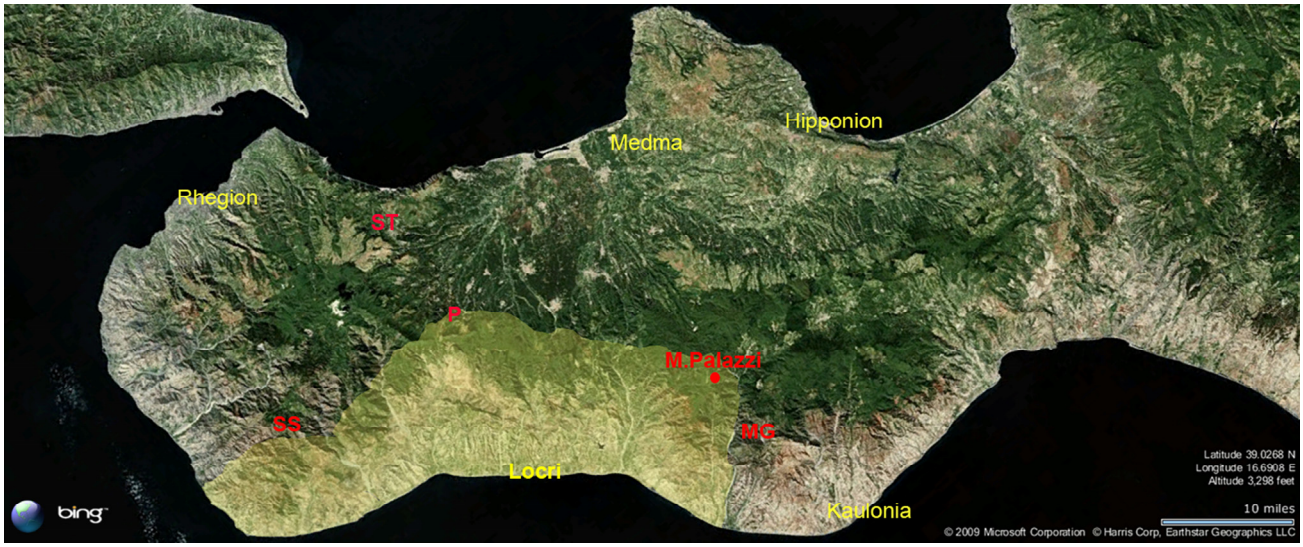

Fig. 1. Satellite map of southern Calabria showing the location of Monte Palazzi and the chora *of* Locri Epizephyrii *(highlighted pale green). The northern and southern boundaries follow the Allaro River and the Fiumara di Palizzi, respectively. From north to south: MG = Monte Gallo; P = Palazzo; ST = Serro di Tavola; SS = San Salvatore. Courtesy of Bing and Microsoft Corp. Computer-aided visualization by J.R. Jansson and L. Chapman.*

* Department of Art, 207 Fine Arts Bldg., University of Kentucky, Lexington, KY 40506 U.S.A.

[1] DU PLATT TAYLOR, MACNAMARA, WARD-PERKINS *et al*. 1983.

[2] See BRIZZI and COSTAMAGNA 2010 (Serro di Tavola); FOXHALL 2004; *ID.* 2007; *San Salvatore 2007*; KNAPP *et al*. 2007 (for Monte Palazzi and Monte Gallo); VISONÀ 2010. An archaic *phrourion* may have been located at Timpone del Gigante near Cotronei: cf. GRAS 1987: 218 and LEONE 1998: 92-93.

[3] Cf. CORDIANO and ACCARDO 2004: 79-84; FIORAVANTI 2002: 32-33, 46.

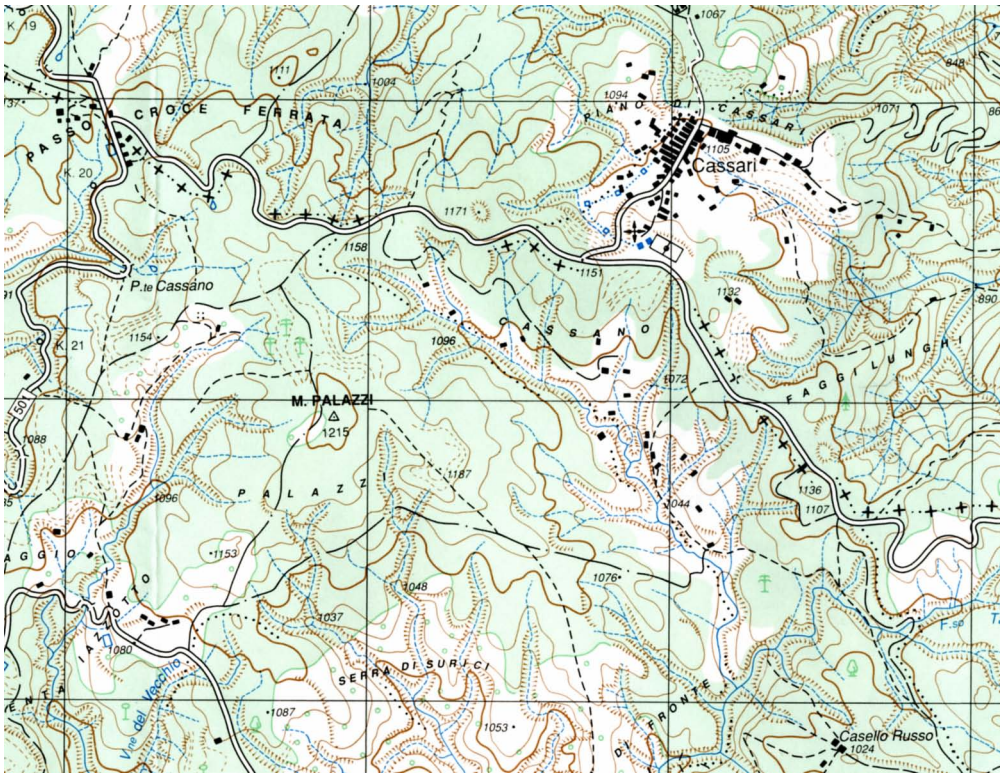

Fig. 2. Location of Monte Palazzi in Carta Topografica d'Italia *(F. 583), sez. II, Fabrizia, ser. 25, ed. 1, IGMI Firenze 1993 (scale: 1: 25 000).*

Nested atop a granitic ridge at 1,221.51 m above sea level overlooking the Croceferrata Pass, a major crossroads for routes leading from Le Serre uplands to the Torbido River Valley, and from the Ionian to the Tyrrhenian seas[4], the site of Monte Palazzi lies at 15.5 km from the eastern coast of Calabria and at c. 25 km from ancient Locri. Any travelers coming from the Ionian coast presumably approached it from the south, where a *mulattiera* cut into the bedrock at the southwestern base of the mountain, and intersected near the Vallone del Vecchio by the road known locally as "*La Scialata"*, may be the terminal of an ancient trail (Fig. 2)[5]. Naturally defended by steep scarps on three sides, and thickly forested today (Fig. 3), its summit would not have been tree-covered in antiquity. Chert utensils found in the 2007-2008 excavations, and a late Neolithic axe from the environs of Cassari (Fig. 4), show that this locale was frequented in prehistory[6]. However, no chert-bearing stone occurs locally. Springs near the mountaintop would have provided drinking water[7]. It is uncertain whether these sporadic finds may signal the existence of a trail across the ridgetop or a temporary campsite, and whether a prehistoric population lived in the area before the arrival of Greek settlers.

Fig. 3. The summit of Monte Palazzi seen from Monte Gremi, c. 2.5 km to the east (2005 photo).

[4] Cf. CORTESE 1983: 262-267; FIORAVANTI 2002: 42; GIVIGLIANO 2004: 211.
[5] GPS data for the *mulattiera*'s trailhead: 38° 25.61 N / 016° 16.56 E (27.6.2007 at 2:45 PM). For topographic maps and GPS data for Monte Palazzi's summit see KNAPP *et al*. 2007: 488-489, 494, n. 20.
[6] This stone implement was found by Bruno De Masi of Cassari between 1990-2000. Cf. ARSLAN 1986: 1045 (from tomb 185); CARDOSA 1994: 13, no. 4; LEIGHTON and DIXON 1992: 190-193; 197, no. 11; O'HARE 1990: 133, 135-136.
[7] The closest spring is on the northwestern slope of Monte Palazzi, a 10-minute walk from the summit.

Fig. 4. Late Neolithic axe from Cassari, environs, found between 1990-2000. Granitic stone. Munsell (R)*: N6. Length 10.97 cm; width 3.22 x 3.81 cm.; oval-shaped cross section; curved bit, worn; tapered and rounded butt. Weight 220 g.*

Monte Palazzi's current name, at any rate, is only centuries old. The presence of ruins of an ancient settlement may have led to the adoption of various forms of this place-name, which is found frequently in Calabria and Sicily[8]. A description of the boundaries of the County of Grotteria in 1714 contains the earliest mention of "*lo luogo dove si dice Il Palazzo*" known to date[9]; the plural form "*Li pilazzi*" ('the palaces') is used in T. Rajola's 1778 *Pianta Topografica del Feudo di Grotteria in Provincia di Calabria Ultra* (Fig. 5)[10]. Calabrian guerrillas found refuge "*alli Palazzi*" during the occupation of southern Italy by the French army of Napoleon Bonaparte in the early 1800s[11]. Families of woodcutters are also said to have lived at Monte Palazzi in temporary shelters over fifty years ago, and there is anecdotal evidence that the site has been exploited as a quarry of available stone at least since the 1950s, when the nearby village of Cassari (a fraction of Nardodipace, in the Province of Vibo Valentia) and a resort named Villaggio Paradiso were built[12]. Cassari's hardy residents, who depend on the mountain's natural resources for logging, fuelwood gathering, horticulture, and goat and cattle herding, refer today to Monte Palazzi as "*Pittini*".

Fig. 5. Detail of 1778 map by T. Rajola showing Monte Palazzi (indicated as "Li Pilazzi") as a conical mountain opposite the "acqua della Cava", where a quarry of garnet chlorite schist ('pietra ollare') has been identified. From FUDA *1995, Pl. 4.*

[8] For this place-name cf. COSTAMAGNA and SABBIONE 1990: 295; CARACAUSI 1994 vol. II: 1146-1147; KNAPP *et al*. 2007: 487, n. 16.
[9] See NAYMO forthcoming.
[10] FUDA 1995, Pl. 4.
[11] A military action against opponents of the French authorities "*a Croceferrata e alli Palazzi*" is mentioned in a letter of 1810 (information by V. Naymo).
[12] KNAPP *et al*. 2007: 491-494. Cassari was settled in 1956 by displaced residents of Ragonà. A 1961 letter of E. Barillaro, datelined "*Da "i Palazzi" a Croceferrata, 15 Giugno*" , describes "[…] "*i Palazzi", località ove notoriamente esistevano delle "macerie", usate quale "cava di pietra" per le esigenze edilizie della zona. Con quel pietrame, sono state gittate* (sic) *le fondamenta del Casello Provinciale di Croceferrata, quelle del Ristoratore-Albergo del "Maggiore", quelle della Palazzina Malgeri, quelle della Casa Calauti, e, infine, quelle dei Villini dell'intero "Villaggio Paradiso*"." (information by G. Pittari from E. Barillaro's Archives, S. Giovanni di Gerace). The Villaggio Paradiso, which was built at the Croceferrata Pass, no longer exists.

Fig. 6. Monte Palazzi 2005. Setting up the archaeological grid in squares A2-A4.

