

resources, as well as semi-technical accounts of original research on the geology of Newfoundland and Labrador. Although the details of some papers may be complex, the broad picture should be understood by teachers and students. New concepts in geology, geophysics and oceanography are discussed. Materials, workshop and book reviews and field trip guide books appropriate for teaching local topics at the high school level are also presented. Teachers concerned with Newfoundland content in their curriculum should be particularly interested.

#### Open Earth

*P. J. Smith (Editor)*

*A bimonthly magazine*

*Rates for Canadian Teachers available*

*on request from the publishers*

*32 St. James Close, Hanslope,*

*Milton Keynes MK 19 7LF, England*

Here is an entertaining magazine that keeps researchers, teachers, students, and others, informed about the current Earth Science scene throughout the world. Approach and content vary from the historical to the futuristic, from the factual to the fictional, from the philosophical to the scientific, or in short from one extreme to the other. Perhaps too advanced for most high school students but stimulating for those science oriented students in the top stream.

#### Our Continent - A Natural History of North America

*S. L. Fishbein (Editor)*

*National Geographic Society,*

*Educational Services,*

*151 Carlingview Drive, Unit No. 5,*

*Rexdale, Ontario M9W 5E7*

*398 p., 1976 \$14.06*

A glossy, well-illustrated, hard covered natural history book that is suitable for Junior and Senior High School libraries. Good for the teacher who would like a very generalized account of the geological and biological evolution of North America.

#### Powers of Nature

*R. L. Breeden (Editor)*

*National Geographic Society,*

*Educational Services,*

*151 Carlingview Drive, Unit No. 5,*

*Rexdale, Ontario M9W 5E7*

*200 p., 1978 \$8.82*

This National Geographic Special provides a well documented, pictorial account of the destructive nature of earthquakes, volcanoes, wind and water. Good for Junior and Senior High School libraries.

#### Planet Earth, An Encyclopedia of Geology

*By A. Hallam (Editor)*

*Elsevier - Phaidon, Oxford*

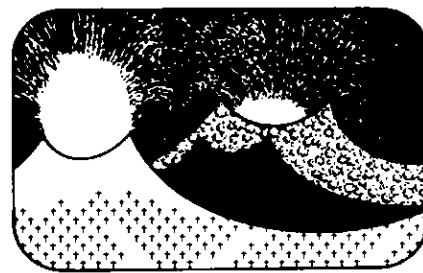
*319 p., 1977*

*Hardcover, \$22.20 (available C.O.D. from*

*Memorial University Bookstore)*

An authoritatively and lavishly illustrated encyclopedia written in language intelligible to the lay reader. Sections on Space, Plate Tectonics, Landscapes, Economic Geology, Rocks, the Geological History of the Earth and the History of Life on Earth are new and up-to-date and provide a fascinating comprehensive review of the subject for any teacher. A mini-library in itself, very good value for the money and very durable in its hard cover and binding.

MS received November 26, 1979



## Pyroclasts

By Ward Neale

### The Choosing of Managers

That little gem by Mike Keen in the last issue of this magazine (v. 6, no. 4, 1979) might be one of the most important papers ever written on the management of geology and geophysics departments. Come to think of it, I can't recall any other written on this subject which, in fact, seldom even comes up in conversations. Mike makes some very good points on the need for sound management during a time of restraint and dwindling resources, especially on the need to establish firm goals in teaching and research. To achieve these ends, he states that departmental chairmen might have to make some bold moves such as initiating an appropriate system of accounting and control; cutting out many of the highly specialized and highly unnecessary courses so dear to many faculty members' hearts; encouraging collaboration in research; and asking deadwood to shape up or ship out. It is easy to add specifics to this list, for example sitting in on colleagues' lectures unannounced and chewing them out if they are performing consistently below standard.

