

EDITORIAL

This year marks the 100th anniversary of Ernst Haeckel's death. He was one of the most influential German Darwinists in his time. In the first contribution the authors ELIZABETH WATTS, UWE HÖBFELD and GEORGY S. LEVIT point out that: *while Haeckel adopted almost all of the developments in the biosciences during his lifetime (morphology, paleontology, systematics, embryology etc.), he excluded genetics almost entirely from his intellectual musings.*

In the article *Repair of Augustinian Graves at the Central Cemetery in Brno* PAVLINA PONČÍKOVÁ reports on the history and current state of Mendel's Tomb, which recently underwent restoration. The National Heritage Institute (NPU) kept the public up-to-date about the repair of the tomb on their website. This year Masaryk University is celebrating its 100th anniversary, and so the University Press – Munipress has decided to mark the occasion by publishing the Czech translation of a book about the history of the gene or more precisely the history of genetics. This book by SIDDHARTHA MUKHERJEE: *The Gene: An Intimate History* is translated by Jan Šmarda. And because it is an extraordinary work, we can say that the publishing house has given the university a very special gift.

Jiří Sekerák

ERNST HAECKEL'S "GENETICA" (1922) - REPRINT AND A SHORT COMMENTARY

ELIZABETH WATTS*

Research Group for Biology Education, Institute of Zoology and Evolutionary Research,
Faculty of Biological Sciences, Friedrich-Schiller-University Jena, Am Steiger 3, Bienenhaus,
07743 Jena, Germany

UWE HOßFELD

Research Group for Biology Education, Institute of Zoology and Evolutionary Research,
Faculty of Biological Sciences, Friedrich-Schiller-University Jena, Am Steiger 3, Bienenhaus,
07743 Jena, Germany

GEORGY S. LEVIT

Research Group for Biology Education, Institute of Zoology and Evolutionary Research,
Faculty of Biological Sciences, Friedrich-Schiller-University Jena, Am Steiger 3, Bienenhaus,
07743 Jena, Germany

ABSTRACT - The year 2019 marks the 100th anniversary of the death of Ernst Haeckel (1834–1919), a German zoologist, philosopher and technical artist, who defended and supplemented Charles Darwin's system of theories dealing with the mechanisms of biological evolution. While Haeckel adopted almost all of the developments in the biosciences during his lifetime (like morphology, paleontology, systematics, embryology etc.), he excluded genetics almost entirely from his intellectual musings. This problem is briefly addressed in the following article.

INTRODUCTION

The ideas presented by Charles Darwin (1809–1882) in his 1859 book *On the Origin of Species* were received with great enthusiasm in Germany by researchers like Ernst Haeckel, August Weismann (1834–1914) and Oscar Hertwig (1849–1922). Haeckel published his main scientific contribution in 1866, the two-volume *Generelle Morphologie der Organismen*. The ideas presented therein were popularised by Haeckel in 1868, when *Natürliche Schöpfungsgeschichte* (Natural History of Creation) was published and (unlike *Generelle Morphologie*) translated into several languages. Haeckel used comparative anatomy and embryology as ways to prove the theory of common descent. Like Johann Friedrich Meckel (1781–1833) and his school, Haeckel also placed great theoretical emphasis on the parallel between the stages of development of the embryo and the series from lower to higher forms of animals studied in comparative anatomy and systematics. Haeckel used the term "Entwicklung" (development) for both the development of the individual and the "development" of species over time. To these two parallels he added a third, which was based

* Corresponding author: Elizabeth Watts (elizabeth.watts@uni-jena.de)

REPAIR OF AUGUSTINIAN GRAVES AT THE CENTRAL CEMETERY IN BRNO*

PAVLÍNA PONČÍKOVÁ

Centrum Mendelianum Musei Moraviae, Brno, pponcikova@mzm.cz

ABSTRACT - Gregor Mendel's last resting place is the Augustinian Order tomb at the Central Cemetery in Brno.

