



Skeletal remains of monks from the Kladrubby Monastery, western Bohemia (17th–18th centuries)

Milan Stloukal and Anna Sekáčová

*Department of Anthropology, National Museum, Václavské náměstí 68, CZ-117 59 Praha 1, Czech Republic;
e-mail: milan.stloukal@nm.cz*

ABSTRACT. Anthropological analysis of skeletal remains of monks buried in the crypt of the Benedictine Monastery in Kladrubby between 1680 and approximately 1786 is presented. Data presented include age structure, skeletal measurements and dental health.

■ Baroque population, skeletal remains, demography, anthropometric data

INTRODUCTION

The Benedictine Monastery in Kladrubby near the town of Stříbro was established in 1115 by Duke Vladislav. The building was originally Romanesque in style. The construction of the monastery, church and funeral chapel was finished in 1233. The church was badly damaged by Hussites in 1421. It was completely restored at the end of the 15th century, and re-consecrated in 1504. The monastery buildings were again renovated and rebuilt in the second quarter of the 16th century. Further restorations were carried out after a fire in 1590, but during the Thirty Years' War the buildings were damaged once again. The old prelacy was built between 1664-1670. The monastery's two Latin-language chronicles, which are now included in the fund *The Benedictines of Kladrubby* which is kept in the State District Archive in Pilsen, state that the monastic crypt was established under Abbot Roman Platzer who was in office during the years 1650-1666. There is no mention of any building or reconstruction of the crypt in connection with the renovations of the church at the beginning of the 18th century. Brother Martin Damiani, a Czech from Praha and *monasterii nostri senior*; i.e. the monastery's oldest member, was the first monk to be buried in the crypt on 4 February 1680. In 1712-1728, under Abbot Mauro Finzgut, the church was renovated by G. Santini. A new convent and a new prelacy were built under Abbot Josef Sieber. The building work was eventually completed by K. I. Dienzenhofer between the years 1739-1770.

Abbot Josef Sieber died on 19 January 1756, aged 61 years. At that time the exemption of the Kladrubby Monastery was already abolished and the monks were subordinated directly to the Prague archbishop. In March 1756, a monastery convent of 43 voters elected the 53 years old Amandus Streer as the new abbot. At that time nobody suspected that he was to be the very last abbot of the Kladrubby Monastery. In April 1770, all last will dealings and testaments for ecclesiastical purposes were banned. In the same year, as a result of a dispute with the Duke of Bavaria, Emperor Josef II issued an order to evict Bavarian members from the monastery, and the following year a decree was issued according to which the abbot was obliged to seek the whole monastery community's

agreement before adopting new members, who were to come only from within the Habsburg Lands. In 1775 Dr. Jan Zeidler died, a physician from the town of Stříbro who also acted as the monastery physician, and presumably for that reason was buried there in the monastic crypt. Abbot Streer died in 1782, aged 79, and was buried before the main altar. A request for the approval of the election of a new abbot was put aside, apparently because the monastery's dissolution was already anticipated. In 1783, Amandus Jošt Hoch was elected as the monastery's prior and he subsequently managed the monastery until the end of its days.

In 1756, during Maria Theresa's reign, the imperial office issued an order according to which the monastery was allowed to have only 58 members and could accept a new one only if one of the brothers had died. In 1781, in the reign of Josef II, this number was further restricted to 50, although the monastery was capable of supporting at least 100 monks. On Saturday 5 November 1785 in the evening, imperial executors arrived in the monastery "like thieves". Two days later, all monks, country priests and teachers from the monastery school were summoned to be told that the monastery would be dissolved as of 7 April 1786. The last 50 monks left the place soon after. Their departure marked the end of one century of burials, although it is possible that some of the former monks were buried in the monastery even later.