After the presence of 'remains of a Greek building' on the mountaintop was reported in 1961 by E. Barillaro, a local scholar and Ispettore Onorario alle Antichità e alle Belle Arti[13], S. Settis identified the ruins as those of a *phrourion* of Locri Epizephyrii that would have guarded an overland route to Medma (a Locrian sub-colony) in the early 4th century B.C. Settis' suggestions were based upon his reconnaissance of the summit in November, 1973, and on surface finds of Greek ceramics and an iron weapon. Since both Settis and C. Sabbione inspected the archaeological site in the mid-1970s, no systematic investigations have hitherto been carried out at Monte Palazzi[14].

This report presents the results of three seasons of fieldwork conducted between 2005-2008 both in order to test Settis' seminal ideas and to gain new insight into the settlement's functions, its occupational history, and its relationship to Locri.

The 2005, 2007, and 2008 campaigns

Following a surface collection led by M.T. Iannelli in October, 2003, whose results are unavailable, a new reconnaissance of the mountaintop in March, 2005, revealed several disturbances seemingly linked to the robbing of stone. While no telltale signs of systematic looting were recorded, two elongated hollows lying almost at right angles along the northwestern and the southeastern sides of the summit resembled old robber trenches. Selected harvesting of trees under the supervision of the Italian Forest Service appeared to have had no visible impact on the architectural remains. After a metal-detector survey proved inconclusive, an archaeological grid of 5 x 5 m squares was established on the mountaintop, a quadrangular area extending c. 40 m north-south by 50 m east-west, and generally sloping down from north to south (Fig. 6). A team from the University of Colorado subsequently commenced excavation of a block of three squares (A2, A3, and A4) on the northeastern flank of the ridge (Fig. 7). Here a 12-m long segment of the perimeter wall, parallel to the ridge and already discernible as an alignment of stones above ground, was un-

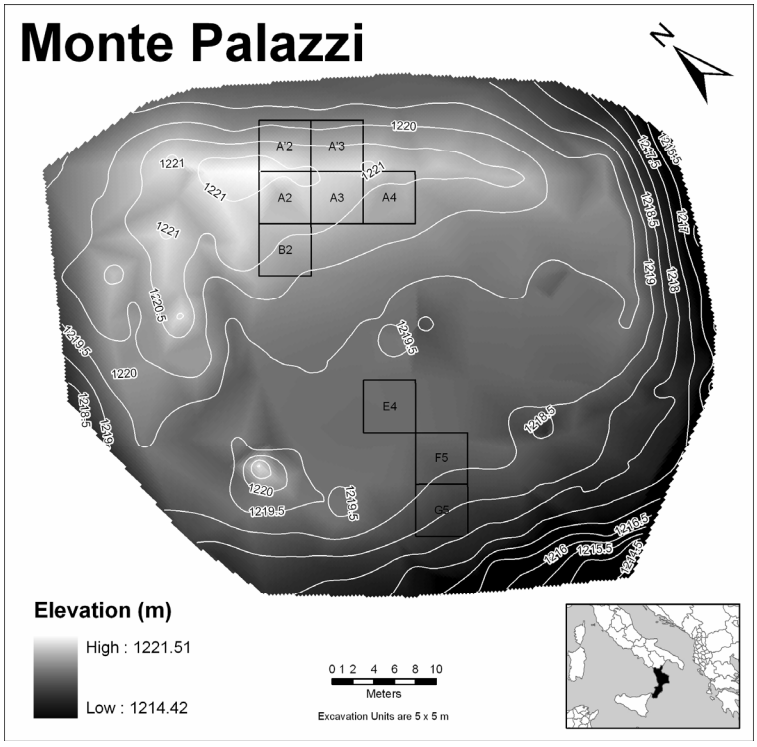

Fig. 7. DEM map of Monte Palazzi by M. Kennedy and J.E. Levy (after KENNEDY 2009), with overlay of the 5 x 5 m excavation units explored in 2005-2008.

[13] BARILLARO 1972: 290: "*Resti di costruzione greca, a pianta circolare e a pietrame sciolto (o in legamento a 'tajo'). Edificio crollato per incendio, in età imprecisata. Complesso scoperto da E. Barillaro (nel 1961). Recupero di frammenti architettonici litici (calcarei) e di reperti metallici e fittili (vascolari). Controversa la consistenza dell'edificio (prob. stazione itineraria di un percorso istmico, o villa montana, a dominio degli opposti versanti jonico e tirrenico). Sec. V a.C.*"

[14] Cf. SETTIS 1987: 161-164; SABBIONE 1977: 370-371. For the intellectual background of this project, see KNAPP *et al*. 2007: 482-487. For the weapon recovered by Settis and other materials said to have been found by Barillaro at Monte Palazzi, see FALCONE 2009: 67 and 70.

Figs. 8-9. Monte Palazzi 2007. The northeastern perimeter wall, seen from the west (on the left). The outer face of the northeastern perimeter wall, resting on bedrock, seen from the north (on the right).

covered. Further excavation by new teams from the University of Kentucky in 2007 and 2008 showed that this rampart was built across the brow of the ridge and is double-faced, with an inner core of dirt and small stones (Fig. 8). Its width ranges from 2.3 to 2.5 m, and its veneer consists of roughly hewn blocks of local granite (medium size: 30-40 x 15-20 cm), which are preserved to a height of 5 and 7 courses respectively (Fig. 9). Even though no interlinking courses of stones are visibile, some blocks may function as headers to bond the facing to the rubble core[15]. A consistent effort was made to line the veneer courses with blocks presenting a flat outer face. The wall seems to have been constructed without digging or cutting a foundation trench in the granitic bedrock, as could be determined at a point where it was robbed out (Fig. 10). Enough was left of the rubble core and the foundation course in this gap to reveal that the lowest stones were laid out horizontally against the bedrock, without any other preparation (Fig. 11). "*La tecnica è figlia del materiale che hai*", as C. Sabbione pointed out[16]. There is some evidence that the wall may also have been supported by an earthwork, a '*scarpata di terra costipata*'[17], built on the escarpment at a lower level, because the extant structure would have required buttressing in spite of its thickness. Its outer face appeared to have shifted because of gravity, it was partially jutting outward when the overburden was removed.

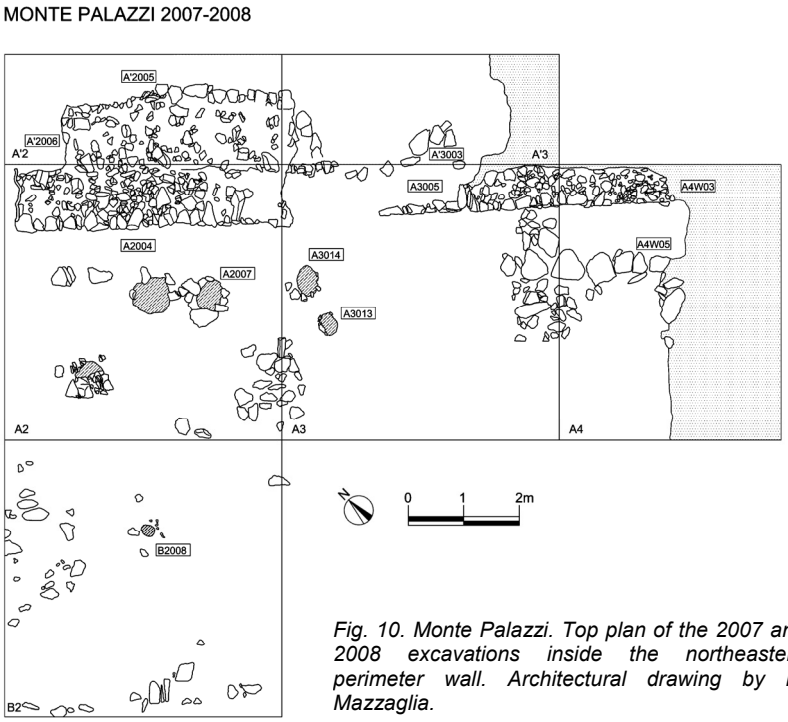

Fig. 10. Monte Palazzi. Top plan of the 2007 and 2008 excavations inside the northeastern perimeter wall. Architectural drawing by P. Mazzaglia.

Although only a short length of this wall has been unearthed, both its masonry technique and its structural characteristics are very similar to those of the late archaic defensive walls of Hipponion and Kaulonia[18]. Its original height may have been enhanced by additional courses of '*pisé*' or mudbrick supporting a catwalk and a timber parapet, but cannot be estimated at present. Mudbrick would have required little clay, which is found in low percent-

[15] Cf. MACNAMARA 1983a: 214-218 and KELLER 2009: 10; see also TOMLINSON 1961: 139; FIELDS 2006: 10-13.
[16] Personal communication (June 23, 2006).
[17] Cf. GIULIANI 1990: 43.
[18] AUMÜLLER 1994: 250-252, Pl. 92; TRÉZINY 1989: 23-25 (wall M9/11).

Fig. 11. Monte Palazzi 2008. Rubble core (locus A'3003) and remains of the lowest course of the northeastern perimeter wall in square A'3.

age at Monte Palazzi[19]. A fill of smaller stones (Fig. 10; locus A4W03) suggests that the inner face of the wall underwent some repair[20]. Unfortunately, this rampart cannot yet be dated stratigraphically, as no datable ceramics was found in its rubble core (Fig. 10, locus A'3003) and above bedrock in the robbed out area. The lacuna or breach in the northeastern wall may be due to stone quarrying rather than to pot-hunting. No clues were found that it was back-filled, contrary to what was surmised in a previous report[21]. A similar disturbance on the northeastern corner of the perimeter wall may represent another episode of robbing.

A *terminus post quem* for the construction of the wall is provided by the earliest ceramics from the squares A2, A3, and A4 excavated immediately inside the perimeter. This includes at least one *kylix* rim and fragments of miniature vessels datable from the late 6th through the 4th centuries B.C., fragments of *skyphoi* with offset rim and sharply carinated shoulder, and fragments of Locrian transport amphorae datable between 500-450 B.C.[22] These materials do not appear to be residual or from an isolated context. The lowest levels of a sondage excavated in 2007 c. 10 m to the east of square G5 to determine the boundaries of the site also yielded several fragments of late archaic Ionic cups (including examples of form B2), at least one Locrian amphora rim datable to the second half of the 6th century, fragments of black gloss *kylikes* with offset rim and convex body datable to the late 6th / early 5th centuries B.C., and fragments of skyphoid cups datable to the early 5th century B.C. (Fig. 12, a-f; Fig. 13)[23]. This sondage also produced two two-edged, socketed cast bronze arrowheads with side spur of a type found at other sites in Calabria in late archaic and classical contexts (Fig. 14)[24]. Other fragments of an Ionic-type cup and of skyphoid cups come from square F5, which was excavated in 2008 in order to locate the position of the perimeter wall on the southeastern flank of the summit.

While approximately 10% of the estimated total area of the site has been excavated to date, a preliminary analysis of the ceramic assemblage indicates that late 6th- and early 5th- century pottery is dispersed across the compound[25]. This can hardly be due entirely to soil movement and to taphonomic processes such as floral-, faunal-, and cryoturbation[26]. In view of the fact that the ceramic evidence dates the arrival of Greek settlers at Monte Palazzi in the second half or towards the end of the 6th century B.C., the perimeter wall was built probably c. 500 B.C., or at the beginning of the 5th century B.C. Given Monte Palazzi's isolated location in a frontier zone, it is unlikely that this settlement would have remained without any fortifications for long.

