



Luboš Vyhnánek's Contribution to Czech and Slovak Palaeopathology and Anthropology

This volume is dedicated to the memory of Professor MUDr. Luboš Vyhnánek, DrSc., who died tragically in a car accident on 2 February 1999. Vyhnánek's main field of activity was radiodiagnostics, a discipline to which he devoted all his life and in which he became an internationally respected authority. However, he was equally committed to yet another discipline that he regarded largely as his personal hobby: palaeopathology. Luboš Vyhnánek was one of the exceptional people who are able to gain international recognition in yet a second speciality. Vyhnánek's bibliography comprises over 200 scientific articles, of which 103 address palaeopathological topics – a clear proof that this area was not unimportant for him. Yet Vyhnánek not only published in anthropological and archaeological journals; he also participated in a number of seminars and congresses, both in the Czech Republic and abroad; was an active member of the Czechoslovak (later Czech)



Anthropological Association as well as of several foreign ones; and was awarded the Hrdlička Medal for his achievements in anthropology. For this commemorative volume, contributions have been requested from anthropologists who collaborated with Vyhnánek and knew him personally through discussions on the problems of skeletal palaeopathology. This was not a difficult job since Luboš Vyhnánek had many friends and colleagues who respected and liked him.

Luboš Vyhnánek was born in Prague on 30 November 1928. His father was a physician and both Luboš and his sister Eva decided to devote their lives to medicine as well. Luboš finished the Medical Faculty of Charles University in Prague in 1952 and began his professional career as a registrar at the roentgenology department in the City Hospital of Ústí nad Labem. After three years he moved to the Faculty Hospital in Prague, a workplace which changed its title several times during the years and to which Luboš remained attached until his retirement in November 1998. Here he started as an assistant, obtained scientific degrees (CSc. and later DrSc.), became assistant professor, and even later received full professorship and was appointed the head of the Radiodiagnostic Clinic. His contacts with anthropology commenced through a happy coincidence in 1963 when he assisted with the diagnosis of a "hair-brush" skull; this started a collaboration which was to last for 36 years. In fact, Luboš died while on his way to a meeting in the anthropology department of the National Museum.

Luboš Vyhnánek's interest of in palaeopathology and anthropology started with his radiological analyses of many interesting finds from the rich Great Moravian site of Mikulčice in the 1960s. Gaining necessary knowledge, he soon started systematic elaboration of palaeopathological changes in large series of human remains from cemeteries at Mikulčice, which were later published in the monograph by Stloukal and Vyhnánek "Slavs from Great Moravian Mikulčice" (in Czech, 1977). After its publication both authors continued to study materials coming from excavations of newly discovered cemeteries in the same locality.

Parallely with these investigations almost all other Czech and Slovak historical anthropologists contacted Vyhnánek, asking for his radiological and palaeopathological collaboration with excavated materials coming from cemeteries analyzed by them (Nové Zámky, Josefov, Libice, Bílina, Abrahám, Želovce, Vyškov, Velké

Hostěrádky, St. Henry of Prague, Přebice, Virt, Branč, Znojmo-Hradiště, Ducové, Koválov-Žabčice and others).

Luboš Vyhnánek's hands touched nearly all skeletons from archaeological excavations that were conducted on the territory of the former Czechoslovakia. He first worked with the material from Mikulčice, but already the earliest results of his efforts, his ability to provide meticulous diagnoses of palaeopathological cases, and his willingness to collaborate resulted in invitations to other localities. He examined thousands of skeletons from large burial-grounds such as those mentioned above, but also from dozens of smaller collections which cannot be detailed here. Each time, the starting point was a thorough examination of individual skeletons, search for pathological abnormalities, detailed description and diagnosis assessment. Transportation of selected cases to his clinic and the taking of x-rays was the next stage. These were always the first steps, after which the publication of initial results followed. As soon as a larger sample of cases of the same type had been assembled, the analysis of all available findings of a given aetiology was performed and reported in another publication. Some less common or rare findings inspired Vyhnánek to study in more depth certain pathologies. From the chronology of Luboš Vyhnánek's publications one can easily detect the topics which attracted him most: inborn synostoses, isolated fractures of ulna, amputations of extremities, post-traumatic changes on long bones, cranium trepanations, the morphology of os metatarsale I, bone growth disorders, artificial interventions on the cranial basis, the carpal angle, the incidence of deformative spondylosis and arthrosis, the diagnosis of the Forestier's disease, skull cuts, osteoma osteoideum, vertebral adhesions, inborn bone anomalies, meningoencephalocele syncipitalis, radiographic analysis of Egyptian mummies with special focus on arteriosclerosis, spondylolysis, artificially deformed skulls, malignant tumours, constitutional dysostoses, occipital assimilation of the atlas, Harris' lines, unspecific osteomyelitis, hypoplasia of dens axis, spondylitis ankylosans. All his efforts culminated in a large synthesis entitled "An outline of the palaeopathology of bones with special emphasis on radiodiagnosics" which he wrote for the manual on the study of human skeleton, a book published already after Vyhnánek's absurdly tragic death.

