Neolithic settlement at Bylany - essential database

P. Květina

I. Pavlů

Archaeological Institute CAS CR,

Praha, v. v. i.

2007

Neolithic Settlement at Bylany – Essential Database

Petr Květina, Ivan Pavlů

Introduction

This publication is not a standard professional study. We have attempted to introduce the systematic foundation that was applied during the processing and evaluation of archaeological material from the Bylany 1 site in Bylany near Kutná Hora. The discovery and terrain excavations of the Neolithic settlement at this location was significant on its own accord: it was the first excavation conceived in this manner of a large surface of a Neolithic settlement area with numerous house foundations and adjacent pits (Fig. 19-22). However, the Bylany site became known also for the processing of a large assemblage of archaeological finds using an approach that remains unique to this day.

The team of researchers under the leadership of B. Soudský became pioneers in the application of formalized data processing using a numerical code that was created especially for the needs of processing the finds from Bylany. Each studied artefact characteristic was regarded in this system as an attribute that can be assigned a numerical code of up to three digits. The given method was adapted to automated processing based on the computing technology available at the time – specifically machines for reading punched cards. The technical possibilities of the machine required the rigorous numerical coding of all attributes, something that might seem impractical given the possibilities of today's database software. While the actual formalized descriptive system is undoubtedly obsolete, the great amount of data that was recorded by means of this system (the database contains more than 170 000 entities) makes it still useful. The contemporary significance of the "Bylany code" is also based on the fact that the system of basic descriptive variables was meticulously developed over many years on the basis of empirical knowledge. Therefore, the selection and form of applied descriptors is a good guideline for possible additional related descriptive systems, not only for the Neolithic period.

In this work all of the descriptive attributes of the “Bylany – Essential Database” were collected and decoded. We have attempted to explain individual database fields in words using images and references to literature. The volume also includes a CD containing "Bylany – Essential Database" in MDB format, drawing documentation of finds and features, as well as a vector map of the locality. We chose a structure for the database that was as simple as possible, on the assumption that the user can change the format, e.g. create relational queries (Fig. 23

and 24). Nevertheless, the database and its contents are regarded as a copyrighted work protected by the relevant laws (see below for details).

The authors hope that the work will be understood as a source of data serving for the further study of Neolithic society and culture. The publication can likewise be used for the purposes of university archaeology instruction. On yet another level, this volume can be understood as a contribution to the history of the development of a formalized description of the characteristics of artefacts and their automated processing.

The publication is the result of two grant projects: "*Archeogeografie neolitických sídelních areálů. Mikroprostorová analýza artefaktů" (GAČR 404/03/0361*) - (The Archaeogeography of Neolithic Settlements. A Microspatial Analysis of Artefacts" (Czech Science Foundation 404/03/0361)) and "Life on the Neolithic Site of Bylany. Situational Analysis of Artefacts" (Grant Agency of the Academy of Science of the Czech Republic A900.2601). Software for the preparation and processing of data was secured through the project entitled "*Digitální archiv české archeologie" (GAČR 1ET200020405*) – (Digital Archive of Czech Archaeology" (Czech Science Foundation 1ET200020405)).

The database system was developed by Mgr. Pavel Vavřín and Ing. Tomáš Fulajtar. Mgr. Markéta Končelová created the illustration appendices and Jana Poupová proofread the text. Many thanks to all of our colleagues who contributed their work and advice.

Use of the database in terms of copyright protection

At this stage, the database is available to parties with a serious interest in using this source. As the document is written in a specific language, it is assumed that those interested in using the database will first familiarize themselves with its structure and other matters related to the database. Due to the size of the database, sufficient knowledge of its structure and content is essential for further use. It is assumed that users will respect the brief license agreement and a certain ethic occupational responsibility, as well as the fact that the work is copyrighted pursuant to Act No. 121/2000 Coll. and is therefore afforded the full protection of this law. Copyright protection of such files as well as databases, particularly databases of symbolic variables, is difficult to enforce from a legal perspective; therefore, respecting the copyright is essentially a matter of ethical research cooperation.

License agreement

The authors of *"Neolitické sídliště v Bylanech - základní databáze (Neolithic Settlement at Bylany – Essential Database),* hereinafter the "authors", declare that the content of this CD

entitled *„Neolitické sídliště v Bylanech - základní databáze“* (hereinafter referred to as *Neolithic Settlement at Bylany – Essential Database)* is a copyrighted work pursuant to Act No. 121/2000 Coll. and is afforded the full protection of this law. By opening this copyrighted CD (at the latest by the time it is used for the first time), the authors and user explicitly agree with the license provisions set forth below and conclude this license agreement:

1. By means of this agreement and upon the fulfilment of additional conditions established in this agreement, the authors of this work grant the user the right to use *Neolithic Settlement at Bylany – Essential Database* (hereinafter the “work”) for the purpose of becoming acquainted with its content in the ensuing manner and for the standard use of this content (hereinafter also "license"). The authorization provided to the user is not exclusive. The user is expressly forbidden to copy, distribute, rent, lend or exhibit or share the work with the public. The license is provided for a fee.
2. The user shall bear in mind that it is not authorized to make, or enable any third party to make changes to the work, i.e. the user is not permitted to modify or change the work or parts thereof. All rights to change or modify the work pertain exclusively to the authors and any intervention to the work made by the user or a third party can be considered as an infringement on the copyrights and other rights held by the authors. The user and authors likewise agree that the user is not entitled, without the consent of the authors, to grant a “sub-license” to any third party.
3. The user undertakes to inform the authors about works that were created or processed with the help of the data contained in the work. In such cases the user is also required to list this work as a source.

Autoři díla:Authors of the work: P. Květina, I. Pavlů.P. Květina, I. Pavlů.

Structure of the Bylany – Essential Database

The database contains archaeological information from the Bylany 1 site (areas A, B, F) and is conceived as a bi-level system. Containing a prepared form-type display with basic filters, the basic level of the database is intended for standard users (Fig. 23 and 24). It also includes an interface that connects the database with image documents in PDF format. For more information see the chapter “Instructions for using the CD”.

The second, expanded, level of the database is intended for advanced users that can work with all of the tables and create their own queries. Users also have the possibility of using independent vector levels in SHP format (created in ArcGis 9). These can be used to compile a GIS map of the Bylany site, either in the user's own software or by means of a prepared map project and the installation of the included ArcReader 9.2 program. The GIS map can be connected to BY11–BY15 tables to perform spatial analyses.

From the onset, the “Bylany – Essential Database" has been conceived as a combination of a basic card index and an analytical database, functions that are also supported by the structure of the tables. The database contains a total of sixteen basic tables (labelled BY01–BY16) and a series of auxiliary tables (labelled D900–D919). Tables BY01–BY04 offer records of spatial contexts, archaeological finds and their characteristics. The following twelve tables (BY05–BY16) present special records of individual entities (houses, ceramics, chipped (flints) and polished tools (axes and adzes), grinding stones (manos and metates) and chronological segments).

Name of table	**Description**	**Entity**
BY01_katalog objektů	Inventory and description of feature (pits)	Spatially demarcated unit (feature or part thereof)
BY02_katalog nálezů_keramika	List of ceramic finds	Artefact
BY03_katalog nálezů_nekeramika	List of non-ceramic finds	Artefact
BY04_přehled inventáře	List of bags and their contents (inv. nos.) according to feature	Bag
BY05_KE-LBK-1EV	Primary records of LBK ceramic finds	Artefact (ceramic fragment)
BY06_KE-LBK-2EV	Secondary classification of LBK ceramics	Spatially demarcated unit (feature or part thereof)
BY07_ŠI	Records and typology of chipped tools (flint)	Artefact (chipped tool)
BY08_BI	Records and typology of polished tools	Artefact (polished tool)
BY09_MLÝNY	Records and typology of grinding stones (manos and metates)	Artefact (grinding stone)
BY10_domy datování	Chronology of houses in categories: stage, phase, interval	Ground plan of house

BY11_fáze-interval-kontext	Chronology of features (pits) in categories: phase, stage, interval	Context	Enables correlation
BY12_objekty-celky	Listing and description of archaeological contexts (analytical units)	Context	
BY13_DOMY	Morphology and typology of houses	Ground plan of house	
BY14_KE-LBK-celky	Secondary classification of LBK ceramics according to spatial analytical units	Context	
BY15_nekeramika-celky	Records of non-ceramic finds, including finds other than LBK ceramics, according to spatial analytical units	Context	
BY16_kontexty GIS v2	Summary of contexts that were vectorized and are part of attached GIS map	Context	
D900 – D919	Auxiliary and system tables		

Table 1. Basic table structure of "Bylany – Essential Database".

The following chapters explain the structure of database tables and the character of individual fields. Variables are explained with a written description or by means of images.

Tabulka BY01_katalog objektů

- Entity: spatially demarcated section (archaeological feature or part thereof).
- Number of entities: 1 888
- Number of fields: 23
- Description: a catalogue of spatially demarcated sections (archaeological features or parts thereof), their attributes (dimensions, fill, presence of finds), circumstances of excavation and relationships with respect to the construction complex of houses ("building complex").

Field	Heading	Description of quality
i	Automatic number classification	
OBJ	Feature number (context)	*Numerical field*
CAST	Feature section	Finds from one part of feature: 1-a; 2-b; 3-c; 4-d; 5-e; 6-f; 7-g; 8-h; 9-i Finds from two parts of feature: see the coding of layers and parts Finds from three parts of feature: see the coding of layers and parts
OBJDRUH	Type of feature according to documentation (written)	
NALEZISTE	Locality	BY1 – Bylany 1 area
SEKCE	Locality section	Section A, B, F (Fig. 19-22)
SEKTOR	Sector of square grid, 15 x 15 m	
ROK	Year of excavation	
VYZKCAST	The feature was only partially excavated	x – yes
VYZKCELY	The entire feature was excavated	x – yes

DELKA_CM	Length in cm	*Numerical field*
SIRKA_CM	Width in cm	*Numerical field*
HLOUBKA_CM	Depth in cm	*Numerical field*
VYPLN_KOD	Schematized fill code (see maps for details)	1 Uniform black 2 Uniform brown 3 Black with yellowish soil 4 Brown with yellowish soil 5 Layered 6 With daub (storage pit) 7 With a daub layer or mixed with daub 8 With a charcoal layer or mixed with charcoal 9 Non-uniform, varied at individual depths
NALEZY_ANO	Finds removed	x – yes
NALEZY_NE	Without finds	x – yes
Data concerning spatial relationships of the feature to its surroundings:		
IZOL_01	Feature is isolated	x – yes
EEI	Feature belongs to (house number)	House number
EEIII	Feature likely belongs to (house number)	House number
EEII	Feature definitely does not belong to (house number)	House number
EEIV	Feature likely does not belong to (house number)	House number
TABULKA	Reference to page in relevant part of catalogue	
POKRAC_EE	Additional data from external records	

Tabulka BY02_katalog nálezů_keramika

- Entity: artefact
- Number of entities: 76 303
- Number of fields: 35
- Description: catalogue of ceramic archaeological finds with more detailed records of ceramic attributes.
- Literature:

Pavlů, I. – Zápotocká, M. – Soudský, O. 1985: Bylany, katalog: section A – part 2. Text. Excavations 1953-1967. Prague

Pavlů, I. – Zápotocká , M. 1978: Analysis of the Czech Neolithic Pottery. Prague: Institute of Archaeology.