When we organise walks through Mendel's Brno, we rarely come to this place, so far from the city centre. However, this is a great pity because, unlike some other buildings along the route, this place has lost neither its original purpose nor its charm. The central cemetery abounds in peace and tranquility, and the Augustinian tomb is an integral part of it. Recently, the tomb underwent restoration to restore the original shrine. Although the place had not lost any of its atmosphere, on closer inspection it was clear that some elements were already very worn and dilapidated.

The National Heritage Institute (NPU) kept the public up-to-date about the repair of the tomb on their website.

Cemeteries were typically located in the immediate vicinity of medieval towns. The Church in the Middle Ages and early modern times required the burial of believers in sanctified ground. In towns, where there was no public space, the cemetery was also used to meet people, make deals and hold markets. However, due to the overcrowding of cemeteries, epidemics and urban development, cemeteries began to be moved beyond the city walls from the 18th century onwards.

The first wave of new cemeteries outside city walls occurred after the decree of Emperor Joseph II on the 23rd August 1784, which abolished cemeteries in towns, churches and monasteries.¹ Another wave occurred in the second half of the 19th century, when the old cemeteries ceased to be sufficient, mainly due to population growth in cities with industrial production, as well as the expansion of urban areas and the need for new development.

A new cemetery was also built in Brno during this period, which could be expanded in the future. The positional plan and project was produced by Alois Prastorfer in 1881².

This cemetery was to serve as the last resting place for the inhabitants of Brno, regardless of denomination, nationality or social status. This led to protests by the population, mainly because of the burials of different denominations in the same cemetery and also because the cemetery was not to be consecrated. In the spirit of this egalitarianism, the 10-year-old Jiří Šimek (Schimke), an inmate of the Brno Institute for the Deaf-Mute, who died of scarlet fever, was the first to be buried here. The first funeral was

* This work is published as a result of the financial support provided to the Moravian Museum by the Ministry of Culture of the Czech Republic as a part of its long-term conceptual development programme for research institutions (ref. MK000094862).

REVIEW

SIDDHARTHA MUKHERJEE: GEN: O DĚDIČNOSTI V NAŠICH OSUDECH (THE GENE: AN INTIMATE HISTORY). Masaryk University, Brno, 2019, pp. 525.

ISBN: 978-80-210-9140-5; 978-80-210-9199-3



This year Masaryk University is celebrating its 100th anniversary, and so the University Press, Munipress has decided to mark the occasion by publishing the Czech translation of a book about the history of the gene, or more precisely the history of genetics, which is today, in it's molecular form, surely the most dynamic field in life sciences. And because it is an extraordinary work, we can boldly say that the publishing house has given the university a very special gift. After all, Siddhartha Mukherjee, the renowned writer of popular scientific literature, was awarded the Pulitzer Prize for his previous book *The Emperor of all Maladies: A Biography of Cancer*. This successful book, which the New York Times Magazine ranked among the 100 best non-fiction books of all time, was published in 2015 by Munipress, translated by Jan Šmarda. It is therefore logical that this would now follow, a widely-anticipated work, which the reader might find as similarly surprising and revelatory as, in its own time, the now legendary book by Jacob Bronowski, *The Ascent of Man*.

One of the primary things to note about this book, is how the author's narrative style has a readability and manages to convey one of the most complicated stories that humanity has come across. The story of understanding the fundamentals of inheritance. Humanity has long sought to find out what our roots are and how that which we project of ourselves is a product of what we inherited from our ancestors. Are we more of ourselves, or do we carry their identities, their qualities, their wealth and their glory, their power and their sins, curses and illnesses? Humanity has always been fascinating with ideas like inherited sin or

P. CLEMENS M. ERICH RICHTER OSA
***28 September 1933 - † 28 March 2018**

Earlier this year, we received the sad news about the death of the great-nephew of Johann Gregor Mendel. Born as Erich Richter on 28 September 1933 in Gross Petersdorf (today, together with Hynčice, part of Vražné). After World War II, the family had to move out of Czechoslovakia and settled in Hettingen. Erich Richter was trained as a tailor by family tradition, but thanks to his contacts with the Augustinians in Messelhausen and Stuttgart (where he worked after school), he decided to study theology and join the Augustinian order.