Since a segment of the southeastern perimeter wall (measuring at least 2.5 m in width) was uncovered in square F5 at a distance of 25 m from the northeastern wall, and seems to run parallel to it, the complex may have had

[19] For the use of "*terra argillosa pressata*" for the upper courses of the see perimeter wall of the fort built at Serro di Tavola in the second half of the 6th century B.C. see BRIZZI and COSTAMAGNA 2010: 583 and 585, Figs. 421-422. For the use of mudbrick at San Salvatore see FOXHALL 2007: 4; cf. also TRÉZINY 1989: 23. Chemical tests have determined that the soil on the summit of Monte Palazzi is a sandy silt. For soils that make good mudbrick, see the Cooperative Extension Service, College of Agriculture and Home Economics, New Mexico State University Website: http://cahe.nmsu.edu/pubs/_g/G-521.pdf (information by R.T. Nishiyama).

[20] KNAPP *et al*. 2007: 499-501 and Fig. 10.

[21] KNAPP *et al*. 2007: 498

[22] KNAPP *et al*. 2007: 503-507, n. 35. See also below, footnotes 57 and 64.

[23] The ceramics from this test-pit include Ionic cups (B2) such as inv. 145331 (cf. OLIVERO FERRERO 1989: 73-74, no. 4; RUBINICH 1992: 99, no. 26; TRÉZINY 1989: 46, nos. 22-23, 28-29; GAGLIARDI 2007a: 79: no. 72; CANNATA 2007: 536 and 539, no. 13) and 145297 (base of the previous cup? Cf. RUBINICH 1992: 99, no. 28; TRÉZINY 1989: 46, no. 27; 48, no. 53); an amphora rim of the type '*a cuscinetto rigonfio e camera d'aria abbastanza larga e continua*', inv. 145310 (BARRA BAGNASCO 1992: 230-231, no. 180; *corrige*: VISONÀ 2010: 600, Fig. 448a), *kylix* rims inv. 145347 and 145284 (cf. RUBINICH 1992: 100, no. 34; GAGLIARDI 2007b: 497, no. 6 e 502-503, no. 29; CANNATA 2007: 541-542, no. 21), and skyphoid cups such as inv. 145309 (cf. OLIVERO FERRERO 1989: 81-92, no. 20; PREACCO ANCONA 1992: 130, no. 70; GAGLIARDI 2007b: 498, no. 12; 507). Also see below, footnote 65.

[24] Cf. TOMASELLO 1972: 587-589; PAPADOPOULOS 2003: 63-64, no. 167; 'Classical Greek artifact gallery', in *San Salvatore 2007*; cf. ELAYI and PLANAS PALAU 1995: 38 and 176, type VII; BAITINGER 2001: 13, Pl. 4, nos. 86-87. See also VISONÀ 2010: 598, n. 7.

[25] The term 'ceramic assemblage' used in this report encompasses all the ceramics found at Monte Palazzi in controlled excavations between 2005-2008, comprising a total of 80,483.5 g. It does not represent "the finds from a single deposit or perhaps a single phase within a confined area of a site", as the term is defined by MILLETT 2000: 217.

[26] HILL 1998: 255-261.

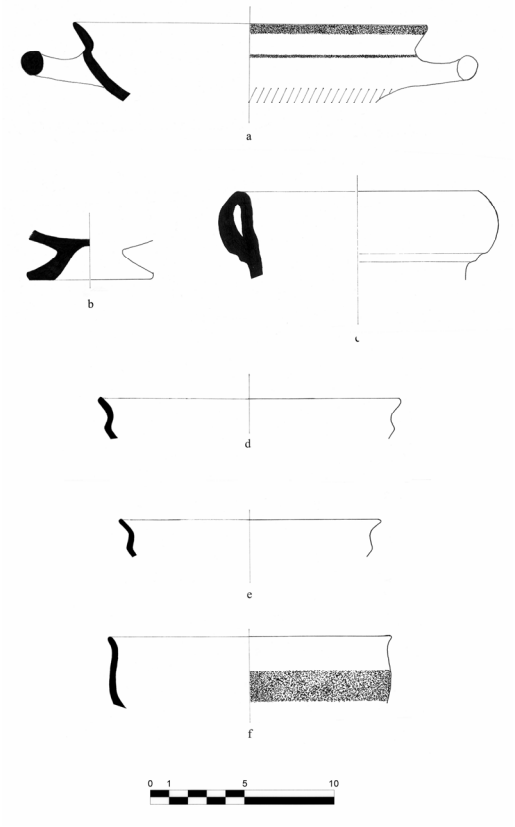

Fig. 12. Monte Palazzi 2007. Ceramics from a sondage at the southern end of the site, including: a) fragmented rim and body sherd of Ionic cup, inv. 145331; fabric: Munsell *7.5YR 6/4; slip:* Gley *1 2.5/N, 2.5YR 5/8; c. 500 B.C. b) base of Ionic cup, inv. 145297 (from same vessel as inv. 145331?); fabric: 7.5YR 7/6 - 6/6; slip:* Gley *1 2.5/N, 2.5 YR 4/6; c. 500 B.C. c) amphora rim 'a cuscinetto rigonfio e camera d'aria', inv. 145310; fabric:* Munsell *7.5 YR 8/2; 500-450 B.C. d) fragment of* kylix *with offset rim and carinated body, inv. 145347; fabric:* Munsell *10YR 6/4; 525-500 B.C. e) fragment of* kylix *similar to the preceding, inv. 145284; fabric:* Munsell *10YR 7/3; slip:* Gley *1 2.5/N; 525-500 B.C. f) rim of skyphoid cup with red stripe, inv. 145309; fabric:* Munsell *10YR 7/3; slip:* Gley *2 2.5/5PB, 7.5 YR 6/4 - 5/4. Early 5th century B.C. Data and drawings by J.E. Knapp.*

Fig. 13. Monte Palazzi. Base of Ionic cup (from the same vessel as inv. 145331?), inv. 145297.

a rectangular plan covering an area of c. 1,200 m² (0.12 ha) across the mountaintop. Its dimensions are comparable to those of the forts at Serro di Tavola (over 2,200 m² in the second building phase; c. 1,120 m² after remodeling) and San Salvatore (1,015 or 986 m²)[27] (Fig. 15), and are consistent with Settis' identification of the complex as a *phrourion*. Surface finds of blocks of granite (up to 55 x 39 x 25 cm) near the summit, and a concentration of debris at higher points in the northwestern and southwestern sectors of the site (see Fig. 7), may be indicative of the presence of a tower or lookout. If this were to be confirmed by new investigations, Monte Palazzi's fort would have had yet another feature in common with the forts at Serro di Tavola and San Salvatore. The Italic fortification built between 310-290 B.C. at contrada Palazzo on the Piani di Zivernà above Piminoro (Oppido Mamertina), at an elevation of 1,040 m. above sea level, may also have been a watchtower (Fig. 16)[28].

A tower attached to or built into a fort would have been used for defensive purposes (i.e., as a bastion), as well as for sighting and intersignaling. The latter would have been especially important, considering Monte Palazzi's limited viewshed in a landscape of "*ampie gobbe arrotondate*"[29]. Despite the fact that Monte Palazzi does not command a view of the Locrian *chora*, its summit is clearly visible from nearby Monte Gremi (1,241 m above sea level), whose southwestern ridge could be seen from Locri Epizephyrii, as satellite photography has shown[30]. It is uncertain whether the Greek outpost had an unrestricted view of the Allaro River to the northeast, or even of today's Croceferrata Pass, since "the gradual falloff doesn't appear to be steep enough" to rise above the surrounding terrain[31].

Fig. 14. Monte Palazzi. Enlargement of cast bronze arrowhead with side spur from the 2007 sondage at the southern end of the summit, inv. 145354. Length: 2.16 cm; width: 0.95 cm. Late 6th-5th centuries B.C.

[27] Cf. BRIZZI and COSTAMAGNA 2010: 583-586; FOXHALL 2007: 4; *San Salvatore 2007*.

[28] Cf. BRIZZI and COSTAMAGNA 2010: 587; FOXHALL 2007: 4; BRIZZI 2008: 470; AGOSTINO and SICA 2009 (*non vidi*). For the use of large blocks of stone in tower construction at Locri and Cozzo Presepe cf. COSTAMAGNA and SABBIONE 1990: 270-272; MACNAMARA 1983b: 244-251.

[29] The phrase is by C. Sabbione, quoted in KNAPP *et al*. 2007: 483. For site-intervisibility and military signaling in classical Greece see FOSSEY 1993: 112, 120, 128-129; GAUVIN 1993; VAN DE MAELE 1993: 101-106; BA SHSHUR and SHANNON 2009: 27-30. Cf. also (*mutatis mutandis*) the remarks by ANNIBALETTO 2006: 120-128. According to CARTER 2006: 144, "towers are not common in the Greek colonies of Magna Graecia."

[30] A fragmentary Greek roof tile was found at loc. Pontano di Gremi before WW II (information by Damiano Salvatore Tassone of Cassari).

[31] Personal communication by J.R. Jansson.

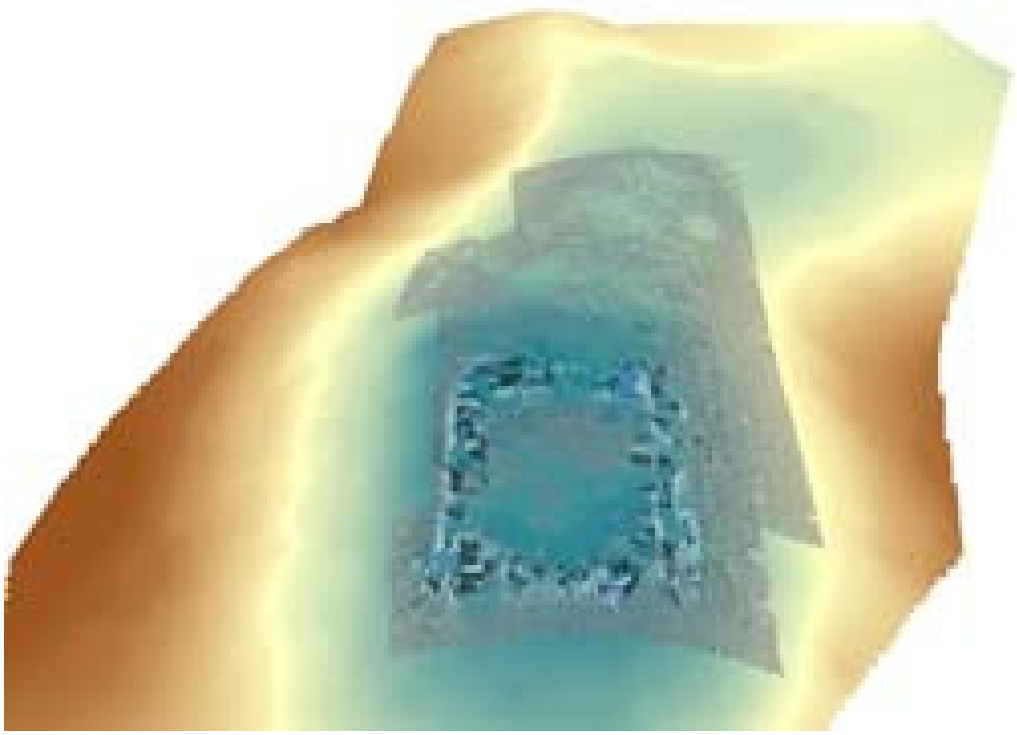

Fig. 15. San Salvatore (Bova). Magnetometry map overlaid on topography, showing the perimeter wall of the fortified complex. From San Salvatore 2007.

