Výhodněnost keramických nálezů z vojenského táboru Nebesa u Aše

Keramický materiál v Nebesích u Aše tvoří dva soubory: 1. nálezy z vlastního táboře, 2. nálezy z příkopu.


V materiálu převážejí brněčtí keramika, v nichž se častěji zjišťují masy, 3isky, talíře a zemasky. Zemasky sbírky je v táboře trocha a zemasky kachlí a lištem včetně šedovlaků, usazených na 18. století. Zemasky sbírky materiál tvoří jednoduché nezobrazované keramické sbírky, v němž převáží dříve nádoby, bez možnosti bližší specifikace. Pak je to 7 celých kamenů, v nichž se rozmístí 3 třpytky labe. na minerální vody, z nich jedně cukrovky, jednu nádobu, snad kůrku. Kůrku jsou tu dva zemasky nádoby, jež lze označit jako polabské. Ve všech případech jde o zboží, jež bylo v brněčský původ nepořízením historickým skutečnos- tem. Kromě toho je tu několik zemských kachlí s běžně chrabřaté keramice v různých třídách a řadách forem. Materiál je základně je mnohem silnější, anebo často rozčleněnější od 18. století až do počátku 19. století, je tu opět brněčkého sbírky / mezi něj 2 zemské kachlí a březové, jeden a mohou existovat jen, i když se zde dva zemasky nádoby, jež byly označené jako polabské. V nižších klenětařských zemasky brněčtí pokračují, kde je nejčastěji usazené 5 zemské kachlí, z nichž jeden a druhý klokové na břehu usazený, asi z 18. století / ale možno i z 18. století / a hlavně tato zemasky z malého sbírky W. Halbena v Kolíně n.l., ne starší mezi ní z 18. století. Souhrnně lze říci, že jde o výroby z 18. a 19. století, jež se dostaly do závěru většinou jako odpor od 17. století. Polabský materiál se v žádném sou- boru nevyzařuje.

Keramický materiál z vlastního táboře je cenný proto, že je zatím jediným svědectvím o užitkové keramice na Chebsku v polovině 18. století a souvisí nebo vnitřním svědectvím o místní keramické produkci. Materiál je závěry je část nezřejmě zkrácený a kromě dvoch kubíků i bez prokázaného signifikantních kubů, i když lze oprávněně předpokládat, že většina střepů pochází z Chebska. Zatím možné slovo jako- ko dokládá o tom, co se v období asi 150 let vybudovalo na areálu a v případě řešení od důvěry jako doklady o rozvoji sbírek cíti známé provenience a časového zafazení.

MORPHOLOGY OF FIELD FORTIFICATIONS OF THE 17TH - 19TH CENTURIES
A contribution to surface research
Petr Měduna

The constantly expanding source base, multiplied in the course of surface investigations, confronts us frequently with the question of description, classification and interpretation of features situated, up to now, in a marginal area of specialized interests - temporary field fortifications. Only the fortifications of the period between the 17th and first half of 19th century which may be described as a whole in view of the present state of our knowledge have been selected for this paper. They may be said to represent a development stage well discernible both morphologically and functionally with a minimum of traditions of structures of this kind dating to the 15th and 16th centuries.

In the course of the first confrontation of fortified units and weapons in the 15th century, most of the builders reacted by trying to improve earlier fortification systems by protective elements of most diverse kinds, such as cannon bastions, revetment walls, advanced fortifications and the like. These, however, represented no more than a temporary solution of a problem which, in the 16th century, resulted in the so-called first crisis of fortification architecture. A way out of this crisis was found by the builders of Renaissance-period Italy who created the so-called Old Italian bastion system introducing the pentagonal cannon bastion regularly spaced between curtain walls (Bochenski 1973, 67-69). In this period of time, these new concepts of fortification architecture were not known in Bohemia, situated far from the focal points of conflict. It was the experience of the Thirty Years' War which brought Bohemia flush with the rest of Europe in which a number of schools projecting and building monumental fortification systems and, as is quite natural, concerned also with the methods of their obliteration, were active in 17th century. The military engineers of that period of time did not neglect field fortifications, the significance of which grew considerably in the 17th century and which were employed en masse both in offensive and defensive tactics of flight and as an advanced component of permanent fortification systems. Their importance remained high in the course of the 18th and at least in the first half of the 19th century in which another set of complex transformations of the foundation architecture occurred. In the sphere of field fortifications, these changes were visualized by the introduction of qualitatively new types of features and by the transition to trench systems.

The morphological perfection of field fortifications dating from the time of their beginnings is a cause of their morphological stability along the whole period in question. For this reason, I have adopted the morphological classification system in accordance with the approach of contemporary writings of military theo-
reticiana. Even if we do feel a lack of real structures and if we resort predominantly to non-architectural sources, we suppose that the source base will be enlarged for this reason, we have selected an open morphological systematization the type- and inerotype variants of structures and is based on the contemporary "building-set" understanding of the fortifications.