Starting in 1797, the church was used as a warehouse. Between the years 1798-1800 the monastery served as a military hospital and in 1802-1826 it was used for accommodation of soldiers. In 1825 the whole site was purchased in an auction by Duke Alfred I Candicus Ferdinand Windischgrätz. When he died in 1862, he was buried in the family crypt in Tachov. His inheritance went to Alfred II Josef Nicolaus who made Kladruba a summer residence for his family. In 1874 he decided to transfer his family grave from Tachov to the crypt in the Kladruba Monastery. According to his orders, all coffins of the deceased monks were simply thrown "into a small shed in the yard of the former prelaty where they were piled up like firewood next to pigpens belonging to the employees of the Kladruba estate".

Alfred II died in 1876 and was also buried in Tachov because the reconstruction of the crypt in Kladruba was not yet finished. The crypt was consecrated only in 1886, after which the remains of those buried in Tachov were brought in.

The crypt was cleared out for reconstruction work in early spring 1874, although the Episcopal Consistory's permission to transfer the corpses was issued only on 9 November that year. In total there were 135 coffins of which only 13 were identified as containing remains which did not belong to only one individual, and these were subsequently put in other coffins. In the new monastic crypt coffins were piled up one upon the other, 97 coffins were placed underneath a corridor leading to the church, and on the crypt's southern side enough space was found for 25 ordinary coffins and three coffins of abbots. This was the situation which Kremer (1983) saw in August 1951 when he entered the crypt, using steps "covered with ice". (The above paragraphs quote from a text supplied by Vratislav Ryšavý).

In 1945 the monastery was for a short period of time occupied by the US Army. In May 1946 a committee, which also included the director of the National Museum Gustav Skalský, visited Kladruba in order to consider its future use. The estate was first under the administration of the District National Committee (DNC) in Stříbro, later the DNC in Tachov, and then the Regional Office for the Preservation of Historical Monuments in Pilsen. The state of the "coffin storehouse" eventually started to disturb the neigh-

bourhood. In April 1976 the district public health officer recommended that the monks' remains be either buried in a cemetery or cremated, but the director of the Regional Office for the Preservation of Historical Monuments decided to leave the remains in place, disinfect the site and then permanently close it, with which the public health officer agreed. Yet two years later negotiations resumed. The administrator of the parish office in Kladruby ruled out any possibility of cremation, but suggested that the remains be either buried or put in new coffins, returned to the crypt in the presbytery and placed next to the splendid Windischgrätz coffins. This last variant was eventually found to be the best, and in July 1978 the Anthropology Department of the National Museum was asked to exhume the remains.

In autumn 1978 staff of the Anthropology Department of the National Museum collected skeletal remains from the decaying coffins. It became clear that the transfer in 1874 was performed in a highly inconsiderate, disrespectful manner. In order to fit the remains in the limited space available, they were often mixed together. Most of the more or less complete skeletons were loaded into 80 coffins, so that 29 coffins contained two skeletons and one coffin as many as three skeletons. During the exhumation, remains of 111 persons were identified and subsequently transported to the National Museum in Praha, where they were cleaned and attended to in the laboratory. The skeletons were then examined in detail by a team of three researchers, consisting of this paper's principal author, Hana Hanáková and Anna Sekáčová, a laboratory technician. Ms. Sekáčová at that time began a university course in anthropology and the Kladruby collection was planned to be the material for her diploma thesis. In fact, A. Sekáčová did all the laboratory work and took all anthropological measurements. The skeletons were then placed in new coffins, returned to Kladruby and laid in the southern part of the original crypt, except for several bones with pathological changes which were included in the Anthropology Department's collections under registration numbers 13802-13842. Soon after that, however, A. Sekáčová married and terminated her university studies in order to commence maternity leave, after which she did not return to the Anthropology Department. The records of the Kladruby skeletons had been put in the Anthropology Department's archive where they remained untouched for 25 years until 2003.

Anthropologically speaking, the collection of skeletons from the Kladruby Monastery is of much interest. As already mentioned, it contains remains of 111 persons, of which 107 were identified through anthropological examination as male skeletons. The remaining four skeletons were so badly preserved that their sex could not be reliably determined, but it is almost certain that even these skeletons are males, i.e. monks from the Benedictine Monastery.