Soudský, B. 1967: Principles of Automatic Data Treatment Applied on Neolithic Pottery. Prague-Stockholm. Manuscript.

Zápotocká, M. 1998: Bestattungsritus des Böhmischen Neolithikums (5500 – 4200 B.C.). Prague: Institute of Archaeology.

Field	**Heading**	**Description of quality**
KUL	Culture, period	Period: 1 – Palaeolithic, Mesolithic; 2 – Neolithic; 3 – Eneolithic; 4 – Bronze Age, Hallstatt A, B; 5 – Hallstatt C, D, La Tene; 6 – Rome, Migration Period; 7 – Early Middle Ages; 8 – High Middle Ages, Early Modern period Neolithic culture: 21 – Starčevo-Criŝs; 22 – Linear Pottery; 23 – Bükk; 24 – Tisza; 25 – Lengyel, Moravian Painted; 26 – Stroked Pottery, Late Lengyel; 27 – Tiszapolgár

LOKALITA	Locality, cadastre	Code list of cadastres; this concerns Bylany in the basic table
NALEZ	Type of find	Artefacts by material: 10 Burnt clay 20 Stone artefacts 30 Copper artefacts 40 Iron artefacts 50 Other artefacts from inorganic materials 60 Bone artefacts 70 Daub 80 Charcoal and organic materials 90 Other Artefacts in detail: 11 – ceramics; 13 – clay spoons; 15 – clay wheels; 16 – clay weights; 17 – clay spindle whorls; 18 – clay sculpture; 19 – clay pendants; 21 – chipped tools; 22 – polished tools; 23 – sandstone whetstones; 24 – grinding stones; 25 – handstones; 26 – stone weights; 27 – stone vessels; 28 – stone sculptures; 29 – stone pendants; 61 – bone tools; 62 – bone handles of stone tools; 66 – human bones; 67 – shells; 68 – bone sculptures; 69 – bone pendants; 81 – carbonized macrobotanical remains; 82 – carbonized grains Special codes (culture-type feature-type of find): 220011 Linear Pottery ceramics; 260011 Stroked Pottery ceramics; 200021 Neolithic chipped tools; 200022 Neolithic ground polished tools; 200023 Neolithic whetstones; 200024 Neolithic grinding stones; 200025 Neolithic handstones; 200070 Neolithic daub; 221200 Linear Pottery culture houses
DO	Type of feature	Type of locality: 1 – settlement; 2 – cave; 3 – fortified settlement; 4 – land lot; 6 – inhumation grave; 7 – cremation grave Features in detail: 11 – pit, small pit, complex of pits; 12 – house; 13 – sunken-floor house; 14 – oven, fireplace; 15 – granary, silo; 16 – vessel in situ; 17 – trench; 18 – layer; 19 – unintentional feature; 10 – field survey Inhumation grave in detail: 61 – crouched; 62 – extended; 63 – grave with horse; 64 – non-ritual grave; 65 – extended beneath burial mound; 66 – crouched beneath burial mound Cremation grave: 71 – ritual cremated burial; 72 – ritual cremated burial beneath burial mound; 73 – cremated burial added to inhumation grave; 74 – cremated burial added to other cremation grave Feature in detail: 111 – small pit; 112 – pit; 113 – complex of pits; 114 – clay-pit; 115 – complex of pits with ovens; 116 – pit-niche; 117 – well Post structures: 121 – house with post hole construction; 122 – post hole; 123 – enclosure Pyro-structures: 141 – oven; 142 – fireplace; 143 – daub layer; 144 – burnt destruction Trenches: 171 – sacrificial trench; 172 – foundation trench; 173 – U-shaped ditch; 174 – V-shaped ditch Natural features: 191 – windthrow; 192 – period runoff; 193 – recent stream; 194 – recent runoff
PORADI	Feature number (order for classification)	
KONTEXT	Feature number = number of the analytical spatial unit	
CAST	Feature section	

VRST	Mechanical layer	Finds from a single layer: 10-1.; 20-2.; 30-3.; 40-4.; 50-5.....90-9.; 0- unmarked Finds from two layers: See the coding of layers and parts Finds from three layers: See the coding of layers and parts
b_lok	More detailed localisation	Square grid at feature – individually
c_kj_domu	Post hole number at house	
INV	Inventory number of find	A unique indicator composed of a seven-digit number
TR	Ceramic class (colour)	Ceramic classes of fine goods: 21 – archaic light grey; 22 – archaic blackish-brown; 23 – archaic ochre; 24 – archaic reddish-blackish-red; 25 – archaic reddish-whitish-grey- red; 31 – standard dark grey; 32 – standard whitish-grey; 41 – standard blackish-reddish-black; 51 – non-standard ochre Ceramic classes of coarse goods: 61 – archaic reddish-blackish-red; 62 – archaic reddish-brown; 63 – archaic blackish-grey; 64 – archaic reddish-whitish-grey- red; 71 – non-standard greyish-black; 72 – non-standard ochre brown; 81 – standard reddish-black
MAT	Ceramic material (Fig. 1)	Clay and fired decorated ceramics: 10 – muddy soft; 30 – washed soft; 50 – washed hard; 70 – unwashed sandy; 90 – muddy hard Clay and fired undecorated ceramics: 20 - muddy soft; 40 – washed soft; 60 – washed hard; 80 – unwashed sandy; 00 – muddy hard Tempering: 1 – organic admixture; 2 – organic admixture and small stones; 3 – weak organic admixture; 4 – coarse with small stones; 5 – fine with stones; 6 – finely grained; 7 – coarsely grained; 8 – sandy; 9 – other Special additional tempering: 1 – crushed ceramics; 2 – small pieces of graphite; 3 – graphitic clay; 4 – weak mica admixture; 5 – heavy mica admixture
P	Surface treatment (Fig. 1)	1 – engobe; 2 – polished engobe; 3 – oxidation red layer; 4 – "wet hand;" 5 – semi-smoothed; 6 – smoothed; 7 – semi-polished; 8 – polished; 9 – other; 0 – damaged surface
ZA	Preservation state	Basic vessel segments: 10 Whole vessel 20 Part of vessel 30 Rim 40 Bottom 50 Wall 60 Knobs, handles 70 Other
		Detail of whole vessel: 11 – undamaged vessel; 12 – slightly damaged vessel; 13 – less than half of vessel seriously damaged; 14 – half of vessel reconstructable ; 15 – more than a half of vessel is a reconstructable
		Detail of vessel parts: 21 – unconnectable rim, wall or bottom; 22 – rim and wall; 23 – bottom and wall; 24 – larger part of wall
		Rim detail: 31 – rim with reconstructable angle; 32 – rim with unreconstructable angle; 33 – rim with perforated opening; 37 – rim of hollow foot; 38 – rim with secondarily ground break edge
		Bottom detail: 41 – entire bottom without walls; 42 – bottom with opening or depression in the middle; 43 – bottom with reparation hole; 44 – part of bottom with wall; 45 – centre of bottom without edge; 46 – vessel on full feet; 47 – vessel bottom on hollow foot; 48 – bottom with indented feet; 49 – bottom with indented hollow foot
		Wall details: 50 – amorphous wall fragment; 51 – wall with distinct profile; 53 – wall with reparation hole; 55 – wall with openings (sieve); 59 – walls from multiple vessels

		Knobs and handles detail: 60 – wall with broken off knob or handle; 61 – knob with wall; 62 – knob without wall; 63 – handle with wall; 64 – handle without wall; 65 – fragment of knob; 66 – fragment of handle; 67 – wall with broken off handle; 68 – wall with broken off knob; 69 – lugs from rim
MM	Thickness of ceramic wall in mm	*Numerical field*
TVA	Shape of ceramic vessel (Fig. 2)	Rim angle and shape of wall: 100 Closed rim with angle over 45° (35°) 200 Closed rim between 45° (35°) and 0° 300 0° perpendicular rim 400 Splayed rim from 0°to 45° 500 Splayed rim over 45° (40°) 600 Closed S-shaped bent rims
		Categories of shapes: 10 Deep conical bowl 20 Bottles and amphorae 30 Spherical and hemispherical vessels 40 Pear-shaped forms 50 Bowls
		Shape detail: 131 Spherical vessel with rounded upper swell 132 Spherical vessel with flattened upper swell 140 Pear-shaped cylindrical 220 Bottle with conical neck 231 Hemispherical vessel with rounded upper swell 232 Hemispherical vessel with weakly flattened upper swell 241 Hemispherical vessel with flattened upper swell (Early Linear) 242 Hemispherical bi-conical vessel with flattened upper swell (Early Linear) 243 Hemispherical vessel with flattened and slightly bent upper swell (Šárecká) 250 Slightly closed bowl 310 Deep bowl 320 Bottle with straight neck 323 Pear-shaped amphora (Močovice type) 331 Hemispherical vessel with straight to slightly closed rim 332 Hemispherical vessel with straight rim 341 Slightly pear-shaped rounded vessel (Early Linear) 342 Slightly pear-shaped, rounded, bi-conical vessel (Early Linear) 343 Pear-shaped, rounded vessel (Šárecká) 350 Bowl with straight rim 410 Deep bowl with splayed rim 420 Bottle with splayed rim 423 Bottle with splayed rim and bent upper part 450 Wide bowl (plate) 510 Wide conical bowl 550 Wide rounded bowl 631 Slightly pear-shaped, rounded vessel (Early Linear) with S-shaped rim 632 Slightly pear-shaped, rounded, bi-conical vessel (Early Linear) with S-shaped rim 633 Pear-shaped, rounded vessel (Šárecká) with S-shaped rim 641 Slightly pear-shaped, rounded vessel (Early Linear)

		with bent upper part and S-shaped rim 642 Slightly pear-shaped, rounded, bi-conical vessel (Early Linear) with bent upper part and S-shaped rim
D	Bottom shape (Fig. 1)	Bottoms: 10 Rounded without edges 20 Flat with sharp edge 30 Flat with rounded edge 40 Swell with ringlet 50 Flat indented 70 Slightly concave swell Feet: 58 Low, conical, solid 59 Low, conical, hollow 69 High, conical, hollow 79 S-shaped, hollow 89 3 small cylindrical 99 4 small cylindrical
PUP	Knobs, lugs (Fig. 3)	Individual: 110-159 – small, rounded; 160-189 – large, rounded; 190 – tubular; 210-239 – cylindrical; 240-249 – code reserve; 250-289 – button-shaped; 290-299 – code reserve; 310-339 – cylindrical, indented on both walls; 340-349 – code reserve; 350-389 – button-shaped, indented on both walls; 390-399 – code reserve; 410-459 – vertical oval, indented on both walls; 460-499 – horizontal oval, indented on both walls; 510-559 – vertical oval; 560-599 – horizontal oval Multiple: 600-629 – two of the same type; 630-639 – three of the same type; 670-699 – combination of various types on a single vessel Special: 710-759 – linguiform; 810-839 – zoomorphic; 851, 852 – face-shaped; 910-939 – protrusions exceeding the rim; 950-959 – unique types Variations are typically defined according to the treatment of the front surface of the knob, which can be untreated, indented, grooved or incised (see graphic code of Pavlů – Zápotocká, 1978).
o	Rim diameter	is measured in mm and grouped in categories: 1- 2- 3- 4- 5- 6- 7- 8- 9
UCH	Handle (Fig. 4)	Size and position: 10 Small horizontal 20 Small vertical 30 Large horizontal 40 Large vertical 50 Large linguiform 60 Oval vertical 70 Small linguiform, pronged 80 Special forms 90 Reserve Placement on vessel: x1-x3 Unknown x4-x6 Aligned x7-x9 Zig-zag x0 Location on vessel Other treatment: x1,x4,x7– without treatment; x2,x5,x8 – grooved or incised Broken off handle: 01 – horizontal, 02 – vertical, 03 – unknown
RYTI	Type of engraving and width of line	1 – very blunt; 2 – very sharp; 3 – medium blunt; 4 – medium sharp; 5 – thin; 6 – fine; 7-9 – grooves over 3 mm
TO	Technical decoration of	Fig. 5