Contemporary terminology has been adopted for morphological classification of individual types of structures. For the cases when one term included several variants of a single type, an auxiliary terminology set specifying the variant in question by classification of morphological changes, again according to contemporary terminology, has been developed. In a case to the contrary, when several terms denote a single variant or type, the selection of the term was done in consideration of its classification quality and quantitive representation in the sources, or it might have again been completed by a morphological precision.

The works of military theoreticians put forward a twofold division of the structure types in question: open fortifications with defence in the form of a segment of a circle and closed fortifications with circular defense enclosing an accurately delimited space /Schwint /1956, 16, 29/. Extensive complexes, composed of singular types, may be divided in the same manner though the classification into individual groups is not so obvious as the employment of other kinds of fortifications /permanent, natural/ must be taken into consideration and the assignment of complex cases to one of the groups will thus be a model character.

Open fortifications

Straight line /Fig. 1/1/

This represents morphologically the simplest type of fortification and a basic component of all the following types and variants, existing in an isolated state. This could have served as refuge for infantry or as protection of a battery of cannon.

Redan /Trench/

The basic redan type is a fortification of a shape of an inverted V the wings of which are set at an angle of 60°-120° /Fig. 1/2/. Length of the wings varies and may be in connection with the function of the redan. Artillery redans by the side of Kokrčen /district of Saxony/ of 1620 have wing lengths of 16 metres at 50° and 18 m at 90° /unpublished/. An infantry redan at Neubau /district of Cheb/ /Eger/, dating from 1759 and mentioned in this volume of studies, displays a wing length of some 40 m at an angle of 120° and represents an extraordinary variant of the basic type in which two thirds of the right wing were transferred behind the basic fortification line in view of an optimum exploitation of the ground line.

Two types of variants are based on the fundamental redan shape. The first one represents an adjustment of the basic type while the second one adds further fortification segments. The first variant type is constituted by a redan with rounded front /Fig. 1/3/ and by a redan with straight front /Fig. 1/4/. The ends of the wings of this second variant could have been provided with flanking devices and its frontage could have been prolonged /Fig. 1/4a/, visibly in a case when it offered protection to a battery of guns as shown on a depiction of the Prussian siege of Prague in 1757 /Kapkacz /Hečval /1955, Fig. 45/.

The other variant type adds to the wings the redan - shorter segments of fortification offering shooting positions for the control of the space in front of the redan tip. A small lateral redan may be formed by the junction of another short flank and the original flank /Fig. 1/2a/. Continuing morphological development will result in a variant with three redans of equal size or with two larger lateral ones and one small central one; the latter may be considered a new type for which a term "crown" /Kromwerk, Fig. 1/2b, c/ may be used. If the central redan is eliminated, the crown becomes a further type which may be called a bicorn /Hornwerk, Fig. 1/2d/. Both terms have been selected as the most suitable ones, though, in contemporary terminology, they usually denote fortifications composed of bastions /Fig. 3/1a/, half-

Fig. 1 - Open fortifications. 1 - straight line /Schwint /1956 Pl. II Fig. 10/; 2 - basic redan type, wings at an angle of 90° /ibid. Pl. II Fig. 14d, 2a - a redan with a flank at the end of the right wing, a pair of flanks making up a lateral redan on the left wing /ibid. Pl. II Fig. 23f, 2b - a crown composed of three equally sized redans /ibid. Pl. II Fig. 24d, 2e - a crown composed of two large lateral redans and a small central one /ibid. Pl. II Fig. 27f, 2d - a bicorn composed of two redans /ibid. Pl. II Fig. 26f, 3 - a redan with a round front /ibid. Pl. I Fig. 18f, 4 - a redan with a straight front /ibid. Pl. I Fig. 17j, 4a - a redan with an elongated front and with flanks according to a depiction of the Prussian siege of Prague in 1757, in: Kapkacz - Hečval /1955, Fig. 45f, 5 - a lunette /Schwint /1956, Pl. II Fig. 22f, 5a - a lunette with flanks according to a variant depiction of the White Mountain battle of 1620 in: Skalská ze Zborů /1954, 357f/, 6 - a bicorn composed of bastions /Schwint /1956, Pl. II Fig. 20, right bastion reconstructed /7 - an example of a more complex integration of a bastion into a fortification line /ibid. Pl. II Fig. 23h, the break of the line in the right part of the fortification functioning as a flank reconstructed/8 - the part of the N wing of the linear fortification at Hloubětín /district of Česká Lípa/ with three battery terraces. Surveyed by the author. Black area - a rampart, white area - a ditch, oblique lines - elevated ground level. Figs. 1-4 drawn by K. Jendrová and P. Meduna. - Cervená fortifikace. 1 - příp. linie /Schwint /1956, tab. I, fig. 10f, 2 - základný typ redanů, ramena svislé úhlop. 90° /zeměč/, tab. I, fig. 14d, 2a - a redan a flank on one side of the redan, tab. II, fig. 23f, 2b - cornera, tvorené třemi stejně velkými ramanami /zeměč/, tab. II, fig. 24f, 2e - corne, tvorené třemi stejně velkými, tab. II, fig. 27f, 2d - rohy, tvorené čtvercové ramenem /zeměč/, tab. II, fig. 8f, 3 - redan a obélka /zeměč/, tab. I, fig. 18f, 4 - redan s plošným čelenem /zeměč/, tab. II, fig. 17f, 4a - redan a prolínající čelen a flanky /zbjev hranění prusckého obkladu /Hečval 1757/, in: Kapkacz - Hečval /1955, obr. 45f, 5 - luneta /Schwint /1956, tab. II, fig. 22f, 5a - luneta s flanky /zbjev variabil. hranění obkladu na Hloubětín vých./, obr. 1-6 kresila H. Jendrová a P. Meduna.
Redoubt