The novitiate spent the years 1959–1962 in Münnerstatt (Bavaria) and adopted the monastic name Clemens Maria.

After further studies in Rome and Würzburg in 1964 he became a priest in Zwiesel.

In 1973, he became a priest in the Church of St. Monica in Ruit, one of the parishes founded by Augustinians.

In 1979, he was elected regional vicar and went to Vienna for 4 years, where he served as priest in the parish of St. Augustine. (Among other things, he was responsible for the new bell called Augustinus in the Augustinian church).



Fig. 1. In the foreground from the right: P. C. Richter, Dr. Anna Matalová and Walter Mann (from Mendel's younger sister Theresa's line), Hynčice 1997

MENDEL FORUM 2019

The Mendelianum Centre of the Moravian Museum has been organising the Mendel Forum regularly since 1992. This year's forum with the main theme of *Basic Instrumental Methods in Molecular Biology*, took place on 5th and 6th June 2019 in the premises of the Mendelianum Centre in the Biskupský Dvůr (Bishop's court) in Brno. There were a total of 50 participants, teachers of primary and secondary schools from all over the Czech Republic participating in the project of the Centre for Education for a Sustainable Future. The event took place in cooperation with this project, whose basic thematic program is *Science Literacy and Research-Oriented Teaching / Education* (CZ.02.3.68 / 0.0 / 0.0 / 16_010 / 0000570). The aim of the program is to develop the competencies of teachers with their mutual cooperation so that they can lead pupils in teaching to understand natural patterns with respect to the integration of knowledge from various fields of science, especially molecular biology, genetics, chemistry and biology in general, including the use of mathematics. Another goal is to support creativity and empower students for the labour market through skills using digital technologies to record research activities or presentations of workflows. The coordinator of this project is the Globe Gymnasium in Brno.

This year's program was divided into two basic parts. The first part dealt with a historical excursion to the beginnings of genetics and introduced participants to the most important stages of the work of Johann Gregor Mendel in Brno, especially as part of his activities in individual sections of the Agricultural Society and the Nature Research Society in Brno.

The second part of the program on basic instrumental methods in molecular biology focused on practical teaching activities in the laboratory with the aim of broadening the participants' awareness of possibilities of modern presentations of basic information in life



FESTIVAL OF SCIENCE 6th AND 7th SEPTEMBER 2019

For several years, Mendelianum has been participating in the Science Festival organised by the Brno Observatory and Planetarium. The festival has gained great popularity over the years and in 2017 it was moved from the space in front of the observatory to a much larger area owned by the municipal police on the Brno Riviera, which also offers much better facilities for organisers. Friday morning belongs to schools, the rest of the time is open to anyone interested in new knowledge of science, technology and history. Mendelianum represents the Moravian Museum, the successor of the Agricultural Society - the oldest scientific institution in Moravia. The motto of the museum is “we connect the past and the future”, and it is Gregor Mendel’s personality that best illustrates this motto. Mendel’s significance for contemporary science and practical activities for all visitors to the event was a well-deserved success amongst the strong competition from other Brno scientific institutions.

Petra Elblová



Contents

FOLIA MENDELIANA 55/2 2019

Jiří SEKERÁK: Editorial	3
Elizabeth WATTS, Uwe HOßFELD, Georgy S. LEVIT: Ernst Haeckel's "Genetica" (1922) - Reprint and a short commentary	5
Pavína PONČÍKOVÁ: Repair of Augustinian graves at the Central Cemetery in Brno	23

REVIEW

Jiří SEKERÁK: Siddhartha Mukherjee: Gen: O dědičnosti v našich osudech (The Gene: An Intimate History)	31
--	----

THE CHRONICLE

Pavína PONČÍKOVÁ: P. Clemens M. Erich Richter OSA (1933–2018)	37
Petra ELBLOVÁ: Mendel Forum 2019	39
Petra ELBLOVÁ: Festival of Science 6 th and 7 th September 2019	41