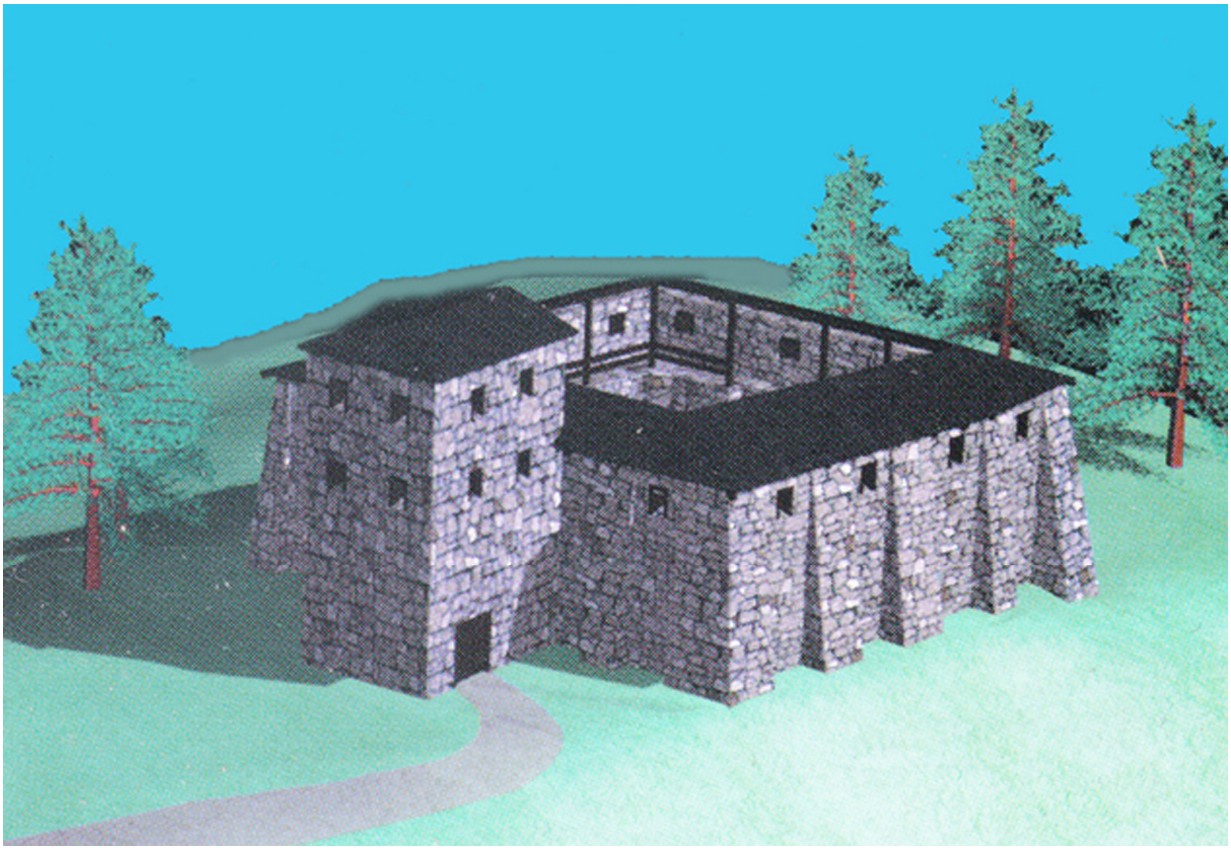

Fig. 16. Reconstruction of the Italic fortification at contrada Palazzo above Piminoro (Oppido Mamertina, RC). From AGOSTINO and SICA 2008: 45. Courtesy of Comune di Oppido Mamertina.

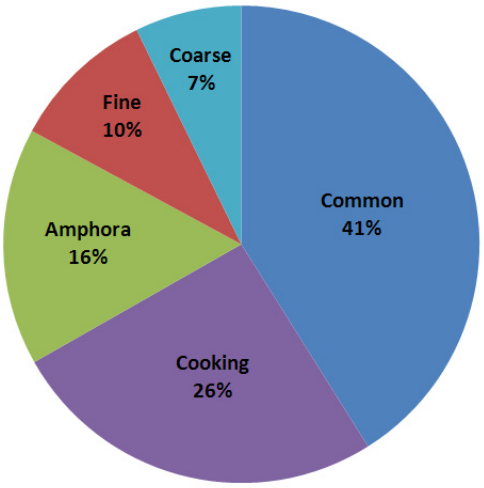

Fig. 17. Monte Palazzi. Preliminary ceramic assemblage from the 2005, 2007, and 2008 excavations. Total weight: 80,483.5 g. (coarse ware: 5832 g; fineware: 7946 g; amphora: 12,953 g; cooking ware: 20,702.5 g; common ware: 33,050 g).

The preponderance in the ceramic record of Locrian transport amphorae with rim '*a cuscinetto rigonfio*' and '*a mandorla*', representing distinctive archaeological hallmarks[32], points to a close connection between the *phrourion* on Monte Palazzi and Locri Epizephyrii, as Settis surmised early on. To be sure, an analysis of the finewares, which comprise 10% of the ceramic finds (Fig. 17), has detected affinities with forms from both Locri and Kaulonia. Nevertheless, while it is difficult to distinguish the material from these sites, the overall impression is that, "there does seem to be a slightly closer agreement with the forms from Locri"[33]. It is hoped that this conclusion will be reinforced by the complete study of the ceramics.

Monte Palazzi's strategic position to the north of the Torbido River Valley must have been vital to Locri's security in the late archaic period. Numerous finds from località S. Antonio, località S. Maria (Gioiosa Jonica), località S. Stefano (Grotteria), and località S. Barbara (Mammola) suggest that the Torbido had become an economic enclave under Locrian control by the middle of the 6th century B.C.[34]. A military installation on Monte Palazzi, in a liminal zone between the territories of Medma, Hipponion, and Kaulonia, would have protected the farmland on the northeastern flank of the Locrian *chora*. As a border post overlooking an important pass, this *phrourion* would also have guarded a northerly route to the Locrian sub-colonies on the Tyrrhenian Sea, particularly Hipponion[35]. It is significant that a guardpost built in 1772 at Croceferrata to prevent robberies and murders which "*soglionsi commettere in danno de poveri Passeg[g]eri, che nicessariamente vi debbono transitare, andando da Paraggio di dietro Marina in altri luoggi, e particolarmente nella città di Montelione* (today's Vibo Valentia) *ove risiede la Regia Cassa*", had similar functions[36]. In addition to securing communication lines with Medma and Hipponion, control of Monte Palazzi could have given the Locrians access to an invasion route into the *chora* of Kaulonia through the Passo di Pietra Spada and the Stilaro River Valley. There are no indications that a fort was needed to keep an eye over an indigenous population in this area, or that it served as a storehouse where goods traded between the Ionian and the Tyrrhenian coasts could be placed in transit[37].

Other compelling reasons explain why the summit was fortified c. 500 B.C., or shortly afterwards. Both the foundation of Hipponion and Locrian expansion on the Tyrrhenian coast throughout the 6th century B.C. had fostered a long-standing rivalry between Kroton and Locri. After the fall of Sybaris in 510 B.C., Kroton and its ally, Kaulonia, would have been perceived as a clear and present threat by the Locrians, and a state of warfare was in effect between Kroton and Locri in the early 5th century[38]. Since Medma and Hipponion fought with Locri against Kroton, as shown by the inscription on the bronze shield dedicated by the Greeks of Hipponion at Olympia in 475 B.C.[39], the fort on Monte Palazzi would have played a critical role as a nexus for communication between these *poleis*, and for any offensive into enemy territory. Its importance as a control point and an observation post, from which early warning

[32] Cf. BARRA BAGNASCO *et al*. 2001. Similar types of amphorae were also made at Kaulonia: see CANNATA 2007: 575, no. 181.
[33] Personal communication by J.E. Knapp, who is preparing the ceramics from Monte Palazzi for publication.
[34] See FALCONE 2009: 53-55, 61-62, 73, 76-77, 97; cf. FIORAVANTI 2002: 44-46. The material from sites in the Torbido River Valley published by Falcone suggests that this area of the Locrian *chora* was more densely populated than previously believed: cf. OSANNA 1992: 214, 220-221.
[35] According to DE SENSI SESTITO 2007: 327 "*Se non c'è difficoltà a considerare confinanti Locri e Medma, separate dalle Serre e collegate tra loro dalle opposte vallate fluviali del Torbido e del Mesima, non è agevole individuare un confine diretto tra Ipponio e Locri, senza ipotizzare un ampio controllo locrese nella regione montana interna alle spalle di Caulonia*." The excavations at Monte Palazzi document the extent of Locrian control over this hinterland. Medma could also have been reached from Locri via today's Passo del Mercante (elevation: 952 m above sea level), where a WW II pillbox is still found. For an 'isthmic' route through this pass that may have been frequented since prehistory, see COSTABILE 2007: 22-23.
[36] CATALDO 2004: 5; cf. CATALDO 2006.
[37] Cf. FIORAVANTI 2002: 34, 42, 45-46, and DE SENSI SESTITO 2007: 327. It is unlikely that bulky goods were transported overland: see GRAS 1987: 214-215, 220-223; REDFIELD 2003: 217-221, 225-227; cf. IANNELLI 2005: 681 and 685, n. 23; IANNELLI and CERZOSO 2005: 691-692, 694, and 697.
[38] DE SENSI SESTITO 2007: 325-326; cf. FIORAVANTI 2002: 44-49; MERCURI 2004: 283-284. Rhegion's offensive in the early 5th century B.C. also threatened Locrian interests on the Tyrrhenian coast: cf. MAFODDA 2002: 296-297 and CORDIANO and ISOLA 2006: 44-50.
[39] MADDOLI 1996: 197-201; cf. PAOLETTI 2001: 2-3.

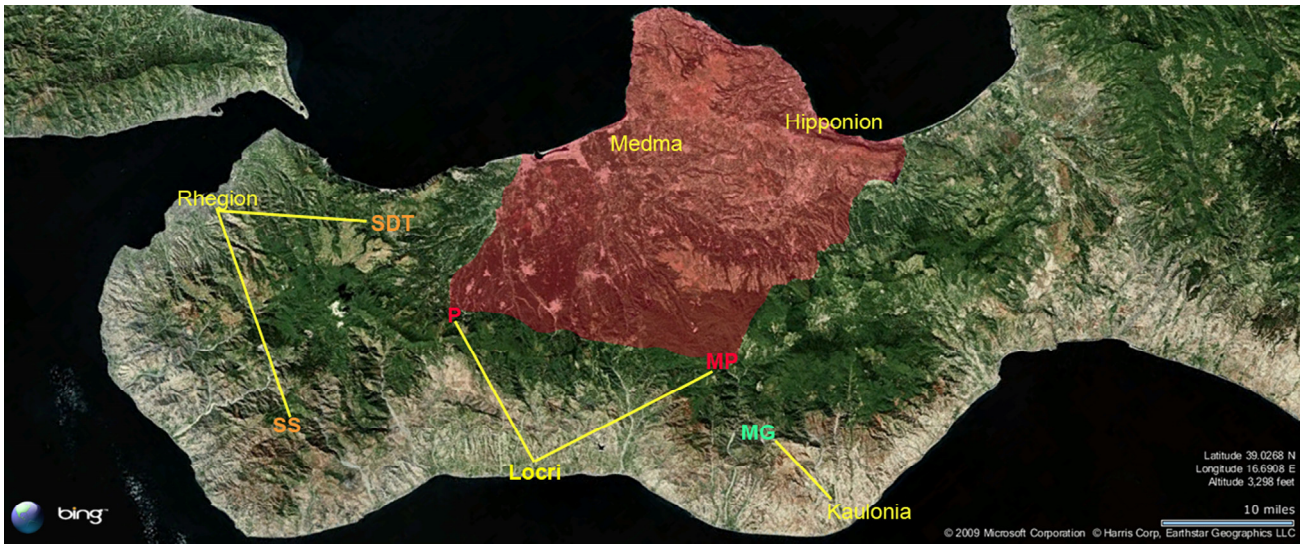

Fig. 18. Satellite map of southern Calabria showing the area under Locri Epizephyrii*'s influence c. 500 B.C. (highlighted in red) and linear distances from Greek cities to mountain forts. From north to south: MG = Monte Gallo; MP = Monte Palazzi; P = Palazzo; SDT = Serro di Tavola; SS = San Salvatore. Courtesy of Bing and Microsoft Corp. Computer-aided visualization by J.R. Jansson and L. Chapman.*

could be sent in the event of an attack from the north, undoubtedly increased in the late 420s, when Locri had to fight a war against its Tyrrhenian sub-colonies (Thucyd. 5.5.3).