In the sources, this term denotes various types of closed fortifications and must be specified by an appropriate adjective. The basic morphological types are constituted by trapezoidal, square, pentagonal and hexagonal redoubts (Fig. 2/1-4). These could have served as independent strong points or be integrated into more extensive complexes. Most frequently, the fortification complexes included square redoubts on their dépôt of the besieged town of Český Budějovice of 1619, Christoph Greuter recorded several variants together (Fig. 3/2/1). A more complex variant has been employed in an area of a military encampment at Avene-sous-le-Lys of 1641, known from the painting by Pieter Snayer (Fig. 3/5/1). Even a pentagonal redoubt, integrated into a shorter section of a linear fortification depicted by Greuter (Bobátová 1966, Fig. 13) is known. All the abovementioned redoubt types served as infantry strong points; artillery batteries were mostly frequently protected by square redoubts (cf. infra) and I assume that the other types might have played this role as well. Preserved examples show that the redoubt size varied of square redoubts, an artillery fortification of 1667 at Třebel, (district of Tachov) has a side length of c. 10 m / unpublished/, the preserved part of one of the two redoubts representing advanced components of fortification of the town of Litoměřice /1639/ displays a side length of at least 14 m /Anker 1925/, 5/4 and the side lengths of a redoubt with bastions of the beginning of 17th century at the Soumarštímost (district of Prachatice) vary between 25.5 m and 20.5 m /Ferhleth 1986/, 25/4. A redoubt built by the French army in 1742 as an advanced fortification of the town of Plzeň - which, in fact, could have represented a re-used redoubt of 1659 - had sides some 30 m long /Ferhleth 1987/, 25/26. One of the eight redoubts, completing the fortifications of a winter camp of the Swedish general Baner by the town of Štěpánov (district of Praha-venkov) and dating from 1639, displayed a side length of 42 m /Irma 1933/, 41/44.

Half-redoubt

This term denotes a type which is morphologically closest to a 90° redan the wing ends of which adhere to the fortification line and which is closed on the rear with the exception of an entrance. (Fig. 2/5/) No case in which this type would turn up independently as a simple three-cornered redoubt and it seems that a redan

