



EUGÈNE WEGMANN 1896–1982

Eugène Wegmann, emeritus professor at Neuchâtel University and an honorary member of the Geological Society of Finland, died after a short illness on 7th January 1982 at Neuchâtel in Switzerland. He was 85 years old.

Cäsar Eugen Wegmann spent his childhood and schooldays in Schaffhausen, the town in German-speaking Switzerland where he was born on 18th April 1896. Already as a schoolboy he showed a keen interest in earth sciences and in 1915 he enrolled as a student of geology at the small university of Neuchâtel in French-speaking Switzerland.

The only professor at the Institute of Geology of the University was Emile Argand, a remarkable man in many ways. Although not at all fond of teaching undergraduates, he was an extremely inspiring lecturer for those capable of following his teaching, which moved only on the highest scientific level, his own. Wegmann made swift progress

and became Argand's assistant, a unique opportunity to a young man of Wegmann's abilities. He saw how Argand produced his famous »Carte tectonique de l'Eurasie» and made the acquaintance of many other leading geologists. At the same time he was at the centre of the heated debate then raging in Central Europe on nappes, and Alpine structures in general. Wegmann chose the subject of his doctoral dissertation from the same rugged Pennine Alps whose structures are depicted in Argand's classic maps and diagrams. His dissertation, »Zur Geologie der St. Bernharddecke im Val d'Herens (Wallis)», was finished in 1922.

Having completed his postgraduate studies on petrography at the universities of Zürich and Grenoble and at the Sorbonne, Wegmann left for Norway in spring 1924. He spent three years there applying alpine tectonic methods to the Caledonides. After a short stay in Sweden, he came to Finland in summer 1927

and stayed in this country until the end of 1931.

At that time Finland was one of the leading countries in Precambrian geology, but very little was known here, as elsewhere, about the three-dimensional structure of the Precambrian shield areas. The director of the Geological Survey, J. J. Sederholm, soon realised the potential of Wegmann and his structural methods for bedrock studies and he, like many other Finns, did his utmost to provide Wegmann with the best possible working conditions. Wegmann extended his research over various parts of Finland – from the most outlying skerries in the south to the Arctic Ocean in the north. He was the first geologist in the whole world to apply methods developed for research on Alpine structures to Precambrian shield areas. He taught his methods to Finnish geologists, the most enthusiastic of whom was the 65-year old Sederholm. In four years Wegmann published over a dozen articles on the geology of Finland, Precambrian tectonics in particular.

At the beginning of the 1930s the famous Arctic explorer, Lauge Koch, was making preparations for a big expedition to eastern Greenland. The expedition was to last many years and he asked Sederholm if there was any chance of getting a highly qualified Precambrian geologist from Finland to join them. Sederholm proposed Wegmann. After leaving Finland Wegmann first went to Innsbruck, where he studied under Bruno Sander. He then spent some time in Belgium and in summer 1932 he left for Greenland. Wegmann spent the summers of 1932–34 and the winter of 1932–1933 working in eastern Greenland. He then went to southern Greenland, where he worked from 1936 until the outbreak of the Second World War. In both regions his pioneering work laid a firm foundation for future investigations.

Argand died in September 1940, and Wegmann was invited back to Neuchâtel university to succeed him as professor of geology and director of the Institute of Geology. The university was small with no more than a few hundred students in all the faculties combined. Even so, the holders of the chair of geology have had an epoch-making influence on the course of geological research. One only has to remember Louis Agassiz, who, in

the 1840s, was the first to prove that large parts of Europe and North America had been covered by glacial ice; Hans Schardt, who, in the 1890s, introduced the concepts of nappes and gravity gliding tectonics; Emile Argand perhaps the most brilliant Alpine geologist of all times; and now, Eugène Wegmann who shook the geological world with his bold and ingenious ideas on granites and migmatites.

His new appointment, the Second World War and the post-war period with all its limitations placed difficulties in his path that were different from those he had encountered in the Alps, Nordic countries and most recently in the extreme conditions in Greenland. Now he was responsible for the teaching of practically all branches of geology for all administrative duties of the institute and he had to fight unremittingly on behalf of his institute for a share of the scarce funds of the small university.

When the Second World War was over Wegmann did all he could to help his friends in ruined Europe and to re-establish contact between geologists in various countries. Dozens of young geologists from all over the world came to him to study his methods of tectonic and kinematic analysis. They usually stayed a few months but he always had time for them and his numerous friends who visited him in Neuchâtel. He was a long-time member of the editorial board of »Geologische Rundschau» and »Science de la Terre». As if all these weren't enough, he somehow managed to find time and energy for his field work and other investigations.