Vyhnánek very soon recognized and theoretically substantiated the significance of palaeopathological findings in historical anthropological material as a complementary source for a complex population characteristics (1967 with Stloukal and Kolář, 1974 by himself). He also contributed to the compilation of the first Czech bibliography by Hanáková and Vyhnánek "Palaeopathological Finds from the Territory of Czechoslovakia" (in Czech, 1981).

In the 70s and 80s Vyhnánek focused his interest to the research and analysis of congenital anomalies on the spine, above all on the atlas and its assimilation, hypoplasia of dens axis, spondylolysis as constituent of associated deviations of the neural arch, vertebral blocks and constitutional dysostoses. The results were partly used for the monograph by Vyhnánek and Stloukal "Spondylolysis. Problems and Occurrence in Ancient Slav Osteological Material" (in Czech, 1977).

Also the multidisciplinary team research on Ancient Egyptian mummies from Czechoslovak public and private collections in 1972–74 could not have been performed without Vyhnánek's collaboration. Having studied publications by the British radiologist P. H. K. Gray on mummies of the United Kingdom and the Netherlands, he was soon able to apply radiological methods to the study of mummified bodies and their fragments. Besides palaeopathological aspects of the research, the necessity arose to study radiologically mummification techniques, which were changing during the long course of Ancient Egyptian history and were thus able to yield approximate dating of the respective mummies. It proved also possible to discern some features aimed at ageing and sexing of mummies. This enabled ageing and sexual evaluation of palaeopathological finds as well as a demographic study of the series.

Following a case report on the mummy of seal bearer Kenamon, radiological aspects of the research were published, as well as evaluation of finds of arteriosclerosis, spinal osteophytosis and degenerative arthritis in mummies. The research was summarized in the monograph "Egyptian Mummies in Czechoslovak Collections" by Strouhal and Vyhnánek (in English, 1979), later complemented by the study of a series of mummified heads by computed tomography.

Eugen Strouhal remembers: "I was one of those colleagues who asked Vyhnánek for radiological collaboration while examining the mummy of the seal-bearer Kenamon from the collections of the Kynžvart State Castle in 1969. Shortly after we started together a systematic X-ray examination of all Egyptian mummies

from Czechoslovak collections. I succeeded to gather the majority of them in Prague while preparing an exhibition on Ancient Egyptian mummies in the Náprstek Museum in Prague in 1972. To avoid disturbance of patients of the Radiodiagnostic Clinics during daytime, we had to work on evenings, often deep into nights. A few mummies could not have been transported to Prague due to their fragile condition or great distance of their depository places. To examine them it was necessary to travel to such places as Topolčiany, Rimavská Sobota or Betliar in Slovakia. Luboš accompanied me and provided guidance during their X-raying in the local clinics.

During that journey in Luboš's car we visited interesting places in the region of Gemer, where in one village we met an evangelical priest who presented us with an old edition of the Tranoscius hymn-book written in ancient Czech language and used until recently by the local congregation. Luboš as a connoisseur of music was excited by the generous gift.

In the village of Šumiac on the slope of the Low Tatras we searched in kitchens of the local inhabitants for the traditional device called *kozub*, whose function to remove smoke of chips of kindling wood out of the room resembled that of a modern digester. In spite of the fact that most of the houses in the village were already modern with all facilities, we rejoiced when, after a long search, we still found one well preserved *kozub* and enjoyed the company of the family living in the house.

Having finished the mummy research we travelled together to different places to deliver them back into their collections. The most curious situation occurred while driving up to the hilltop castle of Buchlov in Moravia. About a kilometre before our destination our car could not move further because of a quantity of fresh snow covering the narrow forest road. We found a solution in walking up to the castle, borrowing there a sledge, transferring the mummy in its coffin from the car on the sledge and pulling it towards the hilltop. I suspect that it could have been the first Egyptian mummy that experienced a ride on a sledge on snow, not on sand as used to be the case in Ancient Egypt ..."

The Czechoslovak Ministry of Health was sending Vyhnánek out for long-lasting stays abroad, in 1960–61 to Kabul in Afghanistan and in 1975–77 to Algiers in Algeria. In the local radiological clinics he offered his professional and organising skills for the benefit of the local population.

Again, some memories of Eugen Strouhal, his colleague and friend: "In the spring of 1977 I got the opportunity to visit him in Algiers where we spent a couple of pleasant days visiting various places of interest. Later I travelled together with him and his wife to the east through Kabylia under the peaks of Djebel Djurdjura to the village of el-Eulma, near which our car broke down. Only thanks to Luboš's charm and diplomatic conduct he succeeded to have it repaired in a short time the following morning. In that region we searched for "escargotières" (prehistoric sites with accumulations of molluscs' shells and stone implements) and visited places like the Roman town of Djemila, the archaeological and anthropological site of Mechta el Arbi, the second greatest Algerian town of Constantine, the Roman town of Tiddis, the monumental tomb of the Numidian King Micipsa, son of Massinissa, near Medracene, and the extensive Roman city of Timgad. South of the mountain chain of Aures and defile of Tighamine we found the countryside of Berbers with the interesting Oases of Biskra and Bou Saad. We slept in tents and camped in open landscape.

