**Letters**

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**Books for Schools**

In the GC August 1975 issue, John Rau, who is Chairman of the Education Committee of GAC, has written a penetrating review of geological education in the secondary schools in Canada. He points out that the large numbers of students will get the maximum benefit if the teacher can provide a stimulating course, not as a rigid and orderly approach but as a science oriented investigation. However, many of the teachers have a limited background in the subject and although their enthusiasm and motivation is commendable, their capabilities are hampering the presentation. What is the solution? The professionals in every area should be taking the initiative to contact the teachers who will welcome any assistance. Some teachers need assistance but do not know how to get it! One day I was talking to a teacher in another city. He said “What is geotechnique?” I said “I don’t know - why don’t you call up - - -” (a professor at a university in his city). The teacher had not thought of that. But I know if he does, a contact will be made and many more questions will be answered. As Jon Rau writes “These teachers may not ask for our help but they need it”. The professional who takes the initiative to contact a teacher could make a substantial contribution.

Jon Rau made a significant contribution - a list of activities which any professional can initiate, with benefits which could have a profound effect. The list contains 44 different actions - and if every professional were to act upon just one, the teachers of earth science/geology in Canada would know they have the support to present a more effective course. Will the professionals respond? Well I decided to act upon just one - #12 - make a collection of books. I asked the faculty in the Department at Western. The response was eighty books - yes 80 - many elementary texts in physical and historical geology. But in addition, books on crystallography, ore suites, paleontology, air photos, petroleum geology, history of the geological science, etc! A book plate is pasted on the inside of the front cover including an invitation for students to telephone with their questions. The books were divided into three lots and distributed to schools where the subject is part of the curriculum. We anticipate satisfaction for everyone - the faculty, the teachers and the students - by just donating a few books which were only gathering dust.

So I say to John Rau, thank you for taking this initiative - and let us hope that all members of the profession will respond in some large or small way.

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**Current Research by Computer?**

For many years Geological Survey of Canada staff have compiled a useful listing of research projects under way across the country (Current Research in the Geological Sciences), relying on the voluntary cooperation of individual research leaders who provided details on a simply-designed form.

This year the form has been redesigned and our spirit of cooperation has plummeted to zero. Why?

The new form is now too long for any typewriter. Since we must therefore resort to hand-writing we are required to put every letter in one of a series of boxes, strung out in groups of 80, that magic number of the new technology: altogether there is space for 1120 alphanumeric characters per form, most of which would be needed to adequately characterise any one research project. Since a director plus two or three graduate students might well be involved in six projects, something like 5000-7000 hand-written characters would be needed, taking perhaps a full day of someone’s time. So much for the labour-intensive aspects.

The shortcomings of the coding required confirm our worst suspicions of creeping bureaucracy. Our principal complaint concerns the discipline names which may be used to describe a research project: we find no descriptor for non-engineering soil science, heat-flow geophysics, speleology, lunar geology, meteoritics, impact phenomena; we find that a geochemist must describe his work as either exploration or theoretical; we find that although geotechnique has five subdivisions permitted, none are given to marine science or to geomorphology. But also there is insufficient space for adequate reference to publications, the geographic area coding includes all...
extra-Canadian areas under other and
the descriptors prescribed for funding
designation will reap a rich harvest of
confusion from mistakes. Finally, the
form appears designed for use in
English only.

Instead of using such forms, evidently
designed so as to be convenient only to
key-punch operators, we are submitting
the information requested on the old
forms which were infinitely more
convenient to the researcher.

As constructive suggestions, we also
propose (1) that two typewriter-sized
forms be devised, one containing the
essential coded information, and one to
allow for "free" typing of the abstract and
references. Even better, (2) why not
dispense with the computer
bureaucracy and devise one form that
can be typed and then directly photo-
offset, much like the G.S.A. abstract
form. We admit that these could not be
cross-referenced so elegantly, but who
relies on (not just "would prefer") this
cross-referencing? The photo-offset
volume could be subdivided into major
topics (Geophysics, Geochemistry,
Sedimentology, etc.), and it would be up
to the user to scan the volume and
extract the information.