The discovery of remains of another Greek mountain fort on Monte Gallo (elevation: 780 m above sea level),11 km to the east of Monte Palazzi, has further implications for the strategic relevance of our fort. Surface finds of late archaic and 5th-century ceramics at Monte Gallo, which lies within the *chora* of Kaulonia, suggest that it was occupied at the same time as the fort on Monte Palazzi[40]. The location of a *phrourion* of Kaulonia on the left bank of the Allaro River, almost directly opposite the Locrian fort on Monte Palazzi, indicates that this river represented a physical boundary between the *chorai* of Locri and Kaulonia.[41] The latter does not seem to have suffered any territorial losses "*almeno lungo il confine locrese*" after Kroton's defeat at the Battle of the Sagra River (c. 550 B.C.), and the border with Locri presumably remained unchanged until Dionysius I's conquest of Kaulonia in 389 B.C.[42]. A Locrian fort would not have been positioned to the north of the Torbido if this river was indeed the boundary between these two cities. Thus, if Strabo's Sagra marked the boundary, the presence of opposite forts across the Allaro since the late archaic period would be strong evidence that this river may now be identified as the Sagra (see Strabo 6.1.10). The two forts would have confronted each other in a pattern recalling the system of territorial defense on the Attic-Megarian frontier in the classical period[43].

By the end of the 6th century B.C. the Locrians may also have occupied a strategic position near the later Italic fortification at Palazzo, overlooking the Petrace River Basin[44]. Most of this fertile river valley (including the best farmland) could have come under Locrian control after Locri's conquest of the Chalcidian center of Métauros (today's Gioia Tauro) c. 550 B.C. If this scenario is credible, outposts at Monte Palazzi and at Palazzo would have guarded simultaneously the northeastern and northwestern flanks of the Locrian *chora*, while a Locrian 'sphere of influence' on the Tyrrhenian coast reached from Hipponion to Métauros (Fig. 18, highlighted in red). The forts at Serro di

[40] KNAPP *et al*. 2007: 501-502, 507, n. 33.

[41]. M.T. Iannelli also believes that the settlement on Monte Gallo should be attributed to Kaulonia (personal communication). According to FACELLA 2007: 185, "[…] *le recentissime ricerche di M.T. Iannelli e F. Cuteri, ancora inedite, hanno permesso di verificare l'esistenza in varie epoche, dall'età arcaica al Medioevo, di un utilizzo del fiume Allaro come confine*". Cf. TALBERT 2000: 46.

[42] DE SENSI SESTITO 2007: 325; cf. FIORAVANTI 2002: 45-46.

[43] For the Allaro River, see BARILLARO 1973: 69-73. For the territorial defense networks between Megara and Athens, see VAN DE MAELE 1993: 105.

[44] According to BRIZZI and COSTAMAGNA 2010: 593, "*La fortificazione era stata anticipata da una struttura precedente, che per ora risulta indiziata solo dal materiale ceramico, risalente al VI sec. a.C. La fortificazione presenta tecniche costruttive e attenzioni poliorcetiche differenti rispetto agli edifici di Serro di Tavola, ma ne condivide la strategia insediativa e probabilmente la stessa funzione di piccolo presidio militare dislocato in un ambito remoto della* chora, *volto non tanto ad una velleitaria difesa militare dei confini, quanto alla garanzia del regolare svolgimento delle attività di sfruttamento agrario e silvo-pastorale vitali per la* polis *artefice di questa infrastruttura, da riconoscere probabilmente nella città di Locri.*" For finds at Palazzo of fragments of Ionic cups "*di produzione calcidese*", one of which has an inscription in the Chalcidian alphabet, cf. BRIZZI 2008: 471 and AGOSTINO and SICA 2009 (*non vidi*). The excavations at San Salvatore have also yielded a late archaic *skyphos* bearing a name inscribed in Rhegion's Chalcidian alphabet: see 'Greek Classical artifact gallery', in *San Salvatore 2007*.

Fig. 19. Monte Palazzi 2008. Alignment of boulders possibly representing a collapsed structure in square A4 (locus A4W05).

Tavola and San Salvatore would have guarded potential Locrian invasion routes into Rhegion's own territory[45].

While the characteristics of the fortification wall do not appear to have been able to withstand a major attack, they attest to a considerable investment in building material and labor by the Locrians that invites comparison with modern dry-built stone forts[46]. In addition to its military functions, an outpost on Monte Palazzi would have served as a boundary marker and a visible symbol of Locrian control of the *eschatiá*. The distance of this fort from Locri Epizephyrii must have been based upon practical as well as strategic considerations, for it could have been reinforced and resupplied in less than a day, despite being c. 25 km away from the *polis* as the crow flies. According to Aristotle, it took a half day's journey to travel across the isthmus from the Gulf of Squillace to that of Lamezia, a distance of 31 km[47]. Therefore, it is significant that the *phrouria* at Serro di Tavola and San Salvatore lie at a linear distance of c. 22 and 28 km respectively from Rhegion, and that the outpost on Monte Gallo is located at c. 15.5 km from Kaulonia. The site of Palazzo, where another Locrian outpost may have been located, lies at c. 21 km from Locri. But "a map is not the territory", as Alfred Korzybski famously noted[48]. Slope and natural obstacles would have had to be negotiated. Once the characteristics of the terrain are taken into consideration, longer non-linear routes of at least 28.5 km, 23 km, 29 km, 26.5 km, and 24 km respectively seem to have been more likely (Fig. 18).[49] These distances suggest that Greek mountain forts in Magna Graecia may be expected within a range of c. 30 km from the *asty*[50].

The excavations conducted inside the northeastern perimeter wall at Monte Palazzi uncovered only one architectural feature that may be identified as a collapsed structure, an alignment of boulders presenting a chiselled face on the southern side (locus A4W05; cf. Figs. 10 and 19). It is uncertain whether these belong to a parallel wall or to a different (or later?) installation, and whether they rest on a soil layer or directly upon bedrock. The stratigraphy in this area of the site (squares A2, A3, A4) is particularly shallow, because the bedrock is higher. Separability between soil layers was also made difficult by the roots of the beech trees grown inside the perimeter wall. Evidence of disturbances, including lack of an abandonment stratum, further suggests that Monte Palazzi is not an 'intact' site and that vertical integrity may have been lost or compromised. Excavation thus far has revealed a 'palimpsest deposit' rather than a coherent sequence of depositional episodes that could be linked to discrete phases of occupation. Even the lowest and presumably earliest soil layers have yielded chronologically mixed materials.

[45] For the 'Locrization' of Métauros in the 6th century B.C., cf. CORDIANO and ISOLA 2006: 20-51 and SABBIONE 2005: 245-251. It is doubtful that Rhegion's territory on the Tyrrhenian coast extended as far as the Castellace terrace: cf. SICA 2007: 29-31 and CARAFA 2005: 390-394.

[46] Fort Negeley, 'the largest inland masonry fortification in North America' built in 1862 to protect the Union garrison in Nashville (Tennessee), required more than 60,000 cubic feet of stone.

[47] ARISTOTLE, *Politics*, 7.9.2 (quoted by GRAS 1987: 215). There is ethnographic evidence that it took 6 hours in the early 1900s to travel on muleback from present-day Caulonia or Focà to Fabrizia (c. 6 km northeast of Monte Palazzi), a distance of c. 15 or 20 km respectively, suggesting a rate of speed of 2.5 or 3.3 km per hour. See DOUGLAS 1928: 398.

[48] Quoted by SAFIRE 2009.

[49] Information from J.R. Jansson based on satellite photography. The conceit that a "small amount of land was under direct Greek control, extending no more than 15 km from the Mediterranean coast" cannot be applied to all Greek cities in Magna Graecia, *pace* WHITEHOUSE and WILKINS 1989: 107. Cf. MUGGIA 2000: 226-228 and 231-232; cf. CARTER 2006: 117-118.

[50] If a *phrourion* existed near Cotronei (*supra*, footnote 2), it would have been located at c. 30 km from Kroton. On the American Frontier in the 18th century "The distance between forts varied with population density, areas of cleared land, and exposure to danger. The Colony of Virginia's official French and Indian War "Line of Forts" were placed every fifteen to twenty-six miles, but there were also private forts spaced between these. In the Greenbrier Valley, forts were located three to ten miles apart during the Revolution", according to MCBRIDE and MCBRIDE 2006: 19.

Fig. 20. Monte Palazzi 2005. Fragment of sandy loam coated with grout- or plaster-like substance containing organic matter. Dimensions: width 1.9 x 1.45 cm; thickness 0.95 cm; thickness of plaster (?) 0.1 cm. Munsell *of sandy loam: 10YR 5/2 - 4/2;* Munsell *of plaster (?) surface: 5Y 5/1 - 5Y 6/1.*

Fig. 21. Monte Palazzi. Refuse pit in square A2, locus A2007 (2007 photo).

Therefore, it may be nearly impossible to distinguish stratigraphically a series of accumulation processes resulting from repeated activities inside the same confined space[51].

No discernible man-made surface was found above the bedrock, which may also have been partially leveled off in antiquity, since two thirds of the summit area are fairly even (see Fig. 7). Some fragments of a sandy loam coated with a grout- or plaster-like substance (or whitewash?), containing organic matter[52], and resembling '*incannucciato*' or adobe (Fig. 20)[53], may come from interior walls and ceilings, rather than from floor surfaces[54]. Nevertheless, it would be premature to conclude that all the bedrock was used as a 'living floor'. A stone-lined refuse pit found in square A2 (Fig. 10, locus A2007; Fig. 21) was dug into it, and an extension of the excavation into square B2 revealed the presence of an oval-shaped post-hole, c. 20 x 15 cm in diameter (Fig. 10, locus B2008; Fig. 22), which contained carbonized remains of silver fir (*Abies alba*). Wooden posts may have supported a roofing structure. Finds of fragmented Greek terracotta pan- and cover tiles from the same area can also be related to the presence of a roof[55]. The altitude of the site and prevailing cold-humid weather conditions between the 6th- 4th centuries B.C. would undoubtedly have required facilities for permanent shelter[56]. Even more intriguing is the presence in square A3 of two ephemeral pits cut into the bedrock (Fig. 10, loci A3013-A3014; Fig. 23), which yielded remains of carbonized olive pits and cereals such as wheat (*Triticum aestivum* / *durum*), emmer (*Triticum* cf. *dicoccum*), and maybe

Figs. 22-23. Monte Palazzi. Post-hole in square B2, locus B2008 (2008 photo) on the left. Pit in square A3 (locus A3013) containing carbonized organic remains (2007 photo) on the right.