Another car excursion was directed from Algiers to the west through Roman sites of Tipaza and Cherchell to Tighennif, on the edge of which we succeeded to locate the deserted quarry of Ternifine, the finding place of *Homo erectus*, originally described by Arambourg as *Atlanthropus mauretanicus*. While examining it we were seized and interrogated by the local police who considered us to be spies. Once more Luboš proved his good knowledge of Algerian habits and psychology and thanks to him we succeeded to avoid imprisonment.

There were several other common excursions, e.g. to Zagreb for the International Congress of Anthropological and Ethnological Sciences, as well as through our own country, which complemented our long-lasting scientific collaboration and corroborated our friendship."

Luboš Vyhnánek participated probably in all anthropological congresses, conferences and seminars organized in the former Czechoslovakia, and he attended also many international meetings. Milan Stloukal remembers: "Extraordinarily dramatic was our travel to the international anthropological congress in Tokyo, which took place shortly after the Warsaw Pact occupation of Czechoslovakia in August 1968. In late September 1969, Luboš Vyhnánek, my wife and myself were able to attend an anthropological conference in Mainz.

Although more than one year had elapsed from the Soviet-led invasion, the official permission to travel to the West was still relatively easily obtainable at that moment. I use the word 'moment' intentionally, because only one day later we learned from the radio that the night after we had entered Germany, the authorities closed the borders, returned all those who reached borders by car or by train, and thus in effect changed Czechoslovakia into a prison fortress from which it was difficult to escape. During our travelling through West Germany in the days that immediately followed, we met many cars from Czechoslovakia with people asking: "Are you going back home?" For my wife and myself, the answer was simple because we had two small children waiting for us in Prague. But the situation was much more complicated for Luboš. He was still unmarried and had no personal commitments, but was already well-known in professional circles and had connections which would have certainly helped him to find a much better position than his assistantship at the clinic in Prague; basically he only had to choose a country. He had excellent contacts with radiologists and anthropologists in a number of countries and was fluent in English, French and German. He hesitated, but in the end he decided to return with us. The value of personal bonds outweighed the prospect of a splendid career."

Vyhnánek's activity in palaeopathology and anthropology was primarily based on his perfect knowledge of radiological analogies for any of his studied historical case in his living patients. This enabled him comparison and therefore, a reliable diagnosis. At the same time, however, he did not underestimate the importance of primary inspection of the real osseous material, which he considered a necessary prerequisite for the application of radiological methods.

He steadily followed progress of his medical science and introduced newly devised methods and views into palaeopathological practice. He worked hard, systematically, meticulously and most infallibly. He was always willing to share his vast knowledge with any of his collaborators or colleagues-anthropologists, searching for his advice.

Being an excellent medical doctor and radiologist, his hobby, grown up from his deep interest in history and archaeology, made of him a leading authority in palaeopathology, well known internationally. His life work was essential for the progress of osteological anthropology during the second half of the 20th century in both parts of the formerly common country, nowadays the Czech and Slovak Republics.

Especially in recent years, after November 1989, Vyhnánek spent a lot of time abroad, making the most of the favourable situation to build his Clinic into a modern diagnostic centre equipped with the latest technology. He was overloaded with work and professional duties in his main discipline, but he never lost his affection for anthropology. From the late 80s into the 90s he became a most valuable member of a multidisciplinary team research on history and palaeopathology of malign tumors, initiated by Strouhal in Egyptian material, later enlarged for the whole Old World (grant project of the Academy of Sciences of the Czech Republic 1994–96). New cases were searched for in Egyptian, British and Czech sites and published in a series of scientific articles (a summarizing monograph, including a chapter by Vyhnánek, is being prepared for publication).

Vyhnánek put fortunately his rich life experience into the chapter "Outline of osseous palaeopathology based on radiology" in Stloukal's *et al.* book "Anthropology. Handbook for Study of the Skeleton" (in Czech, 1999) which appeared in print only after his tragic death.

Luboš Vyhnánek proved to be a charming, faithful and helpful companion in any situation. His sudden loss was a tragic event which struck all of his friends and colleagues deeply. None of them will ever forget him. It has often been asserted that each of us is replaceable. Unfortunately, this is not true. Luboš Vyhnánek cannot be replaced. We are happy to dedicate to his ever-lasting memory this series of papers as a tiny token of our profound gratitude.

Eugen Strouhal, Milan Stloukal

List of scientific publications by Prof. MUDr. Luboš Vyhnánek, DrSc.

Concerning palaeopathology and anthropology

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