	ceramics	
t	Incised rims (Fig. 5)	1 – sparsely finger-pressed; 2 – densely finger-pressed; 3 – sparsely nail-pressed; 4 – densely nailed-pressed
LO	Linear and relief decoration of ceramics	Linear decoration: Fig. 17 and 18 Relief decoration: Fig. 5
rek_kur	Recti- or curvilinear type of decoration (Fig. 6)	Determined by the number of lines: 1,2,3,4 = recti; 5,6,7,8 = curvi; 9 = line under rim
MOTIV	Motif of linear decoration	Fig. 6
VAR	Motif variations	Field was not reviewed
LL	Lines under rim	Fig. 7
HOR	Upper complementary patterns of linear decoration	Fig. 8
DOL	Lower complementary patterns of linear decoration	Fig. 8
2.OR	2nd ornament, over first (e.g. painted Šárecký over engraved)	Same as with field LOPO, Fig. 17 and 18
U	Interior ornament	Same as with field LOPO, Fig. 17 and 18
KS	Number of pieces	*Numerical field*
POCJ	Number of units	*Numerical field*

Note: The table includes all records of ceramics (not only Linear). If material is coded for Stroked ceramics, the code for Linear ceramics was used. A special descriptive system for Stroked ceramics (Zápotocká 1998, 171-177) was developed later and was not applied in this phase on the relevant part of finds from the settlement in Bylany.

Tabulka BY03_katalog nálezů_nekeramika

- Entity: artefact
- Number of entities: 17 654
- Number of fields: 12
- Description: catalogue of non-ceramic archaeological finds and ceramic finds other than LBK ceramics. Also included are special ceramic forms such as spoons and sculptures. Using the "inv" and "obj" reference fields the table can be connected to other tables in the database.
- Literature:

Pavlů, I. – Zápotocká, M. – Soudský, O. 1985: Bylany, katalog: section A – part 2. Text. Excavations 1953 – 1967. Prague.

Pavlů, I. – Zápotocká , M. 1978: Analysis of the Czech Neolithic Pottery. Morphological and chronological structure of projections. Prague: Institute of Archaeology.

Soudský, B. 1967: Principles of Automatic Data Treatment Applied on Neolithic Pottery. Prague-Stockholm. Manuscript.

Zápotocká, M. 1998: Bestattungsritus des Böhmischen Neolithikums (5500 – 4200 B.C.). Prague: Institute of Archaeology.

Field	Heading	Description of quality
KUL	Culture, period	Period: 1 – Palaeolithic, Mesolithic; 2 – Neolithic; 3 – Eneolithic; 4 – Bronze Age, Hallstatt A, B; 5 – Hallstatt C, D, La Tene; 6 – Rome, Migration Period; 7 – Early Middle Ages; 8 – High Middle Ages, Early Modern period Neolithic culture: 21 – Starčevo-Criŝs; 22 – Linear Pottery; 23 – Bükk; 24 – Tisza; 25 – Lengyel, Moravian Painted; 26 – Stroked Pottery, Late Lengyel; 27 – Tiszapolgár
LOKA	Locality, cadastre	Code list of cadastres; this always concerns Bylany in the basic table
NALEZ	Type of find	Artefacts by material: 10 Burnt clay 20 Stone artefacts 30 Copper artefacts 40 Iron artefacts 50 Other artefacts from inorganic materials 60 Bone artefacts 70 Daub 80 Charcoal and organic materials 90 Other
		Clay artefacts: 11 Ceramics 13 Clay spoons 15 Clay wheels 16 Clay weights 17 Clay spindle whorls 18 Clay sculpture 19 Clay pendants
		Stone artefacts: 21 Chipped tools (ŠI) 22 Polished tools (BI) 23 Sandstone whetstones 24 Gringding stones 25 Handstones 26 Stone weights 27 Stone vessels 28 Stone sculpture 29 Stone pendants
		Bone artefacts: 61 Bone tools 62 Bone handles of stone tools 66 Human bones 67 Shells 68 Bone sculpture 69 Bone pendants
		Additional organic artefacts: 81 Carbonized macrobotanical remains 82 Carbonized grains
		Special codes (culture-type feature-type of find): 220011 Linear Pottery ceramics; 260011 Stroked Pottery ceramics; 200021 Neolithic chipped tools; 200022 Neolithic polished tools; 200023 Neolithic whetstone; 200024 Neolithic grinding stones; 200025 Neolithic handstones; 200070 Neolithic daub; 221200

		Linear Pottery culture houses
DO	Type of feature	Type of locality: 1 – settlement; 2 – cave; 3 – fortified settlement; 4 – land lot; 6 – inhumation grave; 7 – cremation grave Features in detail: 11 – pit, small pit, complex of pits; 12 – house; 13 – sunken-floor house; 14 – oven, fireplace; 15 – granary, silo; 16 – vessel in situ; 17 – trench; 18 – layer; 19 – unintentional feature; 10 – field survey Inhumation grave in detail: 61 – crouched; 62 – extended; 63 – grave with horse; 64 – non-ritual grave; 65 – extended beneath burial mound; 66 – crouched beneath burial mound Cremation grave: 71 – ritual cremated burial; 72 – ritual cremated burial beneath burial mound; 73 – cremated remains added to skeleton grave; 74 – cremated remains added to grave with cremated remains Feature in detail: 111 – small pit; 112 – pit; 113 – complex of pits; 114 – clay-pit; 115 – complex of pits with ovens; 116 – pit-niche; 117 – well Post structures: 121 – house with post construction; 122 – post hole; 123 – enclosure Pyro-structures: 141 – oven; 142 – fireplace; 143 – daub layer; 144 – burnt destruction Trenches: 171 – sacrificial trench; 172 – foundation trench; 173 – U-shaped ditch; 174 -V-shaped ditch Natural features: 191 – windthrow; 192 – period runoff; 193 – recent stream; 194 – recent runoff
PORADI	Feature number (order for classification)	*Numerical field*
KONTEXT	Feature number = number of the analytical spatial unit	
CAST	Feature section	
VRST	Layer	Finds from a single layer: 10-1.; 20-2.; 30-3.; 40-4.; 50-5.....90-9.; 0- unmarked Finds from two layers: See the coding of layers and parts Finds from three layers: See the coding of layers and parts
B_LOK	More detailed localisation	Square grid at feature - individually
INV	Inventory number of find	A unique indicator composed of a seven-digit number
POPIS	Written description of find	
KS	Number of pieces	*Numerical field*

Tabulka BY04 přehled inventáře

- Entity: archaeological feature
- Number of entities: 1 240
- Number of fields: 30
- Description: an inventory of all archaeological finds according to spatial contexts – features; summarisation by inventory number.

Field	Heading	Description of quality
i	Automatic number classification	

OBJ	Feature number	Record number of archaeological features
CAST	Feature section	Symbol "O" = surface of feature
INVCIS1_OD	Inventory number	*Numerical field*
INVCIS1_DO	Inventory number	*Numerical field*
INVCIS2_OD	Inventory number	*Numerical field*
INVCIS2_DO	Inventory number	*Numerical field*
INVCIS3_OD	Inventory number	*Numerical field*
INVCIS3_DO	Inventory number	*Numerical field*
Summarisation of ceramics according to cultural determination and dating:		
LNKIND	Number of LBK ceramic units	*Numerical field*
LNKKUSU	Number of LBK ceramic fragments	*Numerical field*
ETAPA	Dating in LBK chronology	1c, 2a-d, 3a-b, 3-4, 4a-b
JINA_STK	Number of STK ceramic fragments	*Numerical field*
JINA_KERA2	Number of other ceramic 2	*Numerical field*
JINA_KERA3	Number of other ceramic 3	*Numerical field*
Number of non-ceramic finds:		
KAM_SI	Number of chipped tools	*Numerical field*
KAM_BI	Number of polished tools	*Numerical field*
KAM_BR	Number of whetstones	*Numerical field*
KAM_DRS	Number of grinding stones	*Numerical field*
KAM_DRH	Number of handstones	*Numerical field*
KAM_DRX	Number of indeterminable handstones	*Numerical field*
KAM_DTC	Number of handstones	*Numerical field*
KAMENY	Number of stones without signs of treatment	*Numerical field*
Other non-ceramic finds (existence only):		
KOSTI	Existence of bones	x – yes; - no; o – not documented
MAZANICE	Existence of daub	x – yes; - no; o – not documented
UHLIKY	Existence of charcoal	x – yes; - no; o – not documented
JINE	Other finds	
POZNAMKA	Note	
TABULKA_OD	Links to illustrations	
TABULKA_DO	Links to illustrations	

Tabulka BY05_KE-LBK-1EV

Entity: Artefact – LBK ceramic fragment

- Number of entities: 68 405
- Number of fields: 30
- Description: Primary evidence of Linear Pottery culture (LBK) ceramic finds. A single ceramic fragment constitutes an entity. The field contains a description of attributes that

are in part identical to table BY02_katalog nálezů_keramika, and in part supplemented with new attributes.

- Literature:

Pavlů, I. – Zápotocká, M. 1978: Analysis of the Czech Neolithic Pottery. Morphological and chronological structure of projections. Prague: Institute of Archaeology.

Pavlů, I. – Zápotocká, M. – Soudský, O. 1985: Bylany, katalog: section A – part 2. Text. Excavations 1953 – 1967. Prague.

Soudský, B. 1967: Principles of Automatic Data Treatment Applied on Neolithic Pottery. Prague-Stockholm. Manuscript.

Zápotocká, M. 1998: Bestattungsritus des Böhmischen Neolithikums (5500 – 4200 B.C.). Prague: Institute of Archaeology.