[51] Cf. HOLDAWAY and WANDSNIDER 2006: 191-196, and the discussion of 'entropic time' by WITMORE 2007: 200-203.
[52] Preliminary information from L. Rampazzi, who is currently analyzing this material.
[53] Cf. http://www.artesano-home.com/floors.html (accessed on 20.2.2010).
[54] KNAPP *et al*. 2007: 501, n. 24. Cf. KELLER 2009: 13-14. For the use of '*incannucciato*' and '*clayonnage*' in Roman and Medieval rural buildings cf. ORTALLI 1995: 159-162, 169; GALETTI 1997: 79-80.
[55] The scarcity of roof tiles in the archaeological record may be attributed to robbing: see KNAPP *et al*. 2007: 494, n. 19. A tile flange from square A2 is too fragmented to be dated with certainty: cf. NOTARIO 1992: 321-322 (types D2, D3, D4, E1, E2).
[56] See ORTOLANI and PAGLIUCA 2003: 165-169.

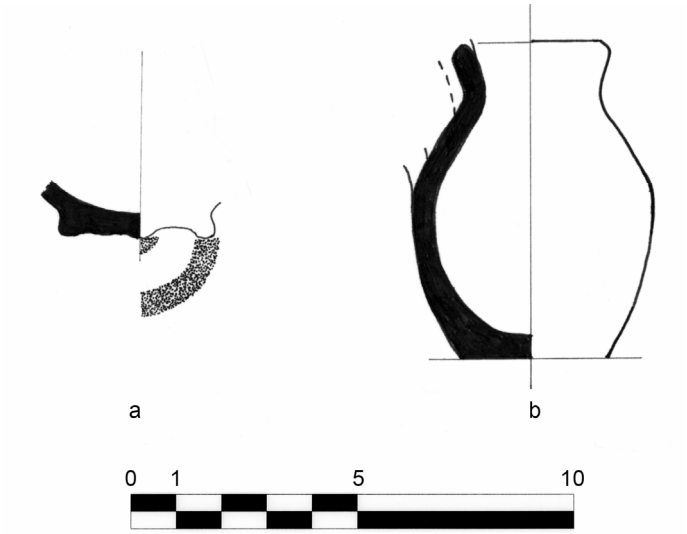

Fig. 24. Miniature ceramics from Monte Palazzi. a) asymmetrical base, very crudely made, of kotyle *from locus A3014, inv. 145266. Red slip interior; Fabric:* Munsell *10YR 7/4; slip: 5YR 4/4. 550-400 B.C. b)* olpe*, inv. 146743. Coarse, micaceous clay with no traces of slip. Early to mid-4th century B.C. Data and drawings by J.E. Knapp.*

barley (*Hordeum sp*.). An unusually high concentration of miniature ceramics, including *chytrai*, *kotylai*, and an *olpe* (Fig. 24,b) was found near these shallow pits, and at least one miniature *kotyle* base (Fig. 24,a) was associated with the larger pit, locus A3014[57]. In addition, fragments of a mold-made terracotta figurine bearing traces of a caduceus were found in a stratum rich in charcoal overlying the bedrock and adjacent to the pits (Fig. 25)[58]. While this evidence is tentative, it does suggest that ritual activity took place inside the wall, possibly over a period of time, since some of the miniature ceramics could have been made throughout the 5th century and in the 4th century B.C. (*e.g*., the *olpe*). The pits' contents recall those of late archaic *eschárai* from Siris-Herakleia and S. Nicola di Albanella (Poseidonia), which contained organic offerings linked to the cult of chthonic deities, such as Demeter[59]. Votive materials have also been found at the forts of Serro di Tavola and San Salvatore, and may attest to the Greeks' engagement with the physical and sacred landscape of the mountaintop[60].

Even if the architectural history and the internal organization of Monte Palazzi's fort cannot be elucidated after three campaigns, the finds of terracotta roof tiles and the large percentages of amphora and cooking ware, comprising at least 16% and 26% respectively of the ceramic assemblage (Fig. 17), corroborate the possibility that it was occupied year-round. These preliminary percentages will probably be revised upwards, since the coarse ware and the common ware, which represent 7% and 41% of the assemblage, include some amphora fabric and cooking ware. The latter, in particular, includes numerous *chytrai*, casseroles, and lidded cooking pots that are comparable to examples from Locri and Kaulonia[61]. Fragments of *mortaria* and

Fig. 25. Monte Palazzi 2007. Fragmented terracotta mold-made draped figurine holding caduceus from square A2, inv. 145348. Length: 7.46 cm; width: 1.82 cm; thickness: 1.28 cm. Munsell*: 10YR 6/3 - 6/4 and 10R 6/6 - 6/8 (reddish spot below caduceus).*

[57] For examples of miniature *chytrai* from Herakleia and Metapontum cf. Danninger 1996: 180 and Carter and Toxey 1998: 729. For the miniature *olpe* (inv. 146743) cf. Rubinich 1992: 100-101, no. 40 bis; Gagliardi 2002: 311, no. 284c; Iannelli 2002: 325 (inv. 124702); Gagliardi 2007b: 524-525, no. 125; Czysz 1996: 165; Danninger 1996: 176; Elliott 1998: 689 (OL2); cf. also Morel 1989: 5151b and 5152a. For the miniature *kotyle* base (inv. 145266), cf. Rubinich 1992: 97, no. 15.

[58] This figurine cannot yet be identified, Although this figurine cannot yet be identified, the caduceus with intertwined snakes is associated with Hermes, Nike, and Iris (information by R. Miller Ammerman).

[59] Cf. Otto 2005: 7-11, 14-15; Sfameni Gasparro 2009: 142-156.

[60] See Brizzi and Costamagna 2010: 594; *San Salvatore 2007*. Cf. Hughes 1975: 65; Franzoni 2002: 225-229; Rocchi 2006: 18-23; Walsh and Richer 2006: 447-451. At Serro di Tavola, "*alcuni reperti di carattere votivo* […] *fanno pensare alla contestuale presenza di un luogo di culto, sorto evidentemente a legittimare l'azione di controllo militare attraverso la forza del soprannaturale*", according to Costamagna 2000: 229. At San Salvatore, "[…] *è stato rinvenuto un deposito rituale di fondazione riferibile alla fase di costruzione dell'edificio. Questo deposito consiste in una statuetta* […] *di una kore che regge nella mano destra una colomba, databile alla metà del VI secolo a.C. La kore era stata deposta nel terreno a faccia in giù ed era accompagnata da quattro piccole brocche, una delle quali aveva il fondo forato intenzionalmente* […] *. Le caratteristiche del deposito […] suggeriscono che il rito fosse destinato a divinità ctonie: è possibile che la statuetta di kore fosse intesa dai partecipanti al rito come una rappresentazione di Persefone*": see Foxhall 2007: 5-6. For this figurine, see 'Classical Greek artifact gallery', in *San Salvatore 2007.*

[61] Cf. Conti 1989: 265, no. 299; 277, no. 317; Conti 1992: 250-252, nos. 235-236 and 247-248; Tréziny 1989: 82, no. 382; Aylwin Cotton 1983: 374-375; Carter and Toxey 1998: 726-727. See Knapp *et al*. 2007: 505-507; Visonà 2010: 600, Fig. 448, b-c.

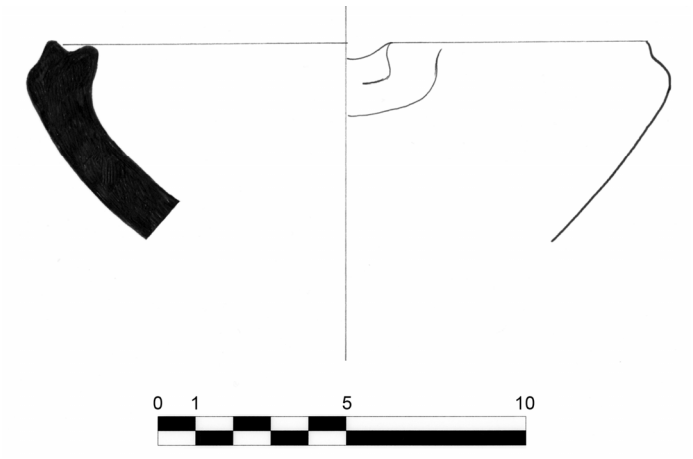

Fig. 26. Monte Palazzi. Fragments of mortarium *rim and spout, inv. 146808.* Munsell*: 10YR 6/3. Data and drawings by J.E. Knapp (on the left).*

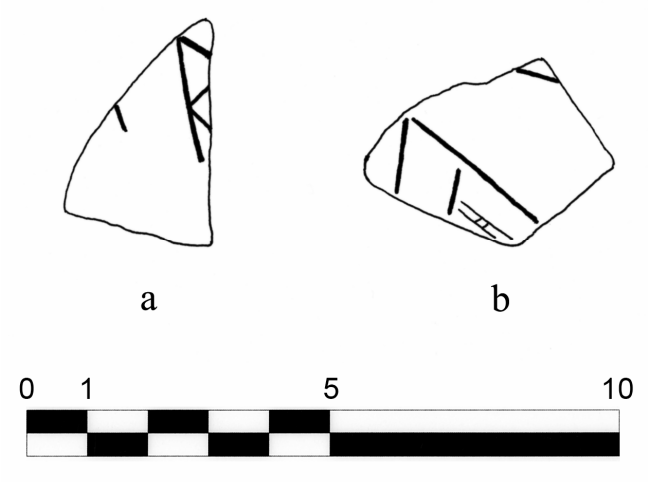

Fig. 27. Black gloss body sherds with graffiti from the 2007 sondage at the southern end of the site. a) inv. 145283. Fabric: Munsell *7.5YR 7/4; slip:* Gley *1 2.5/N. Probably 5th century B.C. b) inv. 145300. Fabric:* Munsell *10YR 7/4; slip: 10YR 2/1. Data and drawings by J.E. Knapp.*

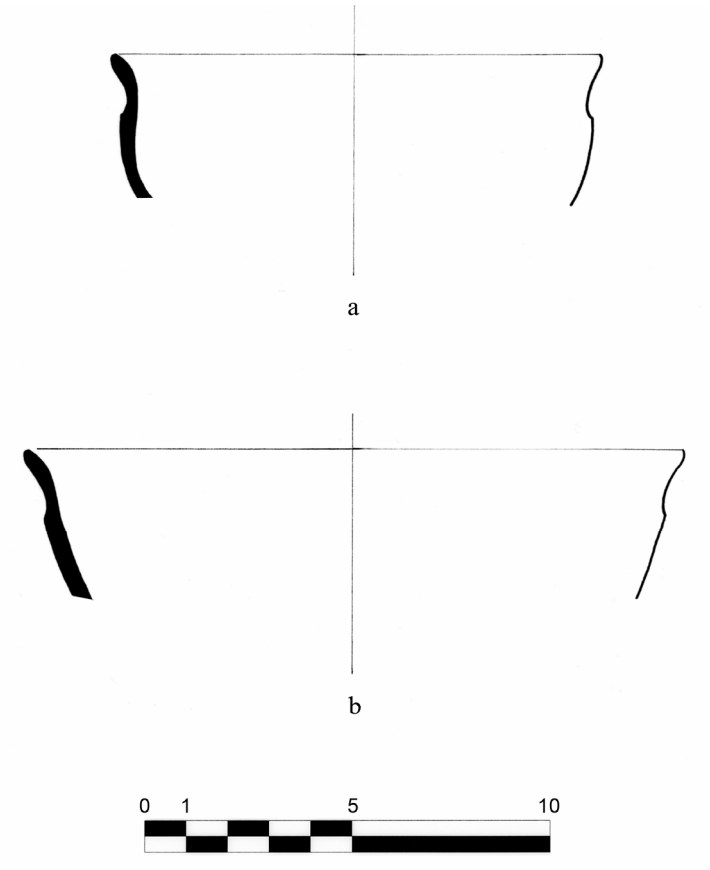

Fig. 28. Monte Palazzi. a) rim and shoulder of skyphoid cup, inv. 146869. Fabric: Munsell *10YR 7/4; slip: 5Y 2.5/1. Early to mid-5th centuries B.C. b) rim and shoulder of skyphoid cup, inv. 146874. Fabric:* Munsell *5YR 7/3; slip:* Gley *2 3/10B. Early to mid-5th centuries B.C. Data and drawings by J.E. Knapp.*

