

ALEXANDER M. OSPOVAT, HISTORIAN OF GEOLOGY, 1923–2010

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Alexander M. Ospovat. Photoportrait from the 1970s. Photograph by courtesy of Naaman Ospovat.

Alexander Meier Ospovat died on 21 December, 2010, at Stillwater, Oklahoma. A professor of history at Oklahoma State University, he was a distinguished researcher on geology's early history. He was known especially for his investigations of the life and work of Abraham Gottlob Werner.

It is worth sketching Alex's early life in some detail, as it reflects the conditions experienced by one Jewish family in interwar Europe and their escape to safety in the Americas in the early years of the Second World War. Alex was born 13 March, 1923 in Königsberg, East Prussia (now Kaliningrad, Russia), the second of two sons in a middle-class family. His father, born in Warsaw to an artisan family, had moved to Russia and was part way through a course of medical studies at the outbreak of the 1917 revolution; he then served as a medical officer in the Red army until 1922. His mother, born in Polangen, then part of Imperial Russia (now Palanga, Lithuania), came from a merchant family. She was musically talented, and worked as a nurse during the war. The young couple met in Moscow, and married in 1918. With Alex's brother Mordechai (called Mura, later Murray) they fled Russia and settled for a short time in Königsberg. Not long after Alex's birth the family moved to Memel (now Klaipeda) in Lithuania, where Alex's father conducted a business as a supplier to butchers and bakers. They remained there until 1938.

Russian and Yiddish were the main languages common to Alex's parents. Memel was essentially a German city, and he grew up speaking German, and attended a German school. His family encouraged his study of music; he displayed considerable ability at the piano. In a recollection recorded more than six decades later, he said that he sensed relatively little discrimination at school before 1935, but thereafter life became distinctly unpleasant for the Jewish pupils. In 1938 he and the other Jewish youngsters, who numbered about one third of his class, were excluded from the school. At that time Alex's parents sent him to Liepaja in Latvia, where he boarded for a year as an apprentice to a German-speaking florist. The rest of the family fled Memel a year later, on the eve of the Nazi occupation. For about a year they lived together in Libau, Lithuania, before their final departure from Europe in February 1940.

Alex's mother had a brother living in Dallas, Texas. This uncle, Isidore Zesmer, with his wife Jenny, helped facilitate the Ospovat family's effort to secure visas and transit to the New

World (from Riga to Stockholm by air, Stockholm to Oslo and then Bergen by train, Bergen to New York by sea). Immediate immigration in the United States was blocked because of national quota limitations, but with an arrangement for their temporary residence in Mexico, permission was secured for a two-month transit through the U.S. After a year in Mexico City Alex's parents and brother gained admission to the U.S. Alex remained in Mexico City, however, at least in part because he did not want to terminate a course of musical study he had begun with a noted piano teacher. During the ensuing two years he attended first a multilingual American School, and then an engineering college. In his three years in Mexico he became fluent in Spanish, but gained only a fair knowledge of English.

Coming finally to the U.S. in 1943, Alex abandoned his musical aspirations, thinking the prospects were poor of earning a living through music. He enrolled at the University of Oklahoma (OU), and received a degree in civil engineering in 1945. For the next several years he worked as a detailer for engineering firms. In 1945 he married Joyce Conoley, whom he had met the previous year when they were both students at OU. They lived for a year in New York City before deciding to return to Oklahoma.

In 1953, Alex decided to go back to school at OU, while continuing part-time contractual engineering work. Initially pursuing a continuation of diverse studies (such as in zoology and history), before long he found his place in the new graduate program in the history of science. That program's establishment in 1954 resulted from the gift to the university of a selection of rare science books by an Oklahoma alumnus and book collector, Everette Lee DeGolyer. From the outset the collection was particularly rich in classic works from early geology, since DeGolyer, who had studied geology at OU, had made a point of trying to acquire as many as possible of the original sources identified in Frank Dawson Adams' *The Birth and Development of the Geological Sciences*.