Field	Heading	Description of quality
OBJ	Feature number	
TR	Ceramic class (colour)	Ceramic classes of fine goods: 21 – archaic light grey; 22 – archaic blackish-brown; 23 – archaic ochre; 24 – archaic reddish-blackish-red; 25 – archaic reddish-whitish-grey- red; 31 – standard dark grey; 32 – standard whitish-grey; 41 – standard blackish-reddish-black; 51 – non-standard ochre Ceramic classes of coarse goods: 61 – archaic reddish-blackish-red; 62 – archaic reddish-brown; 63 – archaic blackish-grey; 64 – archaic reddish-whitish-grey- red; 71 – non-standard greyish-black; 72 – non-standard ochre brown; 81 – standard reddish-black
MAT	Ceramic material (Fig. 1)	Clay and fired decorated ceramics: 10 – muddy soft; 30 – washed soft; 50 – washed hard; 70 – unwashed sandy; 90 – muddy hard Clay and fired undecorated ceramics: 20 - muddy soft; 40 – washed soft; 60 – washed hard; 80 – unwashed sandy; 00 – muddy hard Tempering: 1 – organic admixture; 2 – organic admixture and small stones; 3 – weak organic admixture; 4 – coarse with small stones; 5 – fine with stones; 6 – finely grained; 7 – coarsely grained; 8 – sandy; 9 – other Special additional tempering: 1 – crushed ceramics; 2 – small pieces of graphite; 3 – graphitic clay; 4 – weak mica admixture; 5 – heavy mica admixture
ZA	Preservation state	Basic vessel segments: 10 Whole vessel 20 Part of vessel 30 Rim 40 Bottom 50 Wall 60 Knobs, handles 70 Other
		Detail of whole vessel: 11 – undamaged vessel; 12 – slightly damaged vessel; 13 – less than half of vessel seriously damaged; 14 – half of vessel reconstructable ; 15 – more than a half of vessel is a reconstructable
		Detail of vessel parts: 21 – unconnectable rim, wall or bottom; 22 – rim and wall; 23 – bottom and wall; 24 – larger part of wall
		Rim detail: 31 – rim with reconstructable angle; 32 –

		rim with unreconstructable angle; 33 – rim with perforated opening; 37 – rim of hollow foot; 38 – rim with secondarily ground break edge
		Bottom detail: 41 – entire bottom without walls; 42 – bottom with opening or depression in the middle; 43 – bottom with reparation hole; 44 – part of bottom with wall; 45 – centre of bottom without edge; 46 – vessel on full feet; 47 – vessel bottom on hollow foot; 48 – bottom with indented feet; 49 – bottom with indented hollow foot
		Wall details: 50 – amorphous wall fragment; 51 – wall with distinct profile; 53 – wall with reparation hole; 55 – wall with openings (sieve); 59 – walls from multiple vessels
		Knobs and handle detail: 60 – wall with broken off knob or handle; 61 – knob with wall; 62 – knob without wall; 63 – handle with wall; 64 – handle without wall; 65 – knob fragment; 66 – handle fragment; 67 – wall with broken off handle; 68 – wall with broken off knob; 69 – lugs from rim
MM	Thickness of ceramic wall in mm	*Numerical field*
TVA	Shape of ceramic vessel (Fig. 2)	Rim angle and shape of wall: 100 Closed rim with angle over 45° (35°) 200 Closed rim between 45° (35°) and 0° 300 0° perpendicular rim 400 Splayed rim from 0°to 45° 500 Splayed rim over 45° (40°) 600 Closed S-shaped bent rims
		Categories of shapes: 10 Deep conical bowl 20 Bottles and amphorae 30 Spherical and hemispherical vessels 40 Pear-shaped forms 50 Bowls
		Shape detail: 131 Spherical vessel with rounded upper swell 132 Spherical vessel with flattened upper swell 140 Pear-shaped cylindrical 220 Bottle with conical neck 231 Hemispherical vessel with rounded upper swell 232 Hemispherical vessel with weakly flattened upper swell 241 Hemispherical vessel with flattened upper swell (Early Linear) 242 Hemispherical bi-conical vessel with flattened upper swell (Early Linear) 243 Hemispherical vessel with flattened and slightly bent upper swell (Šárecká) 250 Slightly closed bowl 310 Deep bowl 320 Bottle with straight neck 323 Pear-shaped amphora (Močovice type) 331 Hemispherical vessel with straight to slightly closed rim 332 Hemispherical vessel with straight rim

		341 Slightly pear-shaped rounded vessel (Early Linear) 342 Slightly pear-shaped, rounded, bi-conical vessel (Early Linear) 343 Pear-shaped, rounded vessel (Šárecká) 350 Bowl with straight rim 410 Deep bowl with splayed rim 420 Bottle with splayed rim 423 Bottle with splayed rim and bent upper part 450 Wide bowl (plate) 510 Wide conical bowl 550 Wide rounded bowl 631 Slightly pear-shaped, rounded vessel (Early Linear) with S-shaped rim 632 Slightly pear-shaped, rounded, bi-conical vessel (Early Linear) with S-shaped rim 633 Pear-shaped, rounded vessel (Šárecká) with S-shaped rim 641 Slightly pear-shaped, rounded vessel (Early Linear) with bent upper part and S-shaped rim 642 Slightly pear-shaped, rounded, bi-conical vessel (Early Linear) with bent upper part and S-shaped rim
KODTVARU	Simplified shape categories	Bottoms: 1 Bowl 2 Hemispherical 3 S-shaped hemispherical 4 Pear-shaped vessel 5 Closed bowl 6 Deep bowl 7 Wide bowl 8 Flat bowl 9 Amphora
PUPKY	Knobs, lugs (Fig. 3)	Multiple: 600-629 – two of the same type; 630-639 – three of the same type; 670-699 – combination of various types on a single vessel Special: 710-759 – linguiform; 810-839 – zoomorphic; 851, 852 – face-shaped; 910-939 – protrusions exceeding the rim; 950-959 – unique types Variations are typically defined according to the treatment of the front surface of the knob, which can be untreated, indented, grooved or incised (see graphic code of Pavlů – Zápotocká, 1978).
o	Rim diameter	is measured in mm and grouped in categories: 1- 2- 3- 4- 5- 6- 7- 8- 9
UCHA	Handle (Fig. 4)	Size and position: 10 Small horizontal 20 Small vertical 30 Large horizontal 40 Large vertical 50 Large linguiform 60 Oval vertical 70 Small linguiform, pronged 80 Special forms 90 Reserve Placement on vessel: x1-x3 Unknown

		x4-x6 Aligned x7-x9 Zig-zag x0 Location on vessel
		Other treatment: x1,x4,x7– without treatment; x2,x5,x8 – grooved or incised
		Broken off handle: 01 – horizontal, 02 – vertical, 03 – unknown
RYTI	Type of engraving and width of line	1 – very blunt; 2 – very sharp; 3 – medium blunt; 4 – medium sharp; 5 – thin; 6 – fine; 7-9 – grooves over 3 mm
TONAOKRAJI	Technical decoration of rim	1 – sparsely finger-pressed; 2 – densely finger-pressed; 3 – sparsely nail-pressed; 4 – densely nailed-pressed
TO	Technical decoration of ceramics	Fig. 5
LOPOIII	Linear and relief decoration of ceramics	Linear decoration: Fig. 17 and 18 Relief decoration: Fig. 5
rekti_kurvi	Recti- or curvilinear type of decoration (Fig. 6)	Determined by the number of lines: 1,2,3,4 = recti; 5,6,7,8 = curvi; 9 = line under rim
LINKYNAOKR	Additional frame lines under rim	Fig. 7
DOPLNEKHOR	Additional ornament to main ornament	Fig. 8
KUSU	Number of fragments	*Numerical field*
KOMPLEX	Number of construction complex of houses	*Numerical field*
IZOL	Isolated context	Unclassified to date
FAZE	Number of residential phase of chronology from 1986	*Numerical field*
OKRDIAMCM	Rim diameter in cm	*Numerical field*
ORIFICECM	Amphora neck diameter in cm	*Numerical field*
RADSTENYCM	Curve of walls	*Numerical field*
MINUSHOR	Estimated volume of upper part	*Numerical field*
OBJEMPOC	Calculated volume of vessel	*Numerical field*
SKLONOKR	Angle of rim in degrees	*Numerical field*
INV	Inventory number	*Numerical field*
CLSHASI	Functional classification code based on shape and size	Fig. 10
CLSHAVO	Functional classification code based on shape and volume	Fig. 10

Tabulka BY06_KE-LBK-2EV

Entity: archaeological feature

- Number of entities: 1 708
- Number of fields: 33
- Description: secondary records of Linear Pottery culture (LBK) ceramic finds grouped according to spatial units (archaeological features). Fields contain a quantitative record of ceramic attributes in the form of real numbers.
- Literature:

Pavlů, I. – Rulf, J. – Zápotocká, M. 1986: Theses on the Neolithic Site of Bylany, Památky archeologické 77, 288-412.

Field	Heading	Description of quality
i	Automatic number classification	
OBJ	Feature number	*Numerical field*
CAST	Feature section	See the coding of layers and parts
POCET	Number of LBK ceramic specimens	*Numerical field*
SUMALO	Number of linear decorated ceramic specimens	*Numerical field*
SUMAPO	Number of relief decorated ceramic specimens	*Numerical field*
SUMACO	Number of painted ceramic specimens	*Numerical field*
SUMATO	Number of technically decorated ceramic specimens	*Numerical field*
SUMANO	Number of undecorated ceramic specimens	*Numerical field*
JMN	Number of fine ceramics	*Numerical field*
HRB	Number of coarse ceramics	*Numerical field*
Technical execution of linear decoration (Fig. 17 and 18):		
LOAL12	Alpha 12	*Numerical field*
LOAL13	Alpha 13	*Numerical field*
LOAL20	Alpha 20	*Numerical field*
LOAL30	Alpha 30	*Numerical field*
LOBETA	Beta	*Numerical field*
LOGAMA	Gamma	*Numerical field*
LODE12	Delta 12	*Numerical field*
LODE30	Delta 30	*Numerical field*
LOEP10	Epsilon 10	*Numerical field*
LOEP20	Epsilon 20	*Numerical field*
LOEP00	Epsilon? (not specified in greater detail)	*Numerical field*
LOEP30	Epsilon 30	*Numerical field*
LOTHETA	Theta	*Numerical field*
LOETA	Eta	*Numerical field*
LODZETA	Zeta	*Numerical field*
KOD	Primary record code (1EV)	Fig. 17 and 18
Summarisation according to fragmentation:		
ZACHCELY	Whole vessel	*Numerical field*
ZACHOKRAJ	Rim fragment	*Numerical field*
ZACHDNO	Bottom fragments	*Numerical field*
ZACHSTENA	Wall fragments	*Numerical field*
PUPKY	Number of knobs	*Numerical field*
UCHA	Number of handles	*Numerical field*

Tabulka BY07 SI

Entity: chipped tool finds (flints)

- Number of entities: 864
- Number of fields: 33
- Description: a list of chipped tool finds, including artefact dimensions, typological classification, localisation in the settlement and other special tracked attributes.
- Literature:

Pavlů, I. 2000: Life on a Neolithic site. Prague: Institute of Archaeology.

Popelka, M. 1991: Chipped stone industry, In: Pavlů, I. – Rulf, J. (eds.), Stone industry from the Neolithic site of Bylany, Památky archeologické 82, 277-304.

Přichystal, A. 1985: Štípaná industrie z neolitického sídliště v Bylanech (okr. Kutná Hora) z hlediska použitých surovin a jejich provenience, Archeologické rozhledy 37, 481-488.

Tringham, R. 1968 : Chipped stone industry from Bylany. MS.

Zimmermann, A. 1988: Steine, In: Boelicke, U. – von Brandt, D. – Lüning, J. – Stehli, P. – Zimmermann, A. (eds.), Die bandkeramische Siedlungsplatz Langweiler 8, 569-787.