The problem is not that of adding to the list but of appointing the right people to implement some of the changes called for in Keen's paper. We have an encouraging number of such people across the country who lead fine departments which they have nurtured through slow and carefully planned growth, or welded together from warring factions, or inherited while it was functioning well and kept it that way (possibly the hardest task of all). I think we're very lucky to have these paragons of management virtue among us for most of them were probably chosen for other accomplishments and these departments just lucked into good managers.

If you talk with professors across the country you will find that few of them recognize the challenges that Keen points out and many regard the department

head's position with a mixture of pity and scorn... "poor chap, I guess he had to take his turn"... "how could he decide to leave his research for three years"... ?

This is understandable when you realize that in some universities the members of departments have the major voice in choosing their new head, even though the decision might be rubber stamped by a dean or his committee. If a department is pleasantly plodding along its pedestrian way is it likely to select a boat-rocker who will wake it up with splashes of cold water? Not bloody likely. Other departments, in no-growth positions, may be forced to choose one within their ranks as chairman. It is not unusual for a fairly junior person to be rotated into the chair to do his stint (no hers have made it yet). A short-term appointee such as this, particularly if very young, would have to think twice about his career before devoting more than minimum time to administration and think three times before introducing some of the radical innovations suggested by Mike Keen.

Some universities, when they wish to inject new life into a department, will set up search committees in which departmental representation is not the dominant force. Most such committees tend to pick a scientist with a distinguished research record – a splendid chap who will add lustre to the university's name, a person whom his colleagues will respect and admire. They seldom ask how much of his personal research he is willing to give up and whether or not he will now seek some of his major satisfactions in his colleagues' and students' work.

We're fortunate that many good geoscientists turn out to be good managers. But it's doubtful that we'll get any more than we've got already until universities begin choosing heads specifically for their abilities to implement some of the changes that Mike Keen identifies as necessities for the 1980s.

### **Scientists or Technicians (What's in a Name?)**

Andy Baillie, well known western sage, has written a neat little think-piece on geoscience education in the *Bulletin of Canadian Petroleum Geology* (v. 27, no. 3, 1979). It deserves reading by mineral exploration and university scientists well beyond the Calgary city limits. Among other things he regrets the lack of university research in fields related to hydrocarbon exploration: e.g., clay mineralogy, diagenesis, organic geochemistry and thermal history of basins. This prompted him to look into the encouragement offered by industry – it amounts to only \$200,000 annually. Not much to radically change the course of research when you

think of it in terms of 40 geoscience departments in 33 universities.

The main thrust of the Baillie paper is, however, towards training. Like Keen, he regrets the crowding of geostatistics, facies models, plate tectonics and seismic stratigraphy into the curriculum at the expense of basic courses in geology, physics and chemistry. Upon graduation the young geoscientist finds her head swimming with a mass of unrelated facts. She has never had time to think, to develop analytical skills or practical problem solving. With the intense competition for bodies, industry snaps up these new graduates – and Andy feels that many of them will end up as technicians rather than as petroleum scientists.

His proposal is that most students should continue on to the MSc degree. There are two things that might make this unfeasible: The MSc at Canadian universities now averages over 2.5 years of study and research; recruiters currently lure students away from postgraduate work by emphasizing how much salary they will lose during those long years of study.

A recent discussion with Fin Campbell and others led to the conclusion that a single extra year might satisfy the needs of industry and the average student. The first four years leading to the BSc or BASc should concentrate on basics. The fifth, postgraduate year, would concentrate on professional training in a single subject such as petroleum geology, geochemistry, engineering geology or mineral exploration. Imperial College's well-known diploma program, recognized around the world as a badge of professionalism, might serve as a model. Of course, Imperial's famed D.I.C. has a nice ring to it (in fact, it's often mistaken for a doctorate). Calgary's diploma program wouldn't fare too badly if they resurrected the D.U.C. which used to be awarded on an honorary basis to web-footed friends of the university. However, Laval could be in trouble with a D.U.L. and Manitoba certainly would be with a D.U.M. Let's hope trivial details of nomenclature won't prevent these and other schools seriously considering much-needed postgraduate diploma courses.