Finally, can we (the users, and pawns
in the computer game) afford this
computerized volume? With 30
universities, averaging 15 faculty each,
with four projects per faculty member
(including his graduate students), and
14 punched cards per project (new
form), we are looking at punching over
25,000 cards before any government
projects are included. The only benefit
we can see is that cutting down the trees
to make paper for the punch cards will
create more outcrop on the shield.

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... give it a chance

As Layout Editor for Geoscience
Canada, the above letter from
Professors Shaw, McNutt, and Walker
came to my attention at press time and I
was invited to respond. I am sure that
many geoscientists share their views, so
some background information is
perhaps worthwhile.

Few individuals will likely dispute the
need for periodic objective inventories of
research activity in the geosciences.
These are essential as reference
sources within the science and also for
use by those who wish to argue for a
larger slice of the scientific pie for earth
sciences (see Neale and Wynne-
Edwards, Geoscience Canada,
February, 1976). The Canadian
Geoscience Council has been
attempting to document current
research activity. First, Neale et al. (GSC
Paper 75-6) provided a status report
based on almost 70 discipline-
subdiscipline reviews. Second, the 1975
CGC Report (Barnes et al., GSC Paper
76-6) reviews other aspects of current
research emphasizing research related
to one sector – Canadian petroleum
exploration geology. Third, an attempt to
provide a more objective status report
similar to the Neale et al. (1975) volume
is currently in progress.

The Canadian Geoscience Council
recently assumed sponsorship of the
Current Research in the Geological
Sciences publication. The CGC Editorial
Committee (C. R. Barnes, Chairman,
G. D. Garland, Vice-Chairman,
T. E. Bolton, G. W. Mannard,
N. Morgenstern, E. R. Parker,
G. Perrault) attempted to use the
Current Research volume as part of a
critical analysis of the level and
organization of geoscientific research in
Canada. It was found to be unsuitable
because few projects were reported
from the industry sector. In an attempt to
make the volume more complete, to
allow cross-referencing, to produce lists
of current theses, to provide up-to-date
print-outs of current research to those
involved in producing subdiscipline
reviews or with other needs, etc., it was
decided to revise the form and employ
computer-processable methods.

To answer the specific comments
raised in the above letter:

a) there were unfortunate delays in
designing and printing the actual form
prior to its mailing. These will be
corrected for next year. The intent was
for an 11 x 14 in form (for ready copying)
with the boxes spaced at regular
typewriter-letter intervals.

b) having completed my own set of
forms manually I can assure the writers
that it does not take a day to complete.
but rather a couple of hours (depending
on the number and detail of the reports).

c) In any such first attempt, some
future modification of the coding may be
necessary. The writers criticize the list of
discipline categories. Attempts were
made to reduce and standardize the list
rather than to perpetuate the eternal
subdivision of earth sciences; no
classification will adequately package a
continuum of activities. One important
point was to provide a similar list to that
used in the next (and hopefully future)
CGC status reports. Thus, long-term
trends can be identified and some
information can be quantified with
assurance. The list of categories was
approved by the Committee and then by
CGC Council (with two representatives
from each of the twelve geoscience
societies); thus input from many
specialists was provided.

d) adequate space is available for the
most important reference on each
project published during the past year.

b) the great majority of research
reported in Current Research is from
within Canada; to code all extra-
Canadian areas would be cumbersome
and is not warranted by the relatively few
projects concerned.

f) estimating the funding should be
relatively simple, but less so for those in
industry and perhaps certain sectors of
government; the experiment seemed
worth attempting.

g) the ever-efficient Tom Bolton knew
that the writers preferred the English
form; a French version was mailed to
francophone geoscientists.

h) most of the constructive alternative
suggestions were considered earlier by
the Committee. We simply feel that the
present system offers more advantages.
Annual updating of previously reported
projects will be easier and the entire
volume can be printed (photo-reduced)
directly from the final computer print-out
(cf. new GAC membership booklet).