DEMOGRAPHIC ANALYSIS

Age of monks was estimated on the basis of their skeletal remains (see above) and historical data (Anonymous 2). The latter source includes a list of persons deceased in the Kladruby Monastery with exact dates of their deaths but unfortunately only fragmentary information about their ages at death. Between the year 1680 and the end of the 17th century, 33 names are recorded but ages at death are given in only seven cases. From the beginning of the 18th century until 1786 when the monastery was dissolved, 103 monks died according to this source, of which in 49 cases the ages at death are given. In addition, the list includes names of 43 persons who died later and whose place of burial is

not known (the last person in the list, Chilianus Hronn, died in Břevnov on 15 November 1827). From this it can be inferred that between 1680 and 1786 in total 136 monks died in Kladruby. The concluding part of the list contains information about the ages of a further 17 monks who belonged to the Kladruby Monastery but died after its dissolution between the years 1786-1799. We were unable to find any indication whether these monks were buried in Kladruby or elsewhere. Hence, according to archival records, 153 monks of the Kladruby Monastery died between 1680 and 1799, but in only 78 cases do we have information on their ages at death (Tab. 1). Our anthropological research had at its disposal remains of 111 monks, but it was not possible to establish any exact relationship between our collection and the archival data. It should be mentioned that age cannot be precisely estimated within the group 60+ on the basis of skeletal material.

Tab. 1. Age distribution of monks. A – estimation based on skeletal data (A. Sekáčová), B – historical data (Anonymous 2).

Age [years]	20-29	30-39	40-49	50-59	60-69	70-79	80+	n
A [%]	9	3.6	32.4	59.5	3.6			111
B [%]	1.4	16.4	20.5	19.2	13.7	23.3	5.5	73

It is obvious that the two age distributions are very dissimilar. Differences are greatest between the oldest ages. Whereas our estimates allocate to the age group 60+ only 4 (3.6%) persons, the monastery list indicates that 31 (42,5 %) monks died aged over 60 years.

The comparison of age-specific estimates derived from skeletal material with data obtained from archival records (although the two data sets may not, and probably do not, refer to an identical group of persons) confirms what is often only suspected, namely that anthropological methods tend to underestimate the ages at death among older individuals.

ANTHROPOMETRIC ANALYSIS

With a few exceptions, the skeletons were well preserved and 103 of them could have been subjected to anthropological measurement. The data are presented in Tab. 2.

Group distributions of main measurements and indices are displayed below. This table shows that in the collection of male skeletons from the Kladruby Monastery, skulls are, in terms of absolute measurements, of generally moderate dimensions – that is, moderately long, moderately wide, moderately high (but close to low) and of medium capacity, with a moderately wide and moderately high face and rather low upper-face.

- Maximum cranial length (1): long = 15.6 %, medium = 40.6 %, short = 43.8 % (n = 96)
- Maximum cranial width (8): narrow = 21.0 %, medium = 57.0 %, broad = 22.0 % (n = 100)
- Basion-bregma height (17): low = 45.9 %, medium = 53.1 %, high = 1.0 % (n = 98)
- Cranial capacity (38): oligencephalic = 13.8 %, euencephalic = 52.1 %, aristencephalic = 34.0 % (n = 94)
- Maximum bizygomatic width (45): narrow = 18.5 %, medium = 52.2 %, broad = 29.3 % (n = 92)
- Total cranial facial height (47): high = 12.9 %, medium = 49.5 %, low = 37.6 % (n = 93)

Tab. 2. Skeletal measurements and indices of monks. Abbreviations of dimensions and indices follow Knußmann (1988).