### **On Leaving a Journal**

I leave the CJES editorship with mixed feelings of satisfaction and regret – just as Bill Hutchison and Gerry Middleton must have had as they left *Geolog* and *Geoscience Canada* in mid career. The regret comes from having to leave a thoroughly enjoyable, challenging, spare time pursuit because I finally realized it's high time I left to let someone else bring in some fresh enthusiasm and new ideas. The satisfaction comes from a realization of how the

scientific community backs an enterprise like the CJES. Memorial, U.B.C. and U. of Calgary have all volunteered space, services and goodwill for our headquarters since the *Journal* left Queen's in 1974. G.S.C. colleagues have tolerantly ignored my absences and always accepted my excuse that I had to tend to some urgent CJES business across the street. Most encouraging of all have been the attitudes of associate editors and referees – the people who consider it part of their duty to read, constructively criticize and sometimes to rewrite large parts of manuscripts in their specialities. Even the authors are pleasant people, some of them show understandable flashes of anger when their life works are mauled or rejected but a week later the same people will cheerfully take on the review of someone else's manuscript and without bitterness state that it is a first-rate piece of work that deserves publication with few or no changes.

NRC offers massive help to its journal editors: all copy-editing and processing for publication is handled by a team in Ottawa. In addition, NRC supports a full-time assistant-to-the-editor who actually runs the office on a day-to-day basis. Willis Ambrose's lieutenant, Nancy Cuthbert started Lexi Clague and me off on the right track, Glenys Woodland replaced Lexi and was in turn replaced by Marion Benson who recently turned over the reins to Jamie Gaetz who will now move to Edmonton to set the new editor, Ted Evans, off on the right course. With Jamie's steady hand on the tiller, a dedicated group of Associate Editors and referees at the ready and thousands of authors waiting impatiently to try out a new editor, Ted can't go wrong. I can only think of a single piece of sound advice to offer him:

When the *Journal* holds its annual luncheon, at GAC/MAC meeting time, he will probably find the government allowance of \$3.63 per person inadequate because some associate editors drink as well as eat. The trick is to charge it up as a dinner at \$7.92 (or is it \$8.04) per person. I was almost caught out on this once when an Ottawa staffer attended our annual gathering and reported back to headquarters on the absolutely splendid lunch he had consumed. Shortly afterwards, I was asked to explain my charges for a dinner – fortunately the answer was at hand, in Newfoundland we always took our main meal of the day at noon (10:30 AM Ottawa time). I hope Ted has a good excuse ready for the Halifax luncheon because I expect an invitation to it... and I drink.

**A Few Extra Lapilli**

- University of Calgary's Geology and Geophysics Department, with the largest undergraduate body in the country, found that it had to restrict enrolment this year because student numbers outrun the faculty and facilities. The method was tough but simple - insistence that all those nasty prerequisites in physics, chemistry and maths be discharged before a student could progress to advanced geology courses. It's amazing how many were stopped in their tracks by simple enforcement of an existing rule.
- Congratulations to the new government for raising NSERC's budget by 32% and restoring some of the losses due to inflationary attrition that have left some of our geoscience laboratories working at half normal capacity with antiquated instrumentation and a shortage of skilled technical help.
- Bright idea of the month comes from Don "Lotogeo" Rousell of Laurentian University. He writes that three per cent prize money should be taken off the top of all NSERC grants. Tickets could then be sold to all university researchers and an annual draw held for a super grant of about \$200,000. The winner would be freed for many years from the necessity of writing up time-consuming and unrealistic grant proposals. What an opportunity to get on with one's work.

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edited by W O Kupsch and W A S Sarjeant  
Geological Association of Canada Special  
Paper 19, 1979

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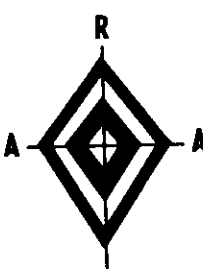
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