Alex always liked to tell the story of how the OU history of science program's first professor, Duane H. D. Roller, knowing of Alex's fluency in German, brought out a copy of Werner's *Kurze Klassifikation und Beschreibung der verschiedenen Gebirgsarten*, and said to him: "See what you can do with this." His Master's thesis (1958) on the *Kurze Klassifikation* showed ambitions beyond providing a translation with critical commentary; it included appendices on such topics as Werner's ideas concerning limestone, coal, and volcanoes, as well as a partial list of Werner's students. Alex's doctoral dissertation (1960) was a more comprehensive treatment of Werner's mineralogy and geology, and of the Wernerian influence in nineteenth-century geology. Important to his research for the dissertation, he was able to secure photocopies of a substantial fraction of the Werner manuscript materials held at the *Bergakademie* in Freiberg. Alex was the first person to complete the doctoral program in history of science at OU.

Alex's first academic appointment was in history at the University of North Dakota, in 1960. Two years later he joined the history faculty at Oklahoma State University in Stillwater, where he taught history of science and medicine, and early modern European history. He worked with his fellow European historians to broaden the agenda of the department, where a focus on American history had tended to predominate. Alex advanced to the rank of professor in 1973, and remained at Oklahoma State until his retirement in 1988.

The Werner research begun as a graduate student continued to be Alex's main focus throughout his academic career. He held Werner to have been the most eminent of all pre-Lyell geologists (*British Journal for the History of Science* 1976, 9: 197). By this he certainly meant, at the least, that Werner was in his time more influential than any other figure in geology. It is by no means unlikely, however, that he also meant Werner should be viewed in retrospect as having done more to shape geology and establish it as a distinct discipline than anyone else before Lyell's time. Alex was of course keenly aware that such an opinion strongly contradicted an enduring strain of historical disparagement of Werner, found not only in Lyell's own account of geology's history but also in other canonical treatments, notably Geikie's *The Founders of Geology*. Alex made it his mission to refute the oft-repeated contention that Werner was a scientific dogmatist who had actually impeded the progress of geology, and to reinstate him in his proper historical place.

In a series of papers, as well as a critical edition (1971) of Werner's *Kurze Klassifikation*

with translation and notes, Alex examined Werner as a geological thinker and teacher, and charted his place in the development of geology in the eighteenth and early-nineteenth centuries. Extending his use of relevant unpublished materials through multiple visits to study the Werner manuscript collections at the *Bergakademie* in Freiberg, Alex was the most conspicuous voice in the English-speaking world—joining in this respect with the work of a number of German contemporaries—in a rehabilitative reassessment of Werner’s place in geology’s history.

Key elements of this revisionist program included a defense of the coherence and plausibility, in Werner’s time, of ‘Neptunist’ geological theory; refutation of an alleged link between Wernerian geological doctrines and traditional religious orthodoxy, the Genesis creation myth and the Flood in particular; and an effort to show that Wernerian geognostic theory and practice were fundamental both to the founding of an independent science of petrography, and to the organization of a new stratigraphic science around recognition of a general stratigraphic succession of distinct *Gebirgsarten*, or contemporaneous formations, thus leading the way toward historical geology. Alex argued in support of the substantial originality of Werner’s ideas, even while acknowledging roles in their formulation for influences from past and contemporary figures such as Steno, Bergman, Arduino, or Füchsel.

Fundamental to Alex’s historical accomplishment was his clear exposition of Werner’s theories. His success in helping researchers and students (especially in the Anglophone world) understand Wernerian geological conceptions is exemplified in his imaginative visual summary of Werner’s account of the main stages in geological history, a diagram he adapted from his master’s thesis for his edition of the *Kurze Klassifikation*.