Field	Heading	Description of quality
KUL	Culture, period	22 – Linear Pottery culture
DO	Type of feature	111 – small pit; 112 – pit; 113 – complex of pits; 114 – clay-pit; 115 – complex of pits with ovens; 116 – pit-niche; 121– house with post construction; 141 – oven; 150 – granary, silo; 160 – vessel in situ; 170 – small trench; 191 – windthrow; 192 – period runoff
OBJ	Feature number	
KOMPLEX	Number of construction complex of houses	*Numerical field*
FAZE	Number of settlement phase according to 1986 chronology	1 - 25
IZOL	Isolated features outside of construction complex of houses	*Numerical field*
INV	Inventory number	*Numerical field*
TYP2	Type 2	Reduced and revised types: 100 – not a tool; 101 – notch; 110 – flake sraper; 120 – blade scraper; 130 – flake with retouched truncations; 140 – blade with retouched truncations; 150 – borers; 160 – point; 170 – sickle blade; 180 – combination; 181 – core handstone; 190 – retouched blade or flake
TYP	Type 1	See Popelka 1991; 279, Tab. 5
TYPDS	Length type	Formal types based on the length and width of blades and flakes: 1-8 (Fig. 11)
TYPVU	Function type	Function types based on the angle of the cutting edge and the height of the tool: 1-6 – additional working (Fig. 11) ; 7 – borers; 8 – point; 9 – with burnishing, according to Tringham 1968 (Fig. 11).
TYPSTY	Stylistic type	Stylistic classification based on the direction and strength of blows in combination with retouching: S1 to S8, according to Zimmerman 1978

PROTOTYP	Prototype	Based on definition: 0 – no, 1 – yes	
FORMA	Form	20 – core; 21 – flake; 22 – blade; 23 – fragment, chip; 29 – not evaluated	
KURA	Cortex	30 – cortex has not survived; 31 – 0 to 25%; 32 – 25 to 50%; 39 – 50 to 100%	
PATKA	Base	40 – not evaluated; 41 – zero; 42 – 1 blow; 43 – multiple blows; 44 – natural-cortex	
BULBUS	Bulb	50 – none; 51 – whole; 52 – partially preserved or only scar	
POINT	Point of impact	According to the location of the bulb in the sector of the minimal grid, calculated clockwise: 1 – 0 to 30°; 2 – 30 to 60°; 3 – 60 to 90°; 4 – 90 to 120°; 5 – 120 to 150°; 6 – 150 to 180°; see Zimmerman 1978	
BUTT	Striking (rear) edge	Unclassified to date	
CONE	Percussor	Unclassified to date	
WALLNER	Cracking ripples	Unclassified to date	
BULB	Bulb shape	0 – missing ; 1 – preserved; 2 – traces; 3 - ?; 4 – un-retouched; 9 – not determined	
LESK	Burnished	0 – unknown; 1 – yes; 2 – no	
UDER	Location of bulb in sectors	1 – ; 2 – ; 3 – ; 4 – ; 5 – ; 6 – , opposite order from Zimmermann 1988 (Fig. 11)	
ALFA	Flake propagation angle	Unclassified to date	
BETA	Angle of retouched distal end	Unclassified to date	
OMEGA	Angle of working edge	Unclassified to date	
SURPOP	Raw materials 1	See Popelka 1991; 279, Tab. 6	
SURBY	Raw materials 2 (defined by A. Přichystal 1985)	1 Baltic 2 Skršín 3 Tušimice 4 Limno-quartzite 5 Porcelanite 6 Bavarian hornstone 7 Flint 8 Burnt artefact 9 Krakow 10 Swatokrzyžsky 11 Krumlov 12 Krumlov 2	13 Hornstone X 14 Bečov 15 Opal 16 Chalcedony material 17 Radiolarite 18 Crystal 19 Boskovštejn 20 Sluňák quartzite 21 Hornstone 21 22 Świenciechowsky 23 Silicite to limno-quartzite 90, 99 Not identified
DELKA	Length in mm	*Numerical field*	
SIRKA	Width in mm	*Numerical field*	
VYSKA	Height in mm	*Numerical field*	
HMOTNOST	Weight in g	*Numerical field*	

Tabulka BY08 BI

Entity: polished tool finds (axes and adzes)

- Number of entities: 1 196
- Number of fields: 49
- Description: a list of polished tool finds, including artefact dimensions, typological classification, localisation in the settlement and other special tracked attributes.

- Literature:

Pavlů, I. 2000: Life on a Neolithic site. Prague: Institute of Archaeology.
Rulf, J. 1991: Polished stone industry, In: Pavlů, I. – Rulf, J. et al.: Stone industry from the Neolithic site of Bylany, Památky archeologické 77, 304-330.
Velímský, T. 1969: Neolitická broušená kamenná industrie z Bylan. Dissertation manuscript, University of Brno.

Field	Heading	Description of quality
KUL	Culture, period	22 – Linear Pottery culture
NALEZ	Detailed coding of find type	
PODRUHOBJ	Feature detail – reserve for code	
DO	Type of feature	11- pit, small pit, complex of pits; 12 – house; 14 – oven, fireplace; 15 – granary, silo; 17 – small trench; 19 – unintentional feature
OBJ	Feature number	
CAST	Feature section	
VRST	Layer	See the coding of layers and sections
KOMPLEX	Number of construction complex of houses	
FAZE	Number of settlement phase according to 1986 chronology	1 - 25
DAT	Number of settlement phase according to 1986 chronology, including isolated pits	1 - 25
IZOL	Number of feature that is isolated without relationship to construction complex of houses	
INV	Inventory number	
Dimensions of ground tools:		
ZAD	Preserved length of artefact	1 – fragment: measurement is incomplete; 2 – artefact is chipped off; measurement is inaccurate; 3 – completely preserved: measurement is precise
AD	Absolute length in mm	*Numerical field*
ZAS	Preserved width of artefact	1 – fragment: measurement is incomplete; 2 – artefact is chipped off; measurement is inaccurate; 3 – completely preserved: measurement is precise
AS	Absolute width in mm	*Numerical field*
ZAV	Preserved height of artefact	1 – fragment: measurement is incomplete; 2 – artefact is chipped off; measurement is inaccurate; 3 – completely preserved: measurement is precise
AV	Absolute height in mm	*Numerical field*
ISIRKDEL	Width/length index	*Numerical field*
IVYSKSIR	Height/width index	*Numerical field*
ALFA	Angle of edge height (massiveness of edge)	*Numerical field*
BETA	Angle of edge grounding (relief grounding)	*Numerical field*
GAMA	Angle of edge	*Numerical field*
DELTA	Angle of edge gradient from profile	*Numerical field*
THET	Angle of edge gradient from plan	*Numerical field*

	view	
OMEG	Angle of side convergency	*Numerical field*
Boring:		
PROVD1	Diameter of bore d1	*Numerical field*
PROVD2	Diameter of bore d2	*Numerical field*
Battle axes:		
DOSTRI	Length of cutting edge	*Numerical field*
Raw materials		
MATERIAL	Raw materials	16 – actinolite-amphibolitic slate; 21 – amphibolitic slate; 22 – amphibolite, – epidotic amphibolite; 42 – eclogite; 30 – graphitic phyllite, biotite-sericitic phyllite; 30 – graphitic slate; 23 – pelitic slate; according to Velímský 1969
Technology and morphology:		
ORPLOCH	Position of the tool base plane in relation to the planes of the rock surface	1 – parallel; 2 – oblique; 3 – perpendicular to base
ORSTOPH	Orientation of working traces on the dorsal side of the cutting edge with respect to the lengthwise axis of the artefact	1 – pitched to the right; 2 – pitched to the left; 3 – parallel to the axis – shoe-last adze; 4 – oblique upwards-axe-hammer
ORSTOPD	Orientation of working traces on the side of the cutting edge adjacent to the tool base with respect to the lengthwise axis of the artefact	1 - pitched to the right; 2 – pitched to the left; 3 – parallel to the axis – shoe-last adze; 4 – oblique upwards- axe-hammer
Secondary use of tool:		
SEKUND	Secondary use of tool	0 – indeterminable; 1 – as handstone; 2 – as a grinder/handstone 3 – other
Sections:		
SECTION	Shape of tool cross-section	0 – not determined; 1 – higher and lower plano-convex cross-section; 2 – oval; 3 – pointed oval; 4 – bi-convex or rectangular; 5 – trapezoidal; 6 – triangular; 8 – special
EDENFACE	Shape of cutting edge in front profile	0 – not determined; 1 - curved toward back; 2 - slightly curved; 3 - direct; 6 – oblique; 7 – on the plane of the back; 8 – perpendicular cutting edges
EDPTAK	Shape of cutting edge outline from above	0 – not determined; 1 – direct, perpendicular to lengthwise axis; 2 – symmetrically curved; 3 – asymmetrically curved; 4 – direct but bowed; 5 – direct and bowed
BOKPTAK	Shape of outlines of sides from above	0 – not determined; 1 – parallel; 2 – curved; 4 – curved at cutting edge; 5 – convergent toward cutting edge, direct; 6 – convergent, curved; 7 – convergent, curved at base of cutting edge; 8 – convergent, curved at tip of cutting edge
TYLPTAK	Shape of rear outlines from above	0 – not determined; 1 – rounded, symmetrically curved; 2 – asymmetrically curved; 3 – with straight face; 4 – with straight bevelled face; 5 – direct, indented; 6 – direct, indented and bevelled; 8 – pointed
BOKPROF	Side cross-section of tool	0 – not determined; 1 – shoe-last; 2 – symmetrical; 3 – shoe-last, tapered toward back; 4 – symmetrical with tapered back section; 5 – trapezoidal
Weight:		
HMOTNOST	Weight in g	*Numerical field*
Preservation state:		

ZACHOVANI	Preservation state	01 – half-finished artefact; 10 – completely preserved artefact; 11 – damaged edges; 12 – damaged back; 13 – damaged sides; 14 – damaged cutting edge and base; 15 – damaged edge and back; 16 – several parts completely destroyed; 19 – secondarily shaped; 21 – broken off back; 22 – broken off edges; 23 – broken off edges and back; 31 – broken off lengthwise half; 32 – one side broken off; 41 – front and rear side broken off; 42 – front part and base broken off; 43 – both front parts broken off; 51 – back and part of sides broken off; 52 – edge and part of sides broken off; 53 – body without one side; 61 – back broken off and cutting edge chipped off; 62 – back broken off and front part of base chipped off; 63 – back broken off and front part of body chipped off; 64 – edge broken off and front part of cutting edge chipped off; 65 – edge broken off and front part of base chipped off; 66 – edge broken off and cutting edge and base chipped off; 67 – back and edge broken off and front part of cutting edge chipped off; 68 – back and edge broken off and front side of base chipped off; 69 – back and edge broken off and cutting edge and base chipped off; 71 – sides broken off and front cutting edge chipped off; 81 – back and side partially broken off together with front part of cutting edge; 82 – back and side partially broken off and front part of base chipped off; 83 – edge and side broken off together with front part of cutting edge; 84 – edge and side broken off and front part of base chipped off; 85 – body without sides and front cutting edge chipped off; 86 – body without sides and front part of base chipped off; 87 – body without sides and front side of base chipped off; 91 – fragment of edge; 92 – fragment of back; 94 – fragment of cutting edge; 95 – fragment of base; 96 – fragment with part of polished surface; 99 – fragment without traces of polishing
Classification:		
PROTOTYP	Adzes and flat shoe-last axe prototypes	0 – unspecified; 1 – adzes: length less than or equal to 100 mm and width less than or equal to 34 mm; 2 – adzes: length less than or equal to 110 mm and width greater than 34 mm; 3 – length greater than 100 mm (or 110 mm) = not a prototype; 4 – axes: width less than or equal to 36 mm; 5 – axes: width greater than 36 mm; compare TYPDS (Pavlů 2000, 52)
TYPOS	Functional type according to cutting edge	0 – unspecified; 1 –F1: sharp adzes; 2 – F2: blunt adzes; 3 – F3: sharp axes; 4 – F4: blunt axes; compare Pavlů 2000, 40
TYPGR	Formal types according to weight and length	0 – unspecified; 1 – adzes; 2 – flat shoe-last axes
TYPDS	Formal types according to length/width index	0 - unspecified; 1 – adzes: length less than or equal to 100 mm and width less than or equal to 34 mm; 2 - adzes: length less than or equal to 110 mm and width greater than 34 mm; 3 – length greater than 100 mm (or 110 mm); 4 –