Dimension	Mean	Standard deviation	Variance	Min	Max	Median
M 1	175,9	6,0	35,8	162	189	176
M 5	97,1	4,7	22,0	85	109	97
M 8	147,0	5,3	28,7	136	162	146,5
M 9	97,3	4,6	21,5	86	111	97
M 10	122,5	6,2	38,4	109	149	123
M 11	127,6	5,9	35,7	113	140	128
M 12	112,2	5,5	30,7	101	128	112
M 17	127,9	5,2	27,8	114	140	128
M 20	111,5	4,1	17,4	101	122	112
M 23	519,9	14,4	210,0	488	560	520,5
M 24	325,4	13,5	182,9	294	365	325
M 25	363,3	12,2	150,2	339	398	363
M 26	126,2	6,5	43,0	115	145	125
M 27	121,2	8,2	68,1	94	145	122
M 28	115,1	7,9	63,2	98	141	115
M 29	109,4	4,6	21,2	101	125	108,5
M 30	108,1	6,6	43,7	91	125	109
M 31	92,8	5,5	30,6	80	107	93
M 38	1408,0	97,7	9647,8	1207	1630	1396
M 40	92,6	5,3	28,1	80	107	93
M 43	105,2	4,6	21,4	92	114	106
M 43/1	99,8	4,2	17,5	87	108	100
M 45	132,5	5,5	30,1	111	144	133
M 46	94,4	4,4	19,8	83	104	94
M 47	116,9	5,8	34,6	103	134	116
M 48	67,8	4,3	19,1	59	80	68
M 50	19,8	2,4	5,6	15	26	19,5
M 51	43,1	2,0	4,2	38	49	43
M 52	34,5	1,9	3,5	29	38	35
M 54	25,6	2,1	4,4	21	32	25
M 55	51,5	3,2	10,4	42	60	51
M 57	10,6	2,2	5,0	5	15,6	10,5
M 65	118,8	6,4	41,0	103	135	119
M 66	100,7	6,8	46,8	82	115	101
M 69	30,1	3,1	9,7	22	38	30
M 70	66,7	4,6	21,2	52	80	67

M 71	30,8	3,3	11,1	23	42	31
IOW-n	18,6	2,7	7,3	12,4	25,3	18,5
GB-ss	18,2	2,4	5,6	13	25	18,2
SS-n	5,4	1,2	1,5	2	7,8	5,35
I 1	83,6	3,4	12,0	74,3	90	83,8
I 2	72,9	3,8	14,5	63,2	83,3	72,7
I 3	87,2	4,4	19,9	74,5	96,4	87
I 13	66,3	2,9	8,3	60,1	74,3	66
I 38	88,1	5,3	28,0	78,7	100	87,2
I 39	51,3	3,7	13,5	44	61	50,7
I 42	80,1	4,0	16,2	69	87,5	79,5
I 48	50,1	5,2	27,3	39,3	79	50
I 60	95,2	4,4	19,9	78,9	103,3	95,7
FM-I	103,4	7,3	53,4	84	121,6	104
I-I	18,6	2,4	5,8	12,8	24,7	18,6
I-II	19,3	2,3	5,6	13,6	25,3	19,2
I-III	51,4	9,4	90,3	33,3	77,1	50
Height	169,1	3,2	10,4	161,3	177,5	168,75

- Upper cranial facial height (48): high = 7.2 %, medium = 30.9 %, low = 61.9 % (n = 97)
- Stature: above-medium = 4.9 %, medium = 20.6 %, below-medium = 36.3 %, high = 38.2 % (n = 102)
- Cranial index (I 1): dolichocranic = 2.1 %, mesocranic = 13.5 %, brachyocranic = 43.8 %, hyperbrachyocranic = 40.6 % (n = 96)
- Cranial length-height index (I 2): chamaecranic = 18.1 %, orthocranic = 53.2 %, hypsicranic = 28.7 % (n = 94)
- Cranial width-height index (I 3): tapeinocranic = 86.6 %, metriocranic = 13.4 %, acrocranic = 0.0 % (n = 97)
- Transversal frontoparietal index (I 13): stenometopic = 51.1 %, metriometopic = 34.0 %, eurymetopic = 14.9 % (n = 94)
- Total facial index (I 38): hypereuryprosopic = 2.3 %, euryprosopic = 30.2 %, mesoprosopic = 34.9 %, leptoprosopic = 19.8 %, hyperleptoprosopic = 12.8 % (n = 86)
- Upper facial index (I 39): hypereuryene = 2.2 %, euryene = 33.0 %, mesene = 48.3 %, leptene = 14.3 %, hyperleptene = 2.2 % (n = 91)
- Orbital index (I 42): chamaeconch = 13.3 %, mesoconch = 72.4 %, hypsiconch = 14.3 % (n = 98)
- Nasal index (I 48): leptorrhine = 27.1 %, mesorrhine = 32.3 %, chamaerrhine = 35.4 %, hyperchamaerrhine = 5.2 % (n = 96)
- Alveolar index (I 60): orthognatic = 70.0 %, mesognatic = 26.8 %, prognatic = 3.2 % (n = 93)
- Frontomandibular index: leptomandibular = 14.3 %, mesomandibular = 40.7 %, eurymandibular = 45.0 % (n = 91)