In 1952 he suffered a severe heart attack, and the same man who used to climb thousands of metres up and down the Alps and the mountains of Greenland now had trouble getting up to the second floor of his institute. He was not daunted, however, and he continued with his field observations. His most faithful companion was his wife and, with a skill reminiscent of the rally drivers of today, she drove him at a speed he obviously enjoyed along the Swiss mountain roads. Nevertheless, he had to transfer the main targets of his investigations nearer to his home and the institute. And so he focused his interest on the interaction of folding in the Jura mountains and the faulting in the underlying basement.

He resigned from the professorship of geology at Neuchâtel in 1964, but that was by no means the end of his scientific career. On the contrary; now he had time to travel, to lecture and work in many European and African countries, and in North America, where he spent one year as regius professor in California. His health was not always too good but it did not hinder his work. »Ich will noch etwas machen, bevor ich geozentrisch abgehen muss«, as he wrote in one of his letters. He continued his correspondence and followed keenly the geological literature right up to the last months of his life.

Wegmann published around 150 papers, the first when he was a young man of twenty-six, the last when he was over eighty. Numbers of his pioneering works are frequently cited in the geological literature. To assess the significance of all that he wrote, his works would have to be looked at in the perspective of such a long period, so many branches of geology and the geological research of so many countries that it would be too big a task for one man.

His most well-known paper is undoubtedly »Zur Deutung der Migmatite«, which appeared in »Geologische Rundschau« in 1935. While in the Alps doing research for his doctoral dissertation, Wegmann made note of structures in gypsum and anhydrite deposits that bore a strong resemblance to migmatites but which were formed completely kinematically without the presence of the liquid phase. His interest in migmatites, which was aroused by their great champion, Sederholm, and his own observations on ice-polished outcrops in the Finnish archipelago and in eastern Greenland fanned his revolutionary concepts that kindled the world-wide controversy over the origin of granites and migmatites, and which lasted over twenty years.

Wegmann had started his field work in the Pennine Alps. From there he had proceeded to older mountain ranges and deeper tectonic levels – first in Norway and then in Finland and Greenland. On his return to Switzerland, he was widely expected to apply his concepts on granites and migmatites to the crystalline parts of the Alps. Under the new conditions, however, he focused his attention on the uppermost tectonic level, the Jura mountains. His thorough knowledge,

based on his own observations, of tectonic phenomena that had taken place at various depths in the earth's crust enabled him to compare and study their mutual relations – stockwork tectonics.

Wegmann was exceptional in his ability to think three-dimensionally. He evidently saw the tectonic phenomena as a continuous process in space and time. It was quite a long time, he once said, before he realised that many geologists, especially those working in low-lying areas, were not capable of thinking in this way. This had made it difficult for them to understand his working methods and the results he obtained. Later he never ceased to emphasise that thinking in space is a *sine qua non* in all tectonic studies and he developed teaching methods for improving this ability in his students.

Wegmann worked, gave lectures and frequented congresses in many countries. He was a cheerful and gregarious man and he spoke many languages. His mother tongue was actually the Schaffhausen Swiss-German dialect and in addition to that he was fluent in German, French, English, and Scandinavian languages. He could also make himself understood in Finnish and Eskimo. For this reason, countless numbers of people got to know some facets of this remarkable man, particularly his vivid sense of humour that was expressed just as often in well-aimed remarks as in highly skilled drawings and in his love of practical jokes.

He was, however, just as happy alone in the wilderness as in the company of his fellows. He knew only one authority in his research – Nature herself – and there was no place too inaccessible to prevent him from pinpointing targets critical to his studies.

From 1941 until his death he lived in Neuchâtel on Faubourg de l'Hôpital. The grave and extremely correct and polite gentleman out walking with his dog, a magnificent Berner Sennenhund, was a familiar evening sight along the lakeside boulevards of Neuchâtel. Many were also the people who shared his and his wife's hospitality and sampled his professional knowledge of wines – he himself used the word *oinology* – sometimes in the form of extremely rare vintages and other specialities.

Wegmann was awarded many honors. He was member of the Academies of Science in

Norway, Belgium, Finland and Göttingen and an honorary doctor of the universities of Besançon, Clermont-Ferrand, Grenoble and Algiers. He was an honorary or corresponding member of numbers of geological societies. He received the highest geological award, the Gustaf Steinmann medal, of the Geologische Vereinigung in Germany. His seventieth birthday was marked by an international colloquium »Etages Tectoniques»,

in Neuchâtel from 18th to 21st April 1966. Geologists from all over the world came to pay their respect to this great man.

In accordance with his wishes, the ashes of Eugène Wegmann were buried in the Waldfriedhof cemetery in Schaffhausen on 19th January 1982 but his memory lives in the thoughts of his friends, and his accomplishments are engraved indelibly in the history of geological research.

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