		axes: width less than or equal to 36 mm; 5 – axes: width greater than 36 mm
TYPBN	Type of polished artefacts	1 – shoe-last adze; 2 – flat shoe-last axe; 3 – shoe-last axe with perpendicular cutting edge; 4 – pointed tool; 5 – chisel; 6 – unspecified perforated polished artefact; 7 – disc-shaped hammer; 8 – double hammer; 9 – perforated hammer; 10 – perforated hoe; 11 – core drill; 12 – unspecified fragment; 13 – amorphous fragment; 14 – half-finished artefact; 15 – raw material; 16 – other; 20 – cannot be determined, see Rulf 1991
PODTYP	Subtypes of flat shoe-last axe and shoe-last adze	Fig. 12 and 13

Tabulka BY09 MLYNY

Entity: grinding stones (manos and metates)

- Number of entities: 441
- Number of fields: 21
- Description: a list of grinding stones finds, including artefact dimensions, typological classification, localisation in the settlement and other special tracked attributes.
- Literature:
  Pavlů, I. 1991: Groundstone artefacts, In: Pavlů, I. – Rulf, J. et al.: Stone industry from the Neolithic site of Bylany, Památky archeologické 77, 330-348.
  Pavlů, I. 2000: Life on a Neolithic site. Prague: Institute of Archaeology.

Field	**Heading**	**Description of quality**	
KUL	Culture, period	22 – Linear Pottery culture	
DO	Type of feature	11	Pit, small pit, complex of pits
		12	House
		13	sunken-floor house
		14	Oven, fireplace
		15	Granary, silo
		16	Vessel in situ
		17	Small trench
		18	Layer
		19	Unintentional feature
		10	Field survey
OBJ	Feature number		
CAST	Feature section		
VRST	Mechanical layer	Finds from a single layer: 10-1.; 20-2.; 30-3.; 40-4.; 50-5.....90-9.; 0- unmarked Finds from two layers: See the coding of layers and parts Finds from three layers: See the coding of layers and parts	
KOMPLEX	Number of construction complex of houses		
FAZE86	Number of settlement phase according to 1986 chronology	1 - 25	
IZOL	Number of feature that is isolated without		

	relationship to a construction complex of houses	
INV	Inventory number (a unique indicator composed of a seven-digit number)	*Numerical field*
DELKA	Length in cm	*Numerical field*
SIRKA	Width in cm	*Numerical field*
VYSKA	Height in cm	*Numerical field*
VYOPO	Height at the point of the greatest wear on the cross section	*Numerical field*
HMOT	Weight in g	*Numerical field*
TYP	Type of grinding stone	Fig. 14
SURBY	Type of grinding stone raw materials	1 – fine-grained limonite; 2 – fine-grained ferruginous; 3 – coarse-grained ferruginous; 4 – fine-grained to solid quartzite; 6 – gneiss (red orthogneiss); 7 – biotite gneiss; 8 – siliceous sandstone; 9 – medium-grained limonite; 10 – muscovite-biotite gneiss (two-mica gneiss); 12 – medium-grained ferruginous; 13 – mica-schistose-gneiss; 16 – green slate; 18 – fine-grained; 19 – medium-grained; 22 – amphibolite; 33 – quartzite; 35 – migmatitic gneiss - migmatite; 37 – mica schist; 39 – tourmaline-muscovite granite; 40 – metaconglomerate with pyrite; 99 – undetermined
STOPY	Macro-traces of use	1 – well visible; 2 – moderately visible; 3 – poorly visible
INDEX	Width/height index	*Numerical field*
FORMT	Formal classification	11-14 upper stone; 21-24 lower stone (Pavlů 2000, 75)
FUNKT	Functional classification	Fig. 11
PROTY	Prototype	Fig. 11

Tabulka BY10 DOMY DATOVANI

Entity: Ground plan of house

- Number of entities: 147
- Number of fields: 4
- Description: the table presents the ground plans of houses with their placement on areas A, B or F, as well as their position within the internal chronology of the settlement (1986 phase and 2000 intervals).

Field	Heading	Description of quality
DUM	House number	*Numerical field*
SEKCE	Excavation section	A, B, F (Fig. 19–22)
FAZE86	Number of settlement phase according to 1986 chronology	1-25
PERIOD2000	Number of residential interval according to chronology from 2000	1-6

Tabulka BY11 FAZE INTERVAL KONTEXT

Entity: archaeological feature

- Number of entities: 686
- Number of fields: 11
- Description: the table of features (contexts) and respective construction complex of houses presents the relation of these variables to the chronology of the settlement (LBK chronology, Bylany internal chronology: 1986 phase and 2000 intervals).

Field	Heading	Description of quality
SEKCE	Excavation section in Bylany	A, B, F (Fig. 19–22)
PORADI	Feature number (context) for automatic classification	*Numerical field*
CAST	Feature section (context) according to documentation	
CELEK	Spatial integrity	Whole = not further divided; sections = sections of a single feature
KONTEXT	Feature number (context) – a unique number enabling correlation	*Numerical field*
HOUSE	The number of the construction complex of houses to which the feature belongs	*Numerical field,* 999 = ?, 0 = feature does not belong to any house
DUM	The number of the construction complex of houses to which the feature belongs	IZ = isolated feature, ? = feature likely belongs to house
STUPEN	LBK chronology stage	1c, 2a-d, 3a-b, 3-4, 4a-b
FAZE86	Number of settlement phase according to 1986 chronology	1-25
PERIOD2000	Number of settlement interval phase according to 2000 chronology	1- 6
poznámka	Note	

Tabulka BY12_objekty-celky

- Entity: spatially demarcated section (archaeological feature or part thereof)
- The "KONTEXT" field is a unique value enabling correlation.
- Number of entities: 1 483
- Number of fields: 24
- Description: a catalogue of spatially demarcated units (of archaeological features or parts thereof), their attributes (dimensions, fill, presence of finds), circumstances of excavation and relationships with respect to the construction complex of houses.

Field	Heading	Description of quality
PORADI	Feature number (context) for automatic classification	*Numerical field*
KONTEXT	Feature number (context) – a unique number enabling correlation	*Text field*
CAST	Feature section (context) according to documentation	
CELEK	Spatial integrity	Whole = not further divided; sections = sections of a single feature
OBJDRUH	Type of feature according to documentation (written)	

NALEZISTE	Locality, written out or abbreviated	BY1 – Bylany 1 area
SEKCE	Part of locality	Section A, B, F (Fig. 19–22)
SEKTOR	Sector of square grid	
ROK	Year of excavation	
VYZKCAST	The feature was only partially excavated	x - yes
VYZKCELY	The entire feature was excavated	x - yes
DELKA_CM	Length in cm	*Numerical field*
SIRKA_CM	Width in cm	*Numerical field*
HLOUBKA_CM	Depth in cm	*Numerical field*
VYPLN_KOD	Fill code	1 Uniform black 2 Uniform brown 3 Black with yellowish soil 4 Brown with yellowish soil 5 Layered 6 with daub (storage pit) 7 with a daub layer or mixed with daub 8 with a charcoal layer or mixed with charcoal 9 Non-uniform, varied at individual depths
NALEZY_ANO	Finds removed	x - yes
NALEZY_NE	Without finds	x - yes
Data concerning spatial relationships of the feature to its surroundings:		
IZOL_01	Feature is isolated	x - yes
EEI	Feature belongs to (house number)	House number
EEIII	Feature likely belongs to (house number)	House number
EEII	Feature definitely does not belong to (house number)	House number
EEIV	Feature likely does not belong to (house number)	House number
TABULKA	Links to illustrations	
POKRAC_EE	Additional data from external records	

Tabulka BY13 DOMY

- Entity: ground plan of house
- Number of entities: 119
- Number of fields: 38
- Description: a list of preserved ground plans of above-ground post structures, including house dimensions, typological classification, dating in the settlement and other special tracked attributes.
- Literature:

von Brandt, D. 1988: Häuser, In: Boelicke, U. – Brandt, D.v. – Lüning, J. – Stehli, P. – Zimmermann, A. (eds.), Der bandkeramische Siedlungsplatz Langweiler 8, 36-289. Köln: Rheinland-Verlag.

Modderman , P. J. R. 1986: On the typology of the house plans and their European setting, Památky archeologické 77, 383-394.

Pavlů, I. – Rulf, J. – Zápotocká, M. 1986: Theses on the Neolithic Site of Bylany. Památky archeologické 77, 288-412.

Field	Heading	Description of quality
DUM	House number	*Numerical field*
PLOCHA	Excavation surface	A, B, F (Fig. 19-22)
FAZE86	Chronological phase of settlement (1986)	1 – 25; 99 – not dated in phase
STUPEN	LBK chronology stage	1c, 2a-d, 3a-b, 3-4, 4a-b
PERIOD2000	Number of settlement interval according to 2000 chronology	1 - 6
TYPFORM	Type and form of ground plan	1 – one-part ground plan; 2 – two-part; 3 - three-part; 99 – cannot be determined
TYPMODD86	Ground plan typology (Fig. 9)	2 – type 1; 3 – type 2; 4 – type 3; 6 – probably type 1; 7 – probably type 2; 8 – probably type 3; 9 – type cannot be determined
CASTDOMU	Existing parts of house	0 – not coded; 1 – N; 2 – M; 3 – S; 4 – N+M; 5 – N+S; 6 – M+S; 7 – N+M+S; 8 - ?house; 9 – not possible to determine. S – northern part, M – middle part, J – southern part (compare von Brandt 1988, 48)
PRIDAVEK	Connected post structures	0 – not coded; 3 – enclosure; 7 – not certain; 9 – none (compare von Brandt 1988, 49)
ZLABKYSTEN	Type of wall trench	0 – not coded; 1-; 4-; 5-; 7-; 8-; 12-; 13-; 14-; 19-none; (see von Brandt 1988, 50, Abb. 33)
PODLOZI	Loess base	0 – not coded; 1 – loess
PORUSENI	Type and method of disruption	0 – not coded; 2 – excessively deep topsoil; 3 – incomplete topsoil; 5 – erosion; 6 – erosion and earth work; 7 – erosion and later features; 8 – multiple reasons (compare von Brandt 1988, 52)
NZACH	Preservation of northern part	0 – not coded; 1 – not preserved, but former existence is apparent; 2 – not preserved and it is unclear if it once existed; 3 – completely preserved; 4 – apparently preserved in entirety; 5 – unclear whether preserved in entirety; 6 – incomplete; 9 – not clear whether it involves this part (compare von Brandt 1988, 54)
NKULU	Number of posts in northern part	*Numerical field*
NTROJ	Number of triple post holes in northern part	*Numerical field*
NDEDM	Length of northern part in dm	*Numerical field*
NSIDM	Width of northern part in dm	*Numerical field*
NSUM2	Area of northern part in m^2	*Numerical field*
MZACH	Preservation of middle part	0 – not coded; 1 – not preserved, but former existence is apparent; 2 – not preserved and it is unclear if it once existed; 3 – completely preserved; 4 – apparently preserved in entirety; 5 – unclear whether preserved in entirety; 6 – incomplete; 9 – not clear whether it involves this part (compare von Brandt 1988, 54)
MKULU	Number of posts in middle part	*Numerical field*
MTROJ	Number of triple post holes in middle part	*Numerical field*
MDEDM	Length of central part in dm	*Numerical field*
MSIDM	Width of central part in dm	*Numerical field*
MSUM2	Area of central part in m^2	*Numerical field*
SZACH	Preservation of southern part	0 – not coded; 1 – not preserved, but former