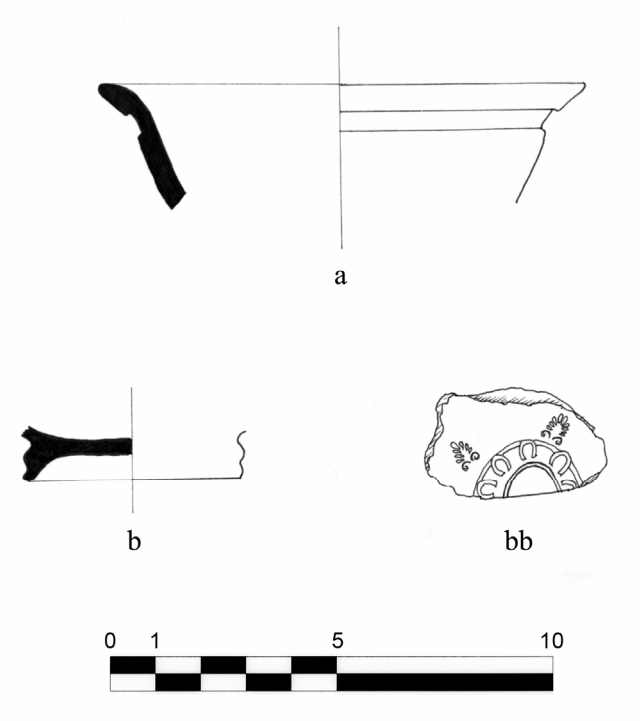

Fig. 29. Monte Palazzi. a) sharply everted rim of black gloss small cup, inv. 145279. Fabric: Munsell *10YR 7/3; slip:* Gley *2 2.5/5PB. Quality black gloss with bluish tint. 400-350 B.C. b) and bb) fragmented stepped base of black gloss cup or bowl with stamped palmette decoration on floor, inv. 145255. Fabric:* Munsell *7.5 YR 7/6; slip:* Gley *1 2.5/N. 4th century B.C. Data and drawings by J.E. Knapp.*

Fig. 30. Monte Palazzi. Floor of stepped base of black gloss cup or bowl with stamped palmette decoration, inv. 145255.

other shallow terracotta basins have also been found (Fig. 26). These may have been used for food preparation[62], together with hand-held grindstones made from local granite. A few common ware and amphora sherds, and some black gloss sherds, bear partially preserved graffiti (Figs. 27, a-b)[63].

Among the fineware, which comprises 10% of the ceramic assemblage, the high frequency of vessels associated with wine drinking is especially noteworthy. Most of them consist of black gloss *skyphoi* datable from the mid-5th to the early 3rd centuries B.C.[64], but there are several skyphoid cups (including examples similar to Ionic type C cups) datable to the early 5th century (Figs. 28, a-b)[65]. Some small black gloss cups belong to the 4th century B.C. (Fig. 29, a-b; Fig. 30)[66]. Comparatively few fragments of lamps have been recorded. A large number and variety of drinking cups (with relatively fewer *skyphoi*, associated with transport amphorae) also come from Serro di Tavola, attesting to a significant consumption of wine at that location. However, the percentage of kitchen ware from this site is negligeable, and no large storage vessels, *mortaria*, and cairns have been found[67]. This suggests that the pattern of domestic activities at Serro di Tavola was somewhat different from that at Monte Palazzi, even though the use of wine for social and perhaps even ritual reasons seems to have been important at both forts.

At this stage in the research, as noted above, the ceramics from Monte Palazzi can be dated predominantly from the late archaic to the late classical periods. Despite the fact that some forms of cooking pots continued to be used in the 3rd century B.C., typically Hellenistic pottery has not yet been found in appreciable quantity. The most recent material consists of fragments of a thin wall vessel from a small area to the south of the alignment of boulders in square A4 (locus A4W05; Fig. 19), which hint at a sporadic frequentation of the mountaintop in the late 2nd or 1st centuries B.C.

Three Greek coins found in 2007 and 2008 provide a *terminus post quem* for the occupation of the site. They consist of two bronzes of Dionysius I of Syracuse with Head of Athena / Winged hippocamp, minted between 405-367 B.C., and of a bronze of Locri with Head of Athena / Eagle with wings open on thunderbolt, issued in the time of Pyrrhus, c. 280-270 B.C.[68]. The Syracusan coins arrived in Calabria between c. 390 B.C. and the end of the tyranny of Dionysius II at Locri in 347 B.C.[69] Since they circulated extensively at Locri until the mid-3rd century B.C., they could have been the possessions of Locrian *perípoloi* (the 'watchmen' or 'patrolmen' stationed at the fort), or of Syracusan mercenaries[70]. The find of a Locrian coin, on the other hand, may indicate that Locrians still held Monte Palazzi in the 3rd century B.C.

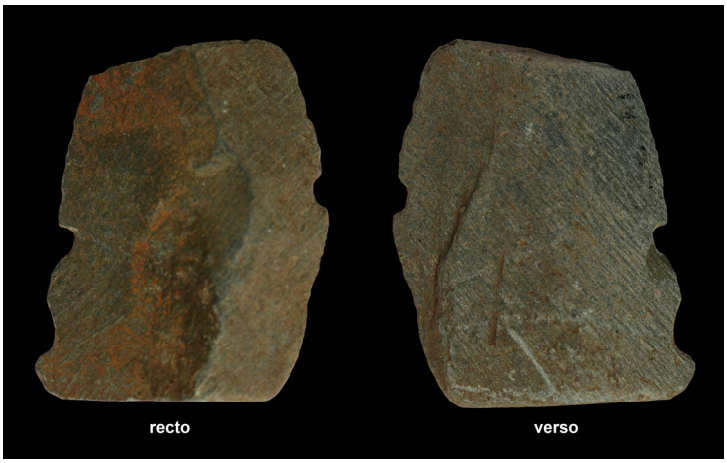

Fig. 31. Monte Palazzi 2008. Micaschist notched blade. Length: 5.18 cm.; width: 2.9 - 3.55 cm; thickness at center: 1.06 cm; Munsell (R)*: 5B 7/1.*

[62] For a later period and a different context, cf. the remarks on *mortaria* by CRAMP 2007: 90-91.
[63] See also VISONÀ 2010: 600, Fig. 447f.
[64] For the *skyphoi* see KNAPP *et al*. 2007: 503-504, Fig. 13, nos. 5-9.
[65] Information by J.E. Knapp. For inv. 146869 and 146874, cf. RUBINICH 1992: 99, no. 27; GAGLIARDI 2002: 283, no. 268c. See also above, footnote 23.
[66] For inv. 145255, cf. PREACCO ANCONA 1992: 133, no. 99, and GAGLIARDI 2002: 283, no. 268d. For inv. 145279, cf. PREACCO ANCONA 1992: 131, no. 80.
[67] BRIZZI and COSTAMAGNA 2010: 591.
[68] *SNG Copenhagen*, no. 721; for the Locrian coin see *SNG ANS Bruttium*, no. 553, *HN Italy* : 183, no. 2405, and VISONÀ 2010: 601, Fig. 450. This specimen came from a sondage excavated c. 15 m to the east of square E4 across a suspected robber trench inside the southeastern perimeter wall, , which also yielded an Italian 5 Lire coin minted in 1948-1950 (cf. GIGANTE 2005: 636).
[69] Cf. DE SENSI SESTITO 2002: 391-403.
[70] See BARELLO 1998; GARGANO 2007: 594; for the 'watchmen', see VISONÀ 2007: 481, n. 17.

Fig. 32: Monte Palazzi 2008. Bronze implement from square B2, inv. 146745. Length: 8.95 cm; width at base: 0.64 cm.; max. with at center: 0.81 cm; width at top (broken): 0.84 cm. Uncertain date.

Particularly interesting, yet still unexplained, is the large number of stone utensils, including several notched blades (Fig. 31), that have been found in virtually all the excavation units and often mingled with the ceramics. All of them are made of a fine-grained micaschist, which occurs in the form of pebbles and small cobbles on the slopes and in the environs of Monte Palazzi. The scatter of debris from this type of stone indicates that they were probably manufactured at the site as expedient tools that could have been used briefly for a variety of tasks such as cutting, sharpening, or perforating. In contrast, pumice stone, which has also been found (albeit in minimal quantity), must have been imported from the outside.

The most enigmatic artifact unearthed thus far is a bronze implement, solid cast and 8,95 cm. long, with a pointed and molded finial, an exquisite bead-and-reel tapered handle, and a broken two-pronged end (Fig. 32). Its presence at Monte Palazzi is puzzling. Although the soil locus with which it was associated yielded ceramic fragments datable from the 5th to the 3rd centuries B.C. and one of the Syracusan coins, it was not a sealed layer. Furthermore, the bronze was not found *in situ*. The closest parallels for this object are among Greek or Roman surgical instruments[71]. Yet, such instruments are seldom found individually. It may have been used instead as a fork or (as an anonymous reviewer has suggested) as a distaff. The cumulative weight of the archaeological evidence from the site makes a dating later than the classical or early Hellenistic periods seem unlikely[72].

Fig. 33. Monte Palazzi 2007. Enlargement of bronze three-sided arrowhead from square A'2, fragmented at base; inv. 145353. Length: 1.5 cm; width at base: 0.83 cm. Late 5th-4th centuries B.C.

Finds of broken bronze and iron projectile points inside and outside the perimeter wall also support an identification of the complex as a military installation. The earliest are bronze arrowheads with side spur datable to the late 6th and to the 5th centuries B.C. (Fig. 14), but a three-sided example, still preserving the end of the shaft made from a branch of silver fir[73], and comparable to exam-

Fig. 34. Monte Palazzi 2008. Iron javelin point (or sauroter*?) from square B2, broken at base; inv. 146746. Length: 5.32 cm; max. width: 1.7 cm.; quadrangular section; weight: 15.7 g. Uncertain date.*

[71] Cf. WALTERS 1899: 314, no. 2323; KÜNZL 2002: 39, Fig. 46.

[72] Information from L.E. Bliquez, S. Descamps, R. Jackson, and E. Künzl. R. Jackson has pointed out that "very little surgical instrumentation has been recognized in pre- 1st century BC archaeological contexts" (personal communication). For bone objects with similar molded stems found in an early Hellenistic tomb at Segesta, cf. BECHTOLD 1998: 406, Pl. 34, 3 (Tomb 7).

[73] "When grown in high forest conditions […] the fir also sheds its lower branches earlier than the pine and is therefore more free from knots", according to MEIGGS 1982: 119. The end of the shaft was faceted to fit a 3-4 cm long socketed arrowhead (information from L. Castelletti).

