PERSONAL PROFILE

William H. Matthews III of U.S.A.

There are two mainsprings to the career of **William H. Matthews III**, the Chairman of the IUGS Commission on Geology Teaching: the great enjoyment he gets from geology, and his passion for educating others. He has been for many years now a major influence in North America, both in teaching geology and in bringing it to the public. Yet despite this "high profile", he is an unassuming man with a gift for enthusiastic communication.

After World War II, Bill Matthews completed his studies at Texas Christian University, where he specialized in palaeontology because of his interest in biological sciences as well as his "bent for the non-quantitative." Today his focus is more on the study of palaeoenvironments, and he stresses the importance of quantitative approaches.

Following several years on the teaching staff of Texas Christian University, Bill Matthews moved to industry in the late 1940s, working as a subsurface geologist. "However I soon discovered that I had chalkdust instead of crude oil in my veins", and the result was a move to Lamar University in Beaumont, Texas, where he is now Chairman of the Geology Department.

But Prof. Matthews' activities have extended far beyond the geological community in Texas. In 1954 he became involved with the then fledgling American Geological Institute (AGI), and was appointed to its Education Committee. He served on this and other committees for nearly 20 years before becoming full-time Director of Education for AGI (see EPISODES, 1979/1, p. 14-15), operating mostly from his base at Lamar University until 1983 when he finally handed over the reins to a new Director.

While at AGI, Bill Matthews became involved in the well-known Earth Science Curriculum Project (ESCP). At that time there were only two earth science books for secondary

schools in the U.S.A., and there was little training available for teachers of geology at middle-school levels. ESCP stressed the "hands on" approach, which was then a real innovation, by letting the students discover basic scientific principles for themselves. The project involved the testing of teaching programs cutting across disciplines such as geology, biology, oceanography, meteorology, physical geography and astronomy. Prof. Matthews was the senior author of the ESCP book "Investigating the Earth," coordinating the work of some 200 contributors. Today, the book is in its fourth edition, and together with supplementary guides for students and teachers, is being used by several million school students around the world; there are editions in French, Portuguese, Spanish and even Korean and Turkish.

The success of ESCP led to a second AGI program, this time aimed at university and college students and again involving Bill Matthews in its direction. Beginning in the 1960s with specially commissioned reviews on mathematical modelling and computer applications, this program evolved into the Council on Education in the Geosciences (CEGS), which before it ended in the early 1970s produced many state-of-the-art papers, modular laboratory exercises and instruction guides, including the well-known guide to "Geowriting" — all still in active use.

Another offshoot of ESCP for Prof. Matthews has been his long involvement in the making of educational films on earth science. Since 1972 he has been Chief Technical Advisor for the film series produced jointly by AGI and Encyclopedia Britannica. His role is to develop outlines and scripts for the films, to find collaborators and to identify locations for filming. He also secures the involvement of USGS, the U.S. Weather Service and other organizations, and convenes screening panels to review the films. This experience has made Bill Matthews an enthusiastic convert to the use of film in teaching earth science, as a way of allowing students to visualize a wide range of geological phenomena. The series is widely recognized for its high quality, and there can be few geology students in North America, at least, who have not seen and benefitted from these films at one point or another in their career, not to mention the tens of thousands of viewers in school and among the general public.

Bill Matthews' strong desire to share the fun of geology with others has not stopped with these activities, for he has now written 31 books addressed to the general public and students alike, so that people could "understand why geysers were 'geysering'." His first in 1962 was written for amateur collectors on "The Fossils of Texas". Others include the well-known college outline "Fossils: An Introduction to Prehistoric Life", a two-volume work on the "Geology of National Parks of the U.S.A.", and "Invitation to Geology", which has now been translated into six languages!

When he saw the "horrible things" his children were bringing home from school, Bill Matthews was drawn into another neglected area, writing books for children. This was also a response to the challenge of getting geology down to a level

Prof. Matthews helping one of his geology majors to identify fossils at Lamar University.

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children could understand. The result has been ten children's books — on soils, volcanoes and earthquakes, dinosaurs and other subjects — and he still gets letters from children the world over. In this aspect of his work, Prof. Matthews has concentrated on areas where there was a lot of misinformation or a gap in popular writings, and his works have never had a rejection slip! As he says, "the greatest joy I have is sharing geology with the general public."

It comes as no surprise therefore that lecturing to first-year classes is no chore for Prof. Matthews; indeed his face lights up when he talks about his students. He does insist, however, that geology students develop the ability to express themselves well and to write well, pointing out that many good projects are ignored or rejected simply because of poor presentation. In my teaching, "I don't ask students to think the same as I do, just to think".

Following many years efforts at the national level, which included a term as President of the National Association of Geology Teachers, and Chairman of Public Information for the American Association of Petroleum Geologists, Prof. Matthews accepted an invitation in 1980 to become Chairman of the IUGS Commission on Geology Teaching (CGT). He sees for CGT a key role in promoting advances in geology

teaching similar to those in North America, and in coordinating such efforts all over the world, (see EPISODES 1983/1, p. 26-27). Despite the lack of funds Bill Matthews points to the catalytic role of such activities as the recent workshops held in Thailand jointly with AGID, Unesco, and Thai organizations on improving high school and university-level curricula in the region.

From one of these meetings, for example, has grown a link between student geological societies of Chiangmai and Lamar Universities, facilitating the exchange of films, books and other educational resource material, and helping students in Texas to understand a little better what the outside world is like. He sees many opportunities for other such "adoptions", as one way to overcome the isolation felt so strongly in many developing countries. Another current CGT project is the compilation of a list of key books as a guide to the building of basic libraries both in the U.S. and elsewhere.

Meanwhile Bill Matthews continues to teach and write and to infect his colleagues with his energy and enthusiasm, complaining with a twinkle in his eye that "my problem is that I can't tell the difference between business and pleasure. My business is my pleasure, and I feel sorry for anyone not a geologist!"