		existence is apparent; 2 – not preserved and it is unclear if it once existed; 3 – completely preserved; 4 – apparently preserved in entirety; 5 – unclear whether preserved in entirety; 6 – incomplete; 9 – not clear whether it involves this part (compare von Brandt 1988, 54)
SKULU	Number of posts in southern part	*Numerical field*
STROJ	Number of triple post holes in northern part	*Numerical field*
SDEDM	Length of northern part in dm	*Numerical field*
SSIDM	Width of northern part in dm	*Numerical field*
SSUM2	Area of northern part in m^2	*Numerical field*
DELKAD	Overall ground plan length (D1 + D2 + D3) in dm	*Numerical field*
INDEX	Length to width ratio (AD/S2)	*Numerical field*
DEZLABKU	Length of foundation trench	*Numerical field*
ORMDIA	Deviation of middle part diagonal from north in degrees	*Numerical field*
ORPDIA	Deviation of diagonal of entire ground plan from north in degrees	*Numerical field*
ORPAXE	Deviation of long axis from north in degrees	*Numerical field*
KODFA86	Dating	Coded dating into phases in time intervals: 1 to 7 for Ic; 1 to 7 for I/II to IId; 1 to 4 for IId to III; 1 to 7 for III to IVb, see Pavlů-Rulf-Zápotocká 1986, Tab. 31, column 1
KODET86	Dating	Coded dating into stages: 13 – Ic; 16 – I/II; 21 – IIa; 22 – IIb; 23 – IIc; 24 – IId; 31 – IIIa; 32 – IIIb; 36 – III/IV; 41 – IVa; 42 – IVb; 99 – not dated

Tabulka BY14_KE-LBK-celky

Entity: archaeological feature

- The "KONTEXT" field is a unique value enabling correlation.
- Number of entities: 1 045
- Number of fields: 34
- Description: secondary records of Linear Pottery culture (LBK) ceramic finds grouped according to spatial analytical units (archaeological features). Fields contain a quantitative record of ceramic attributes in the form of real numbers.
- Literature:
  Pavlů, I. – Rulf, J. – Zápotocká, M. 1986: Theses on the Neolithic site of Bylany, Památky archeologické 77, 288-412.

Field	Heading	Description of quality
PORADI	Feature number (context) for automatic classification	*Numerical field*
KONTEXT	Feature number (context) – a unique number enabling correlation	*Text field*
CAST	Feature section (context) according to documentation	
CELEK	Spatial integrity	Whole = not further divided; sections = sections of a single feature

POCET	Number of LBK ceramic specimens	*Numerical field*
LO	Number of linear decorated ceramic specimens	*Numerical field*
PO	Number of relief decorated ceramic specimens	*Numerical field*
TO	Number of technically decorated ceramic specimens	*Numerical field*
NO	Number of undecorated ceramic specimens	*Numerical field*
JMN	Number of fine ceramics	*Numerical field*
HRB	Number of coarse ceramics	*Numerical field*
Technical execution of linear decoration (Fig. 17 and 18):		
LOAL12	Alpha 12	*Numerical field*
LOAL13	Alpha 13	*Numerical field*
LOAL20	Alpha 20	*Numerical field*
LOAL30	Alpha 30	*Numerical field*
LOBETA	Beta	*Numerical field*
LOGAMA	Gamma	*Numerical field*
LODE12	Delta 12	*Numerical field*
LODE30	Delta 30	*Numerical field*
LOEP10	Epsilon 10	*Numerical field*
LOEP20	Epsilon 20	*Numerical field*
LOEP00	Epsilon? (not specified in greater detail)	*Numerical field*
LOEP30	Epsilon 30	*Numerical field*
LOTHETA	Theta	*Numerical field*
LOETA	Eta	*Numerical field*
LODZETA	Zeta	*Numerical field*
LOJINE1	Other type of linear decoration	*Numerical field*
KOD	Primary record code (1EV)	Fig. 17 and 18
Summarisation by segments:		
CELY	Whole vessel	*Numerical field*
OKRAJ	Rim fragment	*Numerical field*
DNO	Bottom fragments	*Numerical field*
STENA	Wall fragments	*Numerical field*
PUPKY	Number of knobs	*Numerical field*
UCHA	Number of handles	*Numerical field*

Tabulka BY15_nekeramika_celky

Entity: archaeological feature

- The "KONTEXT" field is a unique value enabling correlation.
- Number of entities: 1 130
- Number of fields: 16
- Description: quantitative and dichotomous records of non-ceramic finds grouped according to spatial analytical units (archaeological features). Fields contain a quantitative record of ceramic attributes in the form of real numbers.

Field	**Heading**	**Description of quality**
PORADI	Feature number (context) for automatic classification	*Numerical field*

KONTEXT	Feature number (context) – a unique number enabling correlation	*Text field*
CAST	Feature par (context) according to documentation	
CELEK	Spatial integrity	Whole = not further divided; sections = sections of a single feature
SI	Number of artefacts from the chipped tool category	*Numerical field*
BI	Number of artefacts from the polished tool category	*Numerical field*
BR	Number of artefacts from the whetstone category	*Numerical field*
KA	Number of artefacts from stone category without signs of treatment	*Numerical field*
mlyn	Number of artefacts from grinding stone category	*Numerical field*
JINA_STK	Number of ceramic pieces dated to Stroked Pottery culture	*Numerical field*
JINA_KERA	Number of post-Neolithic ceramic pieces	*Numerical field*
KOSTI	Evidence of the presence of animal bones	x – yes; - no; o – not documented
MAZANICE	Evidence of the presence of daub	x – yes; - no; o – not documented
UHLIKY	Evidence of the presence of charcoal	x – yes; - no; o – not documented
JINE	Finds from categories not listed	
POZNAMKA	Clarification note	

Tabulka BY16_ kontexty GIS v1

Entity: archaeological feature

- The "KONTEXT" field is a unique value enabling correlation.
- Number of entities: 1 071
- Number of fields: 5
- Description: an overview of contexts located in the GIS vector layer. Of the total number of features in Bylany subjected to archaeological study, only units related to the Linear Pottery culture settlement were included in the GIS in this version.

Field	**Heading**
PORADI	Feature number (context) for automatic classification
KONTEXT	Feature number (context) entered in the GIS vector layer – a unique number enabling correlation
AREA	Part of locality: Section A, B, F (Fig. 19–22)
Shape_Length	Feature ground plan in metres
Shape_Area	Feature area in m^2

Coding of layers and parts of features

Layers

Finds from a single layer										
Code	10	20	30	40	50	60	70	80	90	0
Layer	1	2	3	4	5	6	7	8	9	Unmarked

Finds from two layers																	
Code	Layers	Code	Layers	Code	Layers	Code	Layers	Code	Layers	Code	Layers	Code	Layers	Code	Layers	Code	Layers
01	0+1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
02	0+2	12	1+2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03	0+3	13	1+3	23	2+3	-	-	-	-	-	-	-	-	-	-	-	-
04	0+4	14	1+4	24	2+4	34	3+4	-	-	-	-	-	-	-	-	-	-
05	0+5	15	1+5	25	2+5	35	3+5	45	4+5	-	-	-	-	-	-	-	-
06	0+6	16	1+6	26	2+6	36	3+6	46	4+6	56	5+6	-	-	-	-	-	-
07	0+7	17	1+7	27	2+7	37	3+7	47	4+7	57	5+7	67	6+7	-	-	-	-
08	0+8	18	1+8	28	2+8	38	3+8	48	4+8	58	5+8	68	6+8	78	7+8	-	-
09	0+9	19	1+9	29	2+9	39	3+9	49	4+9	59	5+9	69	6+9	79	7+9	89	8+9

Finds from three layers											
Code	Layers	Code	Layers	Code	Layers	Code	Layers	Code	Layers	Code	Layers
11	0+1+2	21	0+1+3	31	0+1+(5-9)	41	0+2+(5-9)	51	1+2+3	61	1+4+(5-9)
-	-	22	0+1+4	32	0+2+3	42	0+3+4	52	1+2+4	62	2+3+4
-	-	-	-	33	0+2+4	43	0+3+(5-9)	53	1+2+(5-9)	63	2+3+(5-9)
-	-	-	-	-	-	44	0+4+(5-9)	54	1+3+4	64	2+4+(5-9)
-	-	-	-	-	-	-	-	55	1+3+(5-9)	65	3+4+(5-9)
-	-	-	-	-	-	-	-	-	-	66	other comb. of
-	-	-	-	-	-	-	-	-	-	-	3: 4+5+6
-	-	-	-	-	-	-	-	-	-	-	to: 7+8+9

Finds from four layers			
Code	Layers	Code	Layers
71	0+1+2+3	81	0+2+3+(5-9)
72	0+1+2+4	82	0+2+4+(5-9)
73	0+1+2+(5-9)	83	0+3+4+(5-9) to: 0+7+8+9
74	0+1+3+4	84	1+2+3+4
75	0+1+3+(5-9)	85	1+2+3+(5-9)
76	0+1+4+(5-9)	86	1+2+4+(5-9)
77	0+2+3+4	87	1+3+4+(5-9)
-	-	88	2+3+4+(5-9) and other combinations of 4 up to: 6+7+8+9

Finds from five layers		**Finds from more layers**	
Code	Layers	Code	Layers
91	0+1+2+3+4	97	with 0, i.e., $0+n_{2-9}$
92	0+1+2+3+(5-9)	98	with 1, i.e., $1+n_{2-9}$
93	0+1+2+4+(5-9)	99	other: n_{2-9}
94	0+1+3+4+(5-9)	-	-
95	0+2+3+4+(5-9) and others with 0 up to: 0+6+7+8+9	-	-
96	1+2+3+4+(5-9) up to: 5+6+7+8+9	-	-

Parts of feature

Finds from one part of feature:									
Code	1	2	3	4	5	6	7	8	9
Part	a	b	c	d	e	f	g	h	i

