

## The Rich Get Richer

In his Pyroclasts column, Ward Neale consistently tries to be provocative with the hope (too often the vain hope, he will tell you) that members of the geoscience community either will pick up the gauntlet and duel with him using the readily available weaponry of "Letters to the Editor" or openly declare themselves to be his seconds. On the issue of research-grant policy (see The Rich Get Richer, Geosci. Canada. v. 5. no. 4, p. 210). I am happy to offer my modest services as a second and add a further plea for a continued fair and just distribution of research funds in a manner that will ensure the greatest return of important, original, reliable results.

No one in his right mind would want to return to the days when every researcher who came to the granting tables was given at least a crumb of the financial pies, with the result that the distinguished and deserving claimants could be granted no more than bitesized pieces. But it would be tragic if the financial pies should come to be so sliced that only those who are, or have been, the most distinguished and most deserving, including some with already well-lined bellies, could claim their wedge, and the thoroughly competent and deserving claimants, many of them content to subsist on the crumbs, could not get even these. This is not to imply that those charged with dividing the financial pies now, or in the recent past have, cut them recklessly and unwisely, guite to the contrary, in my limited experience the divisions have been decided upon after agonizing deliberation and thorough investigation by groups of thoughtful and understanding individuals well endowed with humane traits (see also Neale in

Pyroclasts, v. 4, no. 3). My comments are an appeal to those who now (and will in the future) shoulder the thankless task of deciding on division to resist unreasonable pressure to cut the pies into unjustifiably few slices and thereby allow the competent, deserving, and hungry claimants to starve. Were this to happen it would have a lasting detrimental effect on development of the geosciences in Canada, And, incidentally, the answer to the problem of division most certainly does not lie in apportioning the basic-research pies among the distinguished and most deserving, and expecting the thoroughly competent and deserving to seek their bites and crumbs only from the "mission-oriented" and "strategic" research pies.

Teaching and research are the very life blood of universities. Whereas it is recognized that some faculty members may be excellent teachers and indifferent at research, others the reverse, no faculty member should pursue one and not the other. Faculty members must have a real involvement with research so that, if for no other reason, they can remain sufficiently close to the frontier of their field to be effective teachers. It is unthinkable that institutions of higher learning, calling themselves universities, in the future might have to support a high proportion of their faculty engaged only in teaching. And let these remarks not be misunderstood: they are not designed to suggest that EMR or NSERC or any other granting agency should consider itself under an obligation to provide research funds to ensure only that teaching in Canadian geoscience departments continues to emphasize what is new, true, and topical. It is only reasonable that the granting agencies should expect from their competent and deserving claimants results that at

least geniunely advance knowledge of the geosciences in Canada, and from their distinguished and richly rewarded claimants results that gain recognition as having expanded the international frontiers of knowledge in the geosciences. But if the challenge to the geosciences in this country in the next quarter-century is to be met (see CGC reports on the Status of the Geosciences in Canada, 1974 and 1976). it will require the universities to continue to produce well-trained, researchminded graduates and it will depend upon a productive partnership between government, industry, and university. Each partner must then continue to be, and become increasingly. sensitive to the aspirations and needs of the others. The universities have their fair share of research talent ranging from the competent to the distinguished. Let the necessary steps be taken to ensure that the competent faction is not allowed to become incompetent.

It should be borne in mind too that some of the smaller universities, whose administrations have been unable to equip, staff, and maintain research laboratories from which truly front-line research results can be produced. have special problems. Many of these smaller universities have come to terms with their limitations in an appropriate manner: they have tailored their research thrusts and addressed important problems, commonly in the local scene, that they can reasonably expect to solve. Some excellent research is being conducted in small departments in small universities: it must be nurtured and, if practicable, encouraged to grow. There may be more valid reasons for using research funds to acquire the services of a research associate, a post-doctoral fellow, or a technician in a smaller, than in a larger. department.

In general, the largest slices of the financial pies go to the most distinguished claimants, and this is as it should be; but grantors and grantees could eliminate some difficulties for themselves if they would discourage the notion that the size of the slice or bite or crumb is an unfailing guide to the reputation of the claimant, his badge of office, and directly proportional to his position in the geoscience research heirarchy. If this view were not so widely held, more applicants would be more likely to apply only for what they needed to do the job well which, dependent upon their proposal conceivably could be less than they requested or were granted in a previous application. Quite apart from the need to keep pace with rising costs, prevailing notions of the dollar-prestige formula encourage applicants to seek more and more because they must try to improve their "position" and it would not do voluntarily to invite a "cut". Let it be remembered that to achieve results of comparable value, it may cost a seismologist five times as many dollars as it may cost a palaeontologist; it probably will cost much more to support a Fredericton sedimentologist studying the Sverdrup basin than a Vancouver petrologist studying the Coast Range batholith. With these thoughts in mind, I trust that the granting agency which commended the honesty and good sense of Ward Neale's "leader in his field who, upon his appointment as chairman of a large department, requested a large cut in his grant until his term of administrative duties was completed" will remember to reciprocate and to restore that distinguished researcher's grant to an appropriate level when he requests it. When a distinguished researcher's grant ultimately is reduced for whatever reason (acceptance of position with more administrative responsibilities, declining productivity with age) - and such a "cut" is about as inevitable as death and taxes he commonly considers himself slighted and becomes the subject of comment (yes, sometimes cynical, smug comment) among some members of the geoscience community. How sad! If less reliance could be placed on the dollar-prestige formula, it would have a paregoric effect on the distinguished researcher and all of the geoscience

community might be persuaded to be thankful that his star was on the ascendency, or at its zenith, for as long as it was.

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## Late Silurian and Early Devonian Graptolite, Brachiopod and Coral Faunas From Northwestern and Arctic Canada

by D.E. Jackson, A.C. Lenz, and A.E.H. Pedder Geological Association of Canada Special Paper 17

The work integrates the author's separate and on-going studies of graptolites, brachiopods and corals from northern and Arctic Canada. Much of the importance of the rich faunas from these regions is due to interbedding of graptolite-bearing shales with limestones carrying shelly fossils and conodonts. This and paleoecological aspects of the faunas are stressed by the authors. The volume is 160 pages in length, with four graptolite, ten brachipod and thirty coral plates. (August, 1978)

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