As expected, the skulls have indices which are decidedly brachycranial, even–hyperbrachycranial. The skulls' length-to-height ratio is in medium values (orthocranial), but the cranial breadth-height index is high in terms of both its average and its distribution, and so the skulls are from this point of view markedly low, tapeinocranial. Compared to the skulls' breadth the smallest frontal breadth is rather small, indicating a slight predominance of narrow foreheads over moderately wide ones (stenometopic over metriometopic). The two facial indices are, in terms of both averages and distributions, of medium values, but there is a clear tendency towards wide faces, that is euryprosopic and euryenes ones. There is a clear predominance of medium, mesoconch orbits. The nasal index shows an even distribution between narrow, medium and wide (chamaerhine) values, the last of which slightly dominate. Orthognathic skulls are evidently in the majority, the fronto-mandibular index has a clear tendency towards wide lower jaw-bones. The calculated average body height is above-medium, but tall body heights predominate over medium and below-medium ones.

DENTAL HEALTH

We were able to assess dental health of 102 skulls, of which 44 can be classified as younger (20–40 years) and 58 as older (40–60 years). Frequency of dental caries was 86.4 in younger and 89.7 in older individuals. Intensity of decay was 24.6 in younger (upper jaw: 25.2, lower jaw: 23.9) and 24.2 in older (upper jaw: 24.5, lower jaw: 23.9) individuals. This shows that dental health of the Kladruby monks was relatively poor.

The findings obtained through anthropological research of the skeletal remains of monks from the Benedictine Monastery in Kladruby near Stříbro contribute to our knowledge about the 18th century populations – a historical period from which material for anthropological research is very scarce. The analysis of pathological changes on the skeletons, a topic of the following paper, generated extremely interesting results.

ACKNOWLEDGMENTS

In closing, we would like to thank the staff of the State Central Archive in Prague, the Archive of the Strahov Monastery, and the National Conservation Institute in Plzeň, specifically J. Frühaufová and V. Ryšavý, for their help and collaboration. Vratislav Ryšavý, specialist from the Pilsen regional office of the National Conservation Institute, kindly provided information on the history of Kladruby Monastery and researched relevant materials available from archives in the region.

REFERENCES

- Anonymous 1, s.d.: *Catalogus Abbatum Ducalis Coenobii Cladrubiensis Ordinis S. Patris Benedicti Fundatore Wladislao Duce*. Manuscript in the Archive of the Monastery in Strahov, Prague.
- Anonymous 2, s.d.: *Reverendi Confratres, professi monasterii Chladrubiensis (ex Necrologio archisterii Břevnoviensis)*. In: *The Archive of the Prague Archbishopric*. Manuscript in the State Central Archive, Praha.
- Kremer V.V., 1983: *Klášter Kladrubský (Děje posledních dvou staletí kláštera kladrubského)* [Cultural monument the Monastery in Kladruby: A history of the last two centuries of the Kladruby Monastery]. Manuscript in the State Archive, Tachov.
- Likovský J. & Stloukal M., 2006: *Unique pathological findings in skeletal remains of the monks from the Kladruby Monastery, western Bohemia (17th–18th centuries)*. *Časopis Národního Muzea, Řada Přírodovědná* 175: this volume.
- Knußmann R., ed., 1988: *Anthropologie. Handbuch der vergleichenden Biologie des Menschen*. Vol. 1. Stuttgart: Gustav Fischer, xx + 742 pp.