Finds from two parts of feature															
Code	Part	Code	Part	Code	Part	Code	Part	Code	Part	Code	Part	Code	Part	Code	Part
12	a + b	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	a + c	23	b + c	-	-	-	-	-	-	-	-	-	-	-	-
14	a + d	24	b + d	34	c + d	-	-	-	-	-	-	-	-	-	-
15	a + e	25	b + e	35	c + e	45	d + e	-	-	-	-	-	-	-	-
16	a + f	26	b + f	36	c + f	46	d + f	56	e + f	-	-	-	-	-	-
17	a + g	27	b + g	37	c + g	47	d + g	57	e + g	67	f + g	-	-	-	-
18	a + h	28	b + h	38	c + h	48	d + h	58	e + h	68	f + h	78	g + h	-	-
19	a + i	29	b + i	39	c + i	49	d + i	59	e + i	69	f + i	79	g + i	89	h + i

Finds from three parts of feature																	
Code	Part	Code	Part	Code	Part	Code	Part	Code	Part	Code	Part	Code	Part	Code	Part	Code	Part
11	a+b+c	21	a+b+d	31	a+b+f	41	a+b+i	51	a+c+g	61	a+d+g	71	a+e+i	81	b+c+d	-	-
-	-	22	a+b+e	32	a+b+g	42	a+c+d	52	a+c+h	62	a+d+h	72	a+f+g	82	b+c+e	-	-
-	-	-	-	33	a+b+h	43	a+c+e	53	a+c+i	63	a+d+i	73	a+f+h	83	b+c+f	91	b+d+g
-	-	-	-	-	-	44	a+c+f	54	a+d+e	64	a+e+f	74	a+f+i	84	b+c+g	92	b+d+h
-	-	-	-	-	-	-	-	55	a+d+f	65	a+e+g	75	a+g+h	85	b+c+h	93	b+d+i
-	-	-	-	-	-	-	-	-	-	66	a+e+h	76	a+g+i	86	b+c+i	94	c+d+e
		-	-	-	-	-	-	-	-	-	-	77	a+h+i	87	b+d+e	95	c+d+f
		-	-	-	-	-	-	-	-	-	-	-	-	88	b+d+f	96	c+d+g
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	c+d+h
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	c+d+i
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	99	other

Instructions for using the data CD

Insert the enclosed CD into your computer's disk drive. The window that automatically appears allows you to choose whether you want to work with the database, the GIS map, the electronic version of the manual, or connect to *www.bylany.com.*

Database version 1.0

The database system is built on two levels. Containing a prepared form-type display with basic filters, the basic level of the database is intended for standard users (Fig. 23 and 24). The system also includes an interface that connects the database to image documentation in PDF format. In order for the system to work, it is necessary to install the database software Microsoft Access (version 2000 to 2003) and Adobe Acrobat Reader with at least version 6.0 (can be installed from the CD in the "Install Adobe Reader" directory).

The images of finds and archaeological features on the CD in PDF format are copies of the images in Bylany catalogues (Pavlů – Zápotocká 1983; Pavlů – Zápotocká – Soudský 1985; Pavlů – Zápotocká – Soudský 1987). In the case that no drawings exist for a given feature (e.g. the feature did not contain any archaeological finds), a dialogue window will appear with the message "*náhled není k dispozici*" ("no view available").

The second, expanded, level of the database is intended for advanced users and enables work with all of the tables and the creation of queries. In order to work with the database at this level, it is necessary to thoroughly study the meta-data manual.

"Bylany – Essential Database" contains a total of sixteen basic tables (labelled BY01 - BY16) and a series of auxiliary tables (labelled D900 – D919). Tables BY01-BY04 offer basic records of spatial contexts, archaeological finds and their characteristics. The following twelve tables (BY05–BY16) present special records of individual entities (houses, ceramics, chipped and polished tools, grinding stones and chronological segments).

Troubles may arise during the launching of the database from the CD due to the large number of various application versions that may be used. In such case, we recommend downloading the entire *:\database* directory onto the computer's hard drive. We apologize for any inconveniences this might cause.

GIS map version 1.0

The original map documentation of the archaeological excavations in Bylany was converted into vector digital form. The resulting data is saved in .SHP format with the setup of

geographical coordinates for S-JTSK (east-north). The .SHP format is primarily intended for GIS software by the Esri company, but can also be regularly used in other GIS programs.

Upon clicking on the "Mapa GIS verze 1.0" (GIS map version 1.0) icon, users without any GIS software will be prompted to install the ArcReader 9.2 program, which is also included on the CD (install ArcReader92/setup.exe). The start-up file of the Bylany map documentation for this program is "Bylany_GIS_v1.pmf". The use of this software is restricted to non-commercial purposes and is subjected to the licensing rules of Esri, as set forth in the "ArcReaderLicense.pdf" file in the Documentation directory on the CD. The "Bylany_GIS_v1.mxd" project is directly available to users with the full version of ArcGIS 9. Individual files in the GIS directory represent independent map layers, a description of which is presented in table BY16.

The *BY16_kontexty GIS v1* database table contains a list of all archaeological features at the Bylany 1 site (areas A, B, F); the vector layout of these features is included on the GIS map. We expect a reciprocal interconnection between GIS and the databases in tables BY11 – BY15.

File	**Layer**	**Field for correlation with Bylany – Essential Database**
BY_domy07	Reconstructed ground plans of houses in areas A, B, F	"House" – ground plan number of house; the field can be connected to the field with the same name in the database tables
BY_kontexty07	Ground plans of archaeological features of areas A, B, F	"Context" – number of archaeological feature (or part thereof); the field can be connected to the field with the same name in the database tables
BY_buffer07	Borders of the construction complex of house within 5 m of the assumed house walls	
BY_kulove jamy	Layout of post holes	
BY_vykopane_plochy	Borders of studied areas A, B, F	
A_ctverce_polygon	Site grid - 15 x 15 m	
B_ctverce_polygon	Site grid - 15 x 15 m	
F_ctverce_polygon	Site grid - 15 x 15 m	
casti_objektu_abf	Description of individual parts of the feature	
BY_hrany prekryti	Edges overlapping spatial elements	
natural_kontexty	Features of a natural origin (runoff, windthrow, trenches, etc.)	
BY_vrstevnice_mikroareal	Contour lines every 2 m	
BY_arealy	Geographic location of Bylany sites	
BY_vodni toky	Water course	
BY_popisy_ploch	Description of individual sites	

Table 2 - Description of GIS map layers

While the publication of the database in CD form offers numerous advantages, it also comes with certain problems. An example is the updating of the database contents and the

correction of errors likely to occur in a system of this size. A final solution could therefore be the publication of the entire system on the Internet at *www.bylany.com.*

Bibliography

Adelsbergerová, D. 2000: Archiv 2.0. Prague: Institute of Archaeology.

Macháček, J. 2002: Břeclav - Pohansko. [Část] 5, Sídlištní aglomerace v Lesní školce: digitální katalog archeologických pramenů.

Modderman, P. J. R. 1986: On the typology of the house plans and their European setting, Památky archeologické 77, 383-394.

Neustupný, E. 1993: Archaeological Method. Cambridge: Cambridge University Press.

Neustupný, E. 1997: Uvědomování minulosti. Archeologické rozhledy 49, 217-230.

Pavlů, I. 1991: Groundstone artefacts, In: Pavlů, I. – Rulf, J. et al.: Stone industry from the Neolithic site of Bylany, Památky archeologické 77, 330-348.

Pavlů, I. 1998: Minulost a přítomnost archeologie v muzeu. Neolitické sídliště v Močovicích u Čáslavě. Prague: Institute of Archaeology.

Pavlů, I. 2000: Life on a Neolithic Site. Bylany – Situational Analysis of Artefacts. Prague: Institute of Archaeology.

Pavlů, I. – Rulf, J. – Zápotocká, M. 1986: Theses on the Neolithic Site of Bylany. Památky archeologické 77, 288-412.

Pavlů, I. – Štuller, J. – Soudský, O. 1989: The Structure of Information from the Excavations of Neolithic Sites and their Preparing for Scientific Processing. In: J. Rulf (ed.), Bylany Seminar 1987, Prague: Institute of Archaeology, 35-44.

Pavlů, I. – Zápotocká, M. 1978: Analysis of the Czech Neolithic pottery. Morphological and chronological structure of projections. Prague: Institute of Archaeology.

Pavlů, I. – Zápotocká, M. 1983: Bylany. Section A - part 1. Excavations 1953-1967. Prague: Institute of Archaeology.

Pavlů, I. – Zápotocká, M. – Soudský, O. 1985: Bylany, katalog: Section A – part 2. Text. Excavations 1953 – 1967. Prague: Institute of Archaeology.

Pavlů, I. – Zápotocká, M. – Soudský, O. 1987: Katalog B, F. Prague: Institute of Archaeology.

Popelka, M. 1991: Chipped stone industry, In: Pavlů, I. – Rulf, J. (eds.), Stone industry from the Neolithic site of Bylany, Památky archeologické 82, 277-304.

Přichystal, A. 1985: Štípaná industrie z neolitického sídliště v Bylanech (okr. Kutná Hora) z hlediska použitých surovin a jejich provenience, Archeologické rozhledy 37, 481-488.

Rulf, J. 1991: Polished stone industry, In: Pavlů, I. – Rulf, J. et al.: Stone industry from the Neolithic site of Bylany, Památky archeologické 77, 304-330.

Rulf, J. 1997: Die Elbe-Provinz der Linearbandkeramik. Památky archeologické – Supplementum 9. Prague.

Soudský, B. 1960: Station néolithique de Bylany. Historica II, 5-36. Prague: Academia.

Soudský, B. 1966: Bylany. Osada nejstarších zemědělců z mladší doby kamenné. Prague: Czechoslovak Academy of Sciences.

Soudský, B. 1967: Principles of Automatic Data Treatment applied on Neolithic Pottery. Prague-Stockholm. Manuscript.

Stehli, P. – Zimmermann, A. 1980: Zur Analyse neolithischer Gefässformen Archaeo-Physika 7, 147-177.

Tringham, R. 1968: Chipped industry from the Neolithic Site Bylany. Manuscript.

Třeštík, D. 2001: K poměru archeologie a historie. Archeologické rozhledy 53, 357-361.

Velímský, T. 1969: Neolitická broušená kamenná industrie z Bylan. Dissertation manuscript, University of Brno.

von Brandt, D. 1988: Häuser, In: Boelicke, U. – von Brandt, D. – Lüning, J. – Stehli, P. – Zimmermann, A. (eds.), Die Bandkeramische Siedlungsplatz Langweiler 8, Köln: Rheinland-Verlag, 36-289.

Zápotocká, M. 1998: Bestattungsritus des Böhmischen Neolithikums (5500 – 4200 B.C.). Prague: Institute of Archaeology.

Zimmermann, A. 1988: Steine, In: Boelicke, U. – von Brandt, D. – Lüning, J. – Stehli, P. – Zimmermann, A. (eds.), Die Bandkeramische Siedlungsplatz Langweiler 8, Köln: Rheinland-Verlag, 569-787.

List of illustration appendices:

This publication summarizes the methodological and documentary basis used for processing and evaluating the materials from the Neolithic site of Bylany. It comprises large set of data and information about the archaeological sources and their formal, symbolic and spatial attributes. Owing to the inmense quantity of data collected over the forty years of archaeological research in Bylany, it proved necessary to create a central system allowing for effective use of the recorded data. This metadata manual, together with a compact set consisting of a database, graphic documentation and GIS map published on the enclosed digital data medium, should fulfil this purpose.