

EDUARD ALBERT BIELZ (1827-1898) AND THE FIRST CAVE CADASTER OF TRANSYLVANIA

Introduction

All comprehensive reviews on the speleohistory of Transylvania, published as a separate study (e.g. DÉNES, 1992) or as a part of a larger work refer to the fact, that the first cadaster on the Transylvanian caves was compiled by Eduard Albert Bielz in 1884. But none of these reviews give any more details on the author or the content of this cadaster. The present paper aims to fill this deficiency.

Eduard Albert Bielz (1827-1898)

Eduard Albert Bielz (*Fig. 1.*) was born in a Saxon family in Hermannstadt (Nagyszeben/Sibiu) on 4th of February 1827. He was educated in the local secondary school, and after he completed his studies in a two-years Academy of Low he started to work as a clerk at the local Forestry Administration. During the 1848-49 Revolution, he was a lieutenant in the Austrian army under general Puchner, then, returning to his native town he married in 1851 and worked as a financial secretary. Appreciating his activity in the field of statistics, in 1869 the Ministry of Commerce ordered him to the Statistical Office in Budapest, where he played a major role in the national census of 1870. In 1872 he became the inspector of schools in the Saxon part of Transylvania. As member of the Commission for rectification of the frontiers between the Monarchy and Rumania, he took also part in frontier perambulations in 1869, 1875 and 1876. Unfortunately, on the course of these he got an eye disease, and by 1878 he became blind for both eyes. He had to retire, and died in an age of 71 due to a malignant tumour in 27 of May 1898 in Hermannstadt.



Fig. 1. Eduard Albert Bielz

These general biographical data, however, do not indicate at all the naturalist and scientist, that Bielz actually was. His interest toward the nature was undoubtedly evoked, and probably also determined by the family house. His father, Michael Bielz, was a pastor and teacher, who – settling down in Hermannstadt in 1821 – founded the first lithographic printing industry of Transylvania. While collecting suitable rocks for this work, he became aware of the variety of fossiles in them, and his interest soon turned completely to studying the nature. He became not only a renowned fossile collector and author of small scientific papers, but in 1849 the founder and first chairman of the siebenbürgische Verein für Naturwissenschaften (Transylvanian Society for Nature Sciences).

Eduard Albert Bielz was actively helping his father already in his young age. He was less than 15, when took part – with his father's friend M. Ackner and his teacher, M. Fuss – in the first large collecting trip from Hermannstadt through Csík and the Gyergyó Mountains as far as to the Rodna Mountains in the summer of 1841. In the summers of 1842-1845, similar trips were

organised to the Szeben Mountains, the Fogaras Mountains, the Transylvanian Ore Mountains and to the area of Kolozsvár/Cluj, which were completed by several smaller or longer travels to almost all parts of Transylvania in the following decade. Based on his wide knowledge on the land and its geographical-geological conditions, he took part as a guide in the geological survey of Transylvania led by Franz Ritter von Hauer from the Vienna Geological Institute in the summers of 1859 and 1860. As a member of the Frontier Commission, he also had the possibility to participate in the perambulation of the whole frontier line between the Monarchy and Rumania in 1869, 1875 and 1876. He utilized even these official trips – as well as the field stationing during his short military career – to improve his collections: according to contemporary memories, he was looking untiredly for rare specimens while his companions were having a rest.

The Austrian naturalist Schur referred him as having the richest collection and widest knowledge on Transylvanian bugs already by an age of 22 years. Besides that, he also had rich collections on rocks, minerals, fossiles, plants and old coins, as well as on birds and bats, which were mounted mostly by himself. To complete his collections and knowledge, he had correspondence with several scientist not only in Transylvania, but in Europe and even overseas. With those who spoke no German, he corresponded in Latin language. He also took an active part in the life of scientific societies. Besides being a leading personality in the Transylvanian Society for Nature Sciences and the Transylvanian Carpathian Association until the end of his life, he was a corresponding or honorary member of several other scientific societies, too. In 1873 he became a corresponding member of the Hungarian Academy of Sciences, and – as the greatest acknowledgement of his scientific activity – he was awarded with the title „doctor philosophiae honoris causa” at the Kolozsvár / Cluj University in 1896.