An aspect of Alex’s case for Wernerian geology’s preponderant historical role was, of course, the central place of the *Bergakademie* in nurturing an entire generation of geological observers and thinkers who extended Werner’s teachings worldwide, while often modifying and sometimes opposing them. Alex also took an interest in students of Werner’s who became leading figures in the German Romantic movement. And he studied scientific figures whose views were influenced by Wernerian methods and doctrine, without their having spent any time in Freiberg. (One such character, Humphry Davy, gave geological lectures informed by Wernerian views, and Alex produced an annotated edition of four of these previously unpublished lectures dating from 1805.) Along the way, a sometimes indirect outcome of Alex’s analysis of Wernerian geology was its recognition of historical difficulty or ambiguity in distinguishing the descriptive and classificatory functions of mineralogical natural history (and, indeed, of practical mining enterprises), from the business of constructing theories to account for what is observed. He saw that classification and nomenclature, which were important features of Werner’s teachings and influence, usually carry with them certain elements of explanatory theorizing, even though such links are not always explicit.

Additional themes addressed in Alex’s research, in conjunction with his Werner studies, included his interest in an apparent imbalance, in the closing decades of the eighteenth century, between investigatory production of geological information and success in synthesizing such information in explanatory frameworks. He also took issue with the historical validity of what might be called an environmentalist doctrine concerning an individual’s geological thinking—a view asserting a determinative connection between prevalent local and regional geological features and the theories developed by scientists who have lived in their presence. Such an idea had frequently been salient in accounts treating Werner as a geological observer of, it was said, regrettably limited experience and propensity for over-generalizing from what he saw in Saxony.

Alex Ospovat was keenly aware that historical craftsmanship involves hard-earned skills. He admired scholarship that proceeds from close examination of primary sources, and he was wary of interpretations that rely on inadequately scrutinized or hastily-applied historical classifications (such as ‘catastrophist’ or ‘uniformitarian’). Unsurprisingly, in light of his vexation over how Werner’s work had been so generally dismissed in Anglo-American histories of geology, he brought to his work considerable skepticism regarding received accounts of the science’s past. He was habitually careful to set his subjects in their historical context, and was critical of anachronistic judgments. One specific way this attitude materialized was in his resistance to use of mineral terminology outside its proper historical setting.

Alex travelled to East Germany for his research on several occasions, at times when this

was not an easy thing for an American to do, and he developed strong and cordial associations with German scholars and their institutions. Nearly half his publications are in German or were published in Germany. In recognition of his contributions to the history of geology Alex received in 1987 a medal (the Abraham Gottlob Werner Silver Pin) from the Society of the Geological Sciences of the German Democratic Republic (*Gesellschaft für Geologische Wissenschaften*), and in 1990 a doctorate *honoris causa* from the *Bergakademie Freiberg*. He was elected to the International Commission on the History of Geological Sciences (INHIGEO) in 1970. In 1971–1972 Alex spent a year as a Fulbright Research Scholar in Great Britain.

In addition to his research and teaching duties at Oklahoma State University, he participated actively in the institution's service and governance functions, and was much involved in campus committee and council work. He also served in various capacities for professional and disciplinary groups, notably by serving terms as a member of the governing councils for the History of Science Society and the American Association of University Professors.

Alex—‘Sascha’ as he was known within the family—was a man of gentle and self-deprecating good humor, with a talent for sarcasm when the occasion called for it. He always loved music. He enjoyed canoeing and good wine, and was an avid walker. He was especially fond of walks with his dog.

Alex and Joyce (who died in 1993) had two sons, both of whom shared their father's interests and gifts. Dov, the elder son, also became an historian of science and was already an accomplished Darwin scholar when he succumbed to cancer at the tragically young age of thirty-three. Dov's brother Naaman, an OU graduate like his father, is a composer of symphonic and chamber music.

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Professor Taylor's obituary of Alexander Ospovat has previously been published in a slightly different form in the *Newsletter* of the International Commission on the History of Geological Sciences (INHIGEO) (2011), and is reproduced here by permission of the Commission's Secretary General (Ed.).