Fig. 35. Monte Palazzi 2008. Section of slag from square F5. Dimensions of slag: 3.46 x 3.5 x 3 cm (photo by D.P. Moecher).

ples from Locri, Motya, and Roccagloriosa, could be be dated to the late 5th or to the 4th centuries B.C. (Fig. 33)[74]. An iron point could belong to either a javelin or a *sauroter* (Fig. 34)[75]. These finds show that the fort may have been attacked repeatedly in its history and probably remained operational throughout the 4th century, after Hipponion was rebuilt with Carthaginian help (379 B.C.), and after war broke out between Dionysius I and the Lucanians[76]. Subsequent hostilities with the Brettians following their capture of Hipponion and Kaulonia, commemorated by Nossis' famous epigram (A.P. 6.132), may even have increased its importance for Locri as an observation post until the early or mid-3rd century B.C.[77]. It is still unclear, however, whether this *phrourion* was destroyed or abandoned.

Preliminary archaeobotanical and zooarchaeological data also cast light on the environment of the ancient settlement and on the food sources of its residents. In particular, the high percentage of silver fir (*Abies alba*) among the samples of plant remains from stratified deposits excavated in 2005-2008 strongly indicates that the forest surrounding Monte Palazzi in antiquity was unlike today's wooded landscape, which is dominated by beech (*Fagus sylvatica*). As the most valuable timber used for shipbuilding, silver fir would have been an important asset for Locri's economy[78], in addition to being of practical use to the *perípoloi* stationed at the site. Relatively fewer are the remains of carbonized cereals and seeds, including common wheat (3 husks of *Triticum aestivum* / *T. durum*), emmer (2 husks of *Triticum* cf. *dicoccum*), possibly barley (1 fragment of *Hordeum sp*.), pulses (1 vetch, vetchling, or pea, similar to *Vicia*, *Lathyrus* , or *Pisum*), grapevine (1 pip of *Vitis vinifera*) and olives (7 fragmented pits of *Olea europaea*)[79]. Since most of them are characteristic of cultivated plants and trees that grow at a lower altitude, and as no Greek or indigenous settlement has yet been found near Monte Palazzi, the occupants of the fort could have been provisioned directly from the city or from Locrian farms in the Torbido Valley. Their diet was based upon the 'Mediterranean Triad' of grains, grapes, olives, supplemented by legumes[80], and was enhanced by meat from Pig, Sheep / Goat, and Cow or perhaps Red Deer, as finds of bone fragments have revealed[81].

Moreover, finds of slag, including a fragment from square F5 consisting of metallic iron with an oxidized rind of hematite and goethite (Fig. 35), suggest that some metallurgical activity (such as smelting) took place at or near the *phrourion*[82]. Given the proximity of Monte Palazzi to the mining district of Fabrizia, it is plausible that the Locrians may have exploited sources of iron ore and perhaps other minerals in this area of the *eschatiá*[83].

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[74] Cf. ARBOLETTI 1992: 367, no. 404; ELAYI and PLANAS PALAU 1995: 112, no. 81; 185-186; TERMINI 2005: 660 (Gruppo C.1); GUALTIERI and FRACCHIA 1990: 314, 316-317, no. 659. For a thorough study of these projectiles see BAITINGER 2001: 13-15 and 27-28.

[75] Inv. 146746. For earlier finds of iron weapons at Monte Palazzi see FALCONE 2009: 67 and 70; cf. RUSSO 1988, in GIORGI *et al*. 1988: 249, Pl. 41, 5 and Pl. 42, 2. See also SMALL 2000: 223 and 225.

[76] Dionysius II "probably inherited (this conflict) from his father", according to SANDERS 2002: 490.

[77] Cf. SABBIONE 1977: 370-371. For the Brettian presence at Kaulonia see IANNELLI 2002: 320-330; GAGLIARDI 2007b: 493-495; GARGANO 2007: 591.

[78] MEIGGS 1982: 118-119, 463, 469; cf. GROVE and RACKHAM 2001: 51. Corrado Alvaro wrote that, "*Nelle Serre, sulle pendici della Sila piccolo gli Inglesi della occupazione militare spiantarono centomila metri cubi di abete bianco*" (*Un treno nel Sud*, Milano 1958: quoted by BARILLARO 1973: 18-19).

[79] Information from L. Castelletti and E. Castiglioni. Cf. CARTER 2006: 78.

[80] GROVE and RACKHAM 2001: 12, n. 22l; cf. 67 and 133.

[81] Only 5 burnt fragments out of a total of 19 could be identified (information by B.E. Manzano). For the importance of these animal species in Magna Graecia cf. CARTER 2006: 29-31, 79-80, 243; GÁL 2010: 41-54.

[82] Information by D.P. Moecher, based on reflected light microscopy, backscattered electron imaging, energy dispersive analysis, and X-ray diffraction. For the characteristics of hematite, see ARANGUREN *et al*. 2006: 253-254. A second fragment from an unrelated context in square A3 was identified by S. Martin as an oxidized slag containing olivine.

[83] According to COSTABILE 1992: 169, the Locrian sanctuary of Zeus Olympios may have owned iron mines in the hinterland. For iron mining near Fabrizia see RUBINO 1978: 51-52, n. 88; for lead and silver near Grotteria, cf. CALDORA 1960: 269 and G. DE CRISTO, 'La ricchezza mineraria della Calabria' in *Il Mezzogiorno*, 6 agosto 1918: "*E "galena argentifera lamellare" troviamo a "Grotteria", in un giacimento nascosto nella roccia calcarea. La prima volta gli scavi furono praticati da una casa inglese che sfruttò il giacimento dal 1865 al 1869 mandando il minerale estratto a Londra*." For ancient mining in Calabria, see CUTERI 1999.

Fig. 36. Cassari (Comune di Nardodipace), Delegazione Municipale. Cross potent incised on block of stone similar to garnet chlorite schist, used as boundary marker. Dimensions of block: 36 x 38 x 43 x 44 cm. Measurements of cross: height 12.25 cm, width 12.07 cm. Width of serifs: 2.65, 2.6 cm (top and bottom); 2.38, 2.75 cm (sides). Depth of incised cross: 0.5 cm. Munsell *of stone:* (R)*: 5 B6 3/2. 13th-14th century A.D.?*

Lastly, the fortuitous discovery near Cassari in 2007 of a boundary marker bearing a late Medieval (?) cross potent (Fig. 36) had unexpected implications for the archaeological site[84]. The cross was incised on a stone very similar to a garnet chlorite schist[85], a metamorphic rock known in Italy as '*pietra ollare*'. Different lithotypes of it have been used since prehistory to make heat-resistant containers for cooking and preserving food, as well as other implements[86]. The boundary marker was found on a hilltop to the west of Cassari (Fig. 3; elevation: 1,171 m), where a large outcropping of the same type of stone appears to have been quarried[87]. This quarry site may be the "*Cava*" near Cassari mentioned in Rajola's 1778 map of the territory of Grotteria (see above, Fig. 5). Since several fragments of this stone have also been found on-site at Monte Palazzi (c. 500 m. to the southwest of the quarry), it must have been procured from this source. However, no artifacts or implements made from "*pietra ollare*" have been found in the 2005-2008 excavations, and it is uncertain whether this geomaterial was used by the Greeks or by later settlers.

[84] This marker was found on or before June 12, 2007, by Bruno De Masi of Cassari while logging (*vidi*); it was dated by V. Naymo. The findspot (GPS data: 38° 26.43 N / 016° 17.23 E) links it to the *crucem dictam de* Cassari mentioned in a 1534 description of the feudal lands of Marquis G.B. Carafa: see NAYMO 2004: 245 and 486. For this type of cross, cf. *ibidem*, cxxii, Fig. XI.

[85] The characteristic structure of this stone has been confirmed by X-ray diffraction and by Mössbauer spectrum analysis. Cf. SANTI *et al*. 2009: 2498, Table 4; STIEVANO *et al*. 2003; WAGNER and KYEK 2004 (information by H.E. Francis). Independent analyses of other samples of the same stone by S. Martin support Francis' identification. Cf. also CORTESE 1983: 90.

[86] SANTI *et al*. 2009: 2493-2496.

[87] GPS data of the quarry site: 38° 26. 46N / 016° 17. 22E; elevation: 1152 m (1.7.2008 at 5:25 PM).

On the whole, these data would suggest that the occupants of the fort were engaged in various activities that were not exclusively military, or that the presence of the outpost may have facilitated the development of local resources by state or private initiative[88]. As the Locrians became increasingly familiar with their mountains in the course of three centuries, the *phrourion* on Monte Palazzi could have become a magnet or a conduit for diverse enterprises.

Conclusions

Three exploratory seasons of excavation at Monte Palazzi in 2005 and 2007-2008 have uncovered the remains of a Greek mountain fort that was occupied between the early 5th and the mid- 3rd centuries B.C. and can be attributed to Locri Epizephyrii. Located near an important pass and crossroads on the northeastern flank of the Locrian *chora*, this *phrourion* would have controlled communication and possible invasion routes to the Tyrrhenian and the Ionian seas. Its strategic position on the right bank of the Allaro River, opposite a Greek fort on the left bank presumably belonging to Kaulonia, shows that this river marked the political boundary between the two *poleis* in the archaic period. Its size, geomorphic setting, and structural characteristics are similar to those of other Greek mountain forts which guarded the *chora* of Rhegion between the mid-6th and the mid-5th centuries B.C.

"To study the Greeks in Magna Graecia is to study dynamic, changing relationships on a moving frontier", as J.C. Carter has pointed out[89]. While early Greek forts in Magna Graecia have traditionally been discussed in the context of Greek-indigenous relations, the archaeological investigations at Monte Palazzi have revealed that the Greeks in southern Calabria built mountain forts as a system of territorial defense against other Greeks in the late archaic and classical periods. This system appears to have followed a predictable pattern, as shown by the placement of the forts on commanding positions near or within view of the territorial boundaries of each *polis*, and at comparable distances from the *asty*[90]. Monte Palazzi was probably not the only mountain outpost on Locri's far-flung borders. The impetus for the creation of a network of territorial defenses must be sought in the dynamics of Greek inter-state relations in southern Calabria between the 6th and the 4th centuries B.C. Therefore, a diachronic study of *phrouria* may provide a new interpretive framework for a reconstruction of frontier history in this region.

The excavations at Monte Palazzi also show that this settlement existed in an economically viable landscape. Significant 'site assets' available to its occupants both for local use and for possible shipment to the *polis* could have included iron, timber, and other forest products[91]. Multiple activities seem to have been embedded in the site's primary function as a military installation. Its presumed demise or abandonment in the 3rd century B.C. may signal shifting boundaries and Locri's inability or unwillingness to defend its mountainous hinterland in the face of growing Oscan encroachment.

Paolo.Visona@uky.edu

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[88] Aristotle (*Politics* 7.9.7) recommended that one part of the land in private ownership should be "the district near the frontiers". For the uses of the *eschatiá*, cf. CARTER 2006: 117 and 138. The Metapontine Greeks exploited quarries of *carparo* limestone c. 20 km inland.

[89] CARTER 1998: 3 (quoted by PAPADOPOULOS 1999).

[90] G. Cordiano's conclusion that, on the southern frontier between Locri and Rhegion, "*gran parte degli avamposti* […] *sembrano costituiti* […] *fra il VI e gli esordi del IV secolo a.C., da precari ripari per poche unità di militari*" does not take into account the results of the excavations at San Salvatore in 2005: see CORDIANO *et al.* 2006: 59; cf. also CORDIANO and ACCARDO 2004: 72-85.

[91] Cf. CROUCH 2004: 262-263 and MCNEILL 1992: 282-283, 328-330.

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