Bielz's wide-scaled publication activity extended to almost all branches of nature sciences. Started as early as in 1846, i.e. an age of 19, he published altogether 88 papers (mainly in the periodical „Verhandlungen und Mitteilungen” of the Transylvanian Society for Nature Sciences) and separate books, all in German language (CAPESIUS, 1898). Most of his studies (36 items) are on zoology: molluscs, insects, fishes, birds, and mammals, where it has to be remarked, that he described more than 40 new species of gastropods and bugs. A similarly great part of his works (30 items) deal with geosciences: petrology, sedimentology, paleontology, mineralogy, hydrology, geography, etc.; but he has publications on botany, history, tourism and other miscellaneous topics, too. Thank to his exceptional memory, blindness did not avoid him from publication. In the contrary, his most significant works – including a tourists' guidebook of 415 pages, and his comprehensive studies on certain fauna groups, the rocks, the minerals, the castles and ruins, and, what's the most important from our point of view, on the caves of Transylvania – date from that period.

„Contributions to the cave science of Transylvania”

Bielz's summarising study on the Transylvanian caves was published under the above title in the *Annales* of the Transylvanian Carpathian Association in 1884, that was completed by two shorter supplements (*Fig. 2.*) in the following two years. Although he does not use the term, the philosophy, layout and content of his work are rather similar to modern cave cadasters: based on field observations, literary sources, personal communications and other available information (e.g. cave symbols on the special military map or local geographical names indicating a cave, such as „Valea pestere”), it is a collection of all data on the caves known to the author that time. Each cave locality has a separate chapter (i.e. an own file), supplied with a serial number which follow a strict geographical order: starting from the north, Bielz discusses the localities clockwise and in four main units according to the groups of ranges bordering the Transylvanian Basin. It is remar-

Nachtrag zur Höhlenkunde Siebenbürgens

von
E. Albert Bielz.

Seit dem Erscheinen meiner „Beiträge zur Höhlenkunde Siebenbürgens“ in IV. Jahrbuche unseres Karpatenvereins haben weitere Forschungen auf diesem Gebiete noch zur Entdeckung mehrerer neuer Höhlen im Bereiche unserer Kalkgebirge geführt. So wurden namentlich durch die Bemühungen des Herrn Realschul-Direktors G. Tégliás zu Déva im nördlichen Teile des Hunyader Komitates ganze Reihen von Kalk-Höhlen aufgefunden und auf die in ihnen vorkommenden prähistorischen Überbleibsel untersucht, — wovon dieselbe mir wertvolle Mitteilungen freundlichst zukommen liess. Weitere Beiträge erhielt ich auch von den Herren Vicegespan Johann von Csató in Nagy-Egyed, Eisenbahn-Inspektor Karl Siegmeth in S. A. Ujhely und A., — während die von der Schässburger Sektion unseres Karpaten-Vereins und dem Vereine für siebenbürgische Landeskunde eingeleiteten Untersuchungen der Homorod-Almáscher Höhlen im Vargyas-Thale (wie der ebenfalls im V. Jahrbuche unsers Karpaten-Vereins erschienene Bericht zeigt) noch nicht zum Abschlusse gelangten, während die obenda erschienenen Mitteilungen des Herrn W. Hansmann besonders über die kleine Almáscher Höhle mancho interessante Erweiterung der bisherigen Beschreibungen lieferte.

Die hiedurch notwendig gewordenen Nachträge und Ergänzungen zu meinen Eingangs erwähnten „Beiträge zur Höhlenkunde Siebenbürgens“ glaubte ich am besten und übersichtlichsten in der Art geben zu können, dass ich dieselben in der Reihenfolge dieser Beiträge als Zusätze zu oder zwischen den einzelnen fortlaufenden Nummern in den nachstehenden Zeilen folgen lasse.