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Fig. 2 - closed fortifications. 1 - a trapezoidal redoubt /Schwink 1856, Pl. III Fig. 52/; 2 - a square redoubt /ibid., Pl. III Fig. 49/; 3 - a pentagonal redoubt /according to Christoph Greuter, siege of Český Budějovice in 1619, in: Bobátová 1966, Fig. 13/; 4 - a hexagonal redoubt /ibid./; 5 - a half-redoubt /after Narowiczko -Narolak, in: Nowakowa - Nowak 1957, 150/; 6 - a four-rayed star-shaped redoubt /ibid./; 7 - a five-rayed star-shaped redoubt /Schwink 1856, Pl. III Fig. 44/; 8 - a six-rayed star-shaped redoubt /after Narowiczko - Narolak, in: Nowakowa - Nowak 1957, 150/; 9 - a three-cornered redoubt with half-bastions /Schwink 1856, Pl. III Fig. 49/; 10 - a square redoubt with half-bastions /ibid./; 11 - a bicorne: a square redoubt with bastions in front corners and with a half-redoubt at the rear /after Narowiczko - Narolak, in: Nowakowa - Nowak 1957, 152/; 12 - a square redoubt with bastions /Schwink 1856, Pl. III Fig. 48/; 13 - a pentagonal redoubt with bastions /after Narowiczko - Narolak, in: Nowakowa - Nowak 1957, 40/; 14 - a hexagonal redoubt with bastions /ibid./; 15 - Zveřené fortifikační - 1 - trapezoidal redoubt /Schwink 1856, tab. III, fig. 52/; 2 - čtvercová reduta /tab. III, fig. 42/; 3 - pětihlavňová reduta /die Christoph Greuter - bible Český Budějovic 1619, in: Bobátová 1966, obr. 12/; 4 - šestihlavňová reduta /tab. III, fig. 43/; 5 - pětihlavňová reduta /die Narowiczko - Narolak, in: Nowakowa - Nowak 1957, 150/; 6 - čtyřcípou k Český Budějovic 1619, in: Bobátová 1966, obr. 12/; 4 - šestihlavňová reduta /tab. III, fig. 43/; 7 - pětihlavňová reduta /die Schwink 1856, tab. III, fig. 44/; 8 - šestihlavňová reduta /die Narowiczko - Narolak, in: Nowakowa - Nowak 1957, 150/; 9 - čtvercová reduta s pětihlavňovou /Schwink 1856, tab. III, fig. 42/; 10 - čtvercová reduta s pětihlavňovou /tab. III, fig. 42/; 11 - rozhlíčená čtvercová reduta s bastiony v celých rozích a pětihlavňovou /die Narowiczko - Narolak, in: Nowakowa - Nowak 1957, 152/; 12 - čtvercová reduta s bastiony /Schwink 1856, tab. III, fig. 44/; 13 - pětihlavňová reduta s bastiony /die Narowiczko - Narolak, in: Nowakowa - Nowak 1957, 40/; 14 - šestihlavňová reduta s bastiony /tab. III, fig. 43/.
was used instead of it. There is a question how far this term is applicable to a variant with an opened rear side which appears frequently in iconographical sources (Fig. 3/5, 6, 7, 9/).

**Star-shaped redoubt / Sternschanse/**

Works of military theoreticians and iconographical sources give evidence of four-, five- and six-rayed star shapes (Fig. 2/6, 7, 8/). These were used as independent strong points. Four-rayed redoubts are known from the depictions of the siege of Budyšín/Beutzen of 1620 by Pieter Isselburg /Bohacjov 1966, Fig. 48/ or of the Prussian siege of Prague of 1757 /Kulíček - Nechával 1985, Fig. 45/. A six-rayed redoubt - an advanced town fortification - has been documented by Václav Höller on an image of the conquest of Oppenheim by the Swedish army in 1636 /Richter 1977, 91/.

The plans of field encampments by Josef Naronowicz-Naroski /Fig. 3/1, 3/ indicate that only four-rayed redoubts were integrated into fortification complexes. The abovementioned types could again have served both for infantry and for gun batteries.

**Redoubt with half-bastions**

Only two types are mentioned by the military theoreticians - a three-cornered redoubt (Fig. 2/9) and a square redoubt (Pl. 11/10). In the cases of redoubts which had five and more corners it was more advantageous to integrate whole bastions into the corners. These fortification types could have served as a combination of an infantry fortification with positioning a battery situated in the half-bastions the inner areas of which were pumped full of earth.

**Redoubt with bastions**

One of the most popular types is constituted by a square redoubt of an ideal shape, employed as a combined fortification (Fig. 2/12). The redoubt at Soumársky-most /district of Prague/, to which reference has already been made, represents a variant with two bastions in opposite corners /Forthlich 1986, 29a-29b/.

A redoubt with four bastions seems to have been most popular in the iconographical sources and treatises of the military theoreticians. Much as the redoubts with half-bastions, such fortifications were erected in the vicinity of more extensive complexes at strategically important spots, e.g. for the protection of a double pontoon bridge across the Labe /Elbe river, assembled by the Swedish army commanded by Gustav Adolf by the Werben military encampment in 1631 /Langer 1978, 74d/.

During the siege of Pasov/Pasau in 1626, a bridge across the Danube river was even protected by redoubts at both banks /Langer 1978, 116-117/.

Redoubts with bastions having five and more corners are known from military-theory texts only (Fig. 2/13, 14); no evidence from other sources is available up to now.

**Bicorn and crown**

Much as the open types, the closed types of bicorn and crown may be integrated into extensive complexes; it even seems that this happened much more frequently. The abovementioned bicorn variant in the form of a square redoubt in the front and a half-redoubt at the rear (Fig. 2/11) assumes the position protecting two entrances into a field encampment in the middle of its longer side, and thus is in one of the strategically most important segments of the whole complex, on a plan by Naronowicz-Naroski (Fig. 3/1).

**Fortified encampments**

I use this popular term for the functional interpretation of closed complexes. The best and most numerous examples of fortified encampments are known from the 17th century and it seems that in the course of the following century, enclosing the encampments by impressive fortification systems gradually fell out of use.

Both fortified and open military encampments may be divided - resorting to terms used for medieval structures - into field camps and siege camps, differing in size and quantitative and qualitative representation of individual types in the fortification complex.