A. Im nördlichen Höhenzuge.

3. a) Die Tropfstein-Höhle von Kis-Nyires.

Auf der Poststrasse von Déva nach Nagy-Bánya, etwa 50 Kilom. von vorgenannter Stadt entfernt, wurde diese zwischen den Dörfern Rév-Körtvélyes und Kis-Nyires befindliche und auf dem Gebiete der letzteren Gemeinde gelegene Tropfsteinhöhle durch den kgl. Ingenieur Horán im Sommer des Jahres 1884 zugänglich gemacht. Durch einen, über 100 Meter langen, von einem Bächlein durchrieselten, stollenartigen

II. Nachtrag zu meinen Beiträgen zur Höhlenkunde Siebenbürgens,

von
E. Albert Bielz.

Durch die freundlichen Mitteilungen der Herren Professor J. Rámer in Kronstadt, Pfarrer Fr. Abraham in Fogarasch, Vicegespan und k. Rat J. v. Csató in Nagy-Egyed und Realschul-Direktor G. Tégliás in Déva bin ich in die glückliche Lage versetzt, diesen zweiten Nachtrag zu meinen Beiträgen zur Höhlenkunde Siebenbürgens*) in einer ausführlicheren Weise liefern und dabei auch wieder von einigen neuen Höhlen berichten zu können.

Diese Ergänzungen gebe ich auch diesmal in der Reihenfolge des ersten Beitrages und nach den vier Hauptzügen unserer Grenzgebirge. Es sind demnach hier folgende Nachträge zu verzeichnen:

Im südlichen Höhenzuge.

Zu Nr. 15. Die Frintschlöhle oder Flinschlöhle (jetzt auch Flinschlöhle genannt) wurde am 23. Mai 1886 von Mitgliedern der Kronstädter Sektion unseres Karpatenvereins einer neuerlichen Untersuchung unterzogen, welche mit Stricken und anderen Ausrüstungsgegenständen wohl versehen, es sich zur Aufgabe gemacht hatten, die Ausdehnung und die Verzweigungen dieser Höhle, sowie den allfälligen Zusammenhang mit der weiter unten folgenden neuen Rosenauer Höhle festzustellen. Man war über Abgründe und Klüfte soweit als möglich vorgedrungen, doch schliesslich machte ein vorgelagerter grosser Felsblock, der nicht zu beseitigen war, dem weiteren Vordringen ein Ende. Es wurde hierbei festgestellt, dass die Richtung dieser Höhle bis zum ersten Absturze von Ost nach West verlaufe, dann nach Nordwest umbiege und mit verschiedenen Krümmungen in 3 bis 4 Etagen sich fortsetze; die ganze hiebei zurückgelegte Strecke wurde auf 100 Meter geschätzt.

15. a) Die Rosenauer Höhle.

Die neue Rosenauer Höhle liegt etwa 3 Kilom. südlich von Marktleben Rosenau und ist östlich von dem kalten Spitzberge, welcher in der Spezialkarte des k. k. milit.-geogr. Institutes Zone 23 Col. XXXIII

*) Siehe IV. Jahrbuch. des siebenb. Karpatenvereins 1884. S. 1 bis 66; und V. Jahrbuch des siebenb. Karpatenvereins 1885. S. 24 bis 40.

Fig. 2. Front pages of the two supplements published in 1885 and 1886.

kable, that numbering of the cadastral units of the present Rumanian cave cadaster applies the same geographical order.

The first study contains 73 chapters, i.e. localities, that are completed with 7 and, respectively, 2 new localities in the supplements. To keep the geographical order of the serial numbers, these new localities are identified as 3.a), 15.a), 29.a), 29.b), etc. From among the altogether 82 localities, however, 8 ones discuss just dolines or gorges, which probably have been included to the cadaster as potential cave sites. On the other hand, 31 of the localities comprise more than one cave, the concrete number of which is partly undefined (e.g. as „some smaller caves“). Counting these items with the minimal 2 caves, Bielz's work contains information on at least 130 Transylvanian caves. But it has to be mentioned, that the historical Bihar county did not belong to Transylvania, but to Hungary in the narrower sense. Consequently, Bielz makes just a short remark on the several spectacular caves there, namely the caves of the eastern part of the Bihar / Bihor Mountains and the Királyerdő / Padurea Craiului, which, of course, are not included in the above number.

As title of the certain chapters, Bielz names most of the caves after their geographical localisation, e.g. „3.a) The dripstone cave of Kis-Nyires“, „35. The cave estward from the Zsil Pass“, etc. He applies local cave names as title at 8 items, and such names can be found in the text at a further 13 items. These local names well reflect the multinational and multilingual character of Transylvania: they represent almost equally names of Hungarian (e.g. 2. *Csáki barlang*, 73. *Bajluka*), of Rumanian (e.g. 32. *Csetáte Boli*, 65. *Gaura Urletoare*), and of German origin (e.g. 5. *Schneidergrube*, 14. *Milchloch*).

The length and data content of the certain cave „files“ depend not only on the size and character of the given cave, but also on the sources of information, which are always correctly

referred either in the text or on the bottom of the page. With altogether 66 referred publications, Bielz's cadaster can also be evaluated as the first bibliography on the Transylvanian caves. Strange to realize, but he writes on his own cave experiences in two cases only: at 32. *Csetáte Boli*, that he visited three times (1846, 1860, 1876), and at 40. *The cave at Runk*, that he visited in 1846; and refers approaching the entrance of just 3 further caves: 17. *The cave in Dumbovicsóra* (in 1869), 24. *The cave at Felső-Venice* (in 1859), and 35. *The cave estward from the Zsil Pass* (in 1876). However, several other items containing just the localisation of the cave without any references on the information source can possibly derive from his own field observations.

From among the 130 caves discussed in Bielz's cadaster, 54 items contain just localisation data. A further 33 items also include short inside characterisation, while at the remaining 43 items (i.e. about the third of the files) there are detailed descriptions, too. These comprise a surprisingly variety of information: besides the localisation and access data, they usually indicate the host rock, the size and shape (and, sometimes, even the elevation) of the entrance, the length of the cave (measured in metres, or by steps, or by the time required for the visit), the character and activity (sometimes also the direction) of the passages, their speleothem types, as well as – less frequently – the presence of archaeological and/or paleontological findings, bats and other cave fauna, temperature data, and other miscellaneous information, such as the mode of utilization, legends connected to the cave, further unexplored passages, possible connections to other caves, special dangers, etc.

Evaluation

Summarising the above knowledge on the author and his work, Eduard Albert Bielz cannot be termed a cave researcher. Yet, with recognising that collecting and systematizing of data is the base of any further research, he should be evaluated as a pioneer also in the field of speleology. His review on the Transylvanian caves is much more than „contributions to cave science”: it is the first known comprehensive national speleological database not only in Transylvania but also in historical Hungary, and, probably in the whole ALCADI region.

REFERENCES

- BIELZ, E. A. (1884): Beitrag zur Höhlenkunde Siebenbürgens. – Jahrbuch des siebenbürgischen Karpathenvereines IV. p. 1-66.
BIELZ, E. A. (1885): Nachtrag zur Höhlenkunde Siebenbürgens. – Jahrbuch des siebenbürgischen Karpathenvereines V. p. 34-40.
BIELZ, E. A. (1886): II. Nachtrag zur Höhlenkunde Siebenbürgens. – Jahrbuch des siebenbürgischen Karpathenvereines VI. p. 171-178.
CAPESIUS, J. (1898): Eduard Albert Bielz. – Verh. u. Mitt. des siebenb. Ver. f. Naturwissensch. 48. p. 1-24.
DÉNES, I. (1992): Short history of speleology in Transylvania. – Karszt és Barlang Spec. Iss. p. 17-20.

Takácsné Bolner Katalin
KvVM Barlangtani és Földtani Osztály, H-1025 Budapest, Szépvölgyi út 162/b.
takacsne@mail.kvvm.hu