QUAESTIONES ENTOMOLOGICAE

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Editorial – Paradoxes of Publishing

As Editor of Quaestiones Entomologicae, once again I have been compelled to increase the cost of subscription, this time to $11.00 Canadian. This is approximately 33% more than last year's cost, and coincides with increased publication costs incurred in the last few months. This is characteristic of scientific journals at this time. As costs increase, a greater proportion of my own income is involved in journal subscriptions, and I have had to ponder if this is a wise investment. I think so.

The striking increase in scientific work over the past 25 years has coincided with increased inflationary pressure on the value of money. Increased production has developed increased need for serial publications. In fact, it seems unlikely that the "information explosion" could be sustained in the absence of ways to make public the results of endeavor in science. In turn, increase in the amount of information made public in print has led to an increased demand for, and shortage of, paper. This has resulted in greatly increased cost of this commodity, to such an extent that the government of France has announced recently its intention to open French Guiana to settlers, on the basis of potential monetary gains from cutting down the forests to make pulp for paper. Added to and greatly magnifying these costs have been the effects of inflation. Increased costs must be met by increased charges to the subscribers. The latter (including individual scientists and libraries), operating on budgets that have not increased at the rate of inflation, are being forced to curtail their investments in scientific literature. And this is a paradox: at a time of acute need for access to this important resource, the costs of that resource are becoming prohibitive, and are forcing a decreased demand for it. (For example, the University of Alberta Libraries have not received a budget increase since 1973. Since then, the percentage of the budget invested in journal subscriptions has risen from 15% to approximately 40%, and is expected to rise to 50% during 1976-77, even though the number of subscriptions has not increased significantly. In fact, Science Departments have been asked to consider cancellation of subscriptions to some of their serial publications.) As demand is decreased, and as subscriptions to journals are lost, the resulting decreased income to publishers forces the latter to reduce the amount of material they print, or to increase costs. Either of these actions is likely to decrease further the number of subscribers. Page charges can also be increased, but if they become prohibitive potential authors are compelled to seek other outlets. Ultimately, a journal is forced to cease publication; over the past few years, we have seen the demise of a number of North American entomological journals.

Could we not seek out other, cheaper, systems of making information public? For instance, it might be just as well to print and distribute on a regular basis only abstracts with the actual analyzed data being stored in computer banks, and thus accessible to those few specialists wanting this information. This procedure would greatly reduce the volume of printed material, and hence the costs of publication. But, as those who work with computers know, storage is expensive and charges might have to be levied for the use of this facility. Further, accidents happen, and stored information can be lost. Finally, those who control a computer network could control what is entered into the system. Even at this time, control is exerted by refusal of abstracting services to enter into their data banks abstracts of, or references to, material published prior to certain specified dates. What other criteria might be imposed in the future? My more paranoid readers could probably draft a list of imposing length of topics that might be excluded. So, although computers are wonderful devices, I believe that they should be used to ease the task of locating necessary references, but not to supplant the traditional type of scientific literature.

Alternatively, we could publish the data on microfilm, or microfiche. But, both of these devices require special equipment for reading – devices which are inconvenient for storage and use at home, or on vehicles of public transportation systems – the very places in which many scientists do much of their reading. Also it is not likely that such devices will be generally available to scientists of the "developing" countries, at least at this time and for the immediate future.

So, I would argue that the present standard means of publication are not only the most practical of those available, but

also the most desirable for the following reasons. First, there is a wide variety of journals, ensuring diversity of published material, for no two editors (much less editorial boards) hold the same views on acceptibility of subject matter and style. Conversely, restriction of journals to a few could lead to uniformity in subject matter, style, and ultimately I suppose, thought.

Second, the present system of publication exerts on potential authors a considerable amount of quality control. This is most easily seen by comparing that draft of a typescript circulated to one's colleagues for review with the one following the review that is submitted to the editor of a journal. I suggest that if this review process were not undertaken, the quality of preparation would decline appreciably. For, what author would take much interest in providing a first class treatment of a topic if most of the material were simply stored in a computer?

A third reason for retaining the present system is that it makes information available on an international basis. If only abstracts were made available on a routine basis, how many workers in lands other than those where the work was done, would bother to try to get copies of the complete papers that were suspected to be of interest?

A fourth reason involves serendipity, that wonderful ability of higher primates for making accidental discoveries of things of value – in this case, reading a paper out of curiosity simply because it is in a journal to which one subscribes, and finding therein an idea or clue that opens the mind to possibilities previously not perceived.

Thus, I think one can make a reasonable case for retention of our present system of publication in spite of high costs – and I think it is the responsibility of entomologists to support the system. Now, what can be done by us to fulfil this responsibility, and thus ensure a reasonable diversity of journals that publish papers about insects? First, we have to subscribe to as many journals as we can afford. This applies not only to those who require these publications because otherwise they would not have easy access to them, but it applies also to those associated with institutions having major libraries, with most of the literature readily at hand. (For example, all of the faculty members of my department subscribe to Canadian Entomologist, and most of them, to the Canadian Journal of Zoology (among others), even though these journals are at their disposal through the university library.) It is important to keep in mind that if a journal ceases publication because of lack of support, that journal is denied to major libraries and their patrons, just as it is denied to individual subscribers. Second, those entomologists associated with institutions having libraries with entomological holdings, can impress on the financial authorities the importance of funding adequate to at least maintain, if not increase, those holdings. It must be borne in mind that the network of journals is a vital component of science. Most journals are edited and published by scientists who receive no direct monetary compensation for their endeavors. Thus, support for a journal is not a source of personal income for colleagues. Rather, it is nourishment for a portion of the abstract scientific body.

In turn, if diversity of journals is important to the scientific community, it behooves editors to make their publications as attractive as possible to their subscribers, providing the quantity and quality of material that can reasonably be expected, at as low a price as can be achieved. (For example, last year, ***Quaest. Ent.*** provided its largest volume to date, and one paper was embellished with color illustrations, thanks to a special grant from the National Research Council of Canada. Detailed taxonomic descriptions, of interest to relatively few specialists, were printed in smaller size type to save space. The portion of this essay stating my personal views is in smaller type so that I can exercise editorial prerogative at minimal expense to the subscribers.) Large national societies must ensure that all of the funds collected for subscriptions are used for publication only, and not to finance other parts of their operations. The iniquitous practice must be stopped of charging institutions more than individuals for subscriptions. This would relieve libraries of some of the financial burdens imposed by the present high cost of publishing. Publishers must seek and use cheaper means of production, and the cheapest paper adequate for the job. Why, for instance, should text be printed on prohibitively expensive glossy paper? And, I suppose, on the basis that it is in the national (and international) interest to have diversity of scientific journals additional government support could be sought for publication. However, in these days of financial constraint and conservatism, with governments the world over funding mainly bread and circuses, and preferring the latter over the former (witness, for instance, the huge sums being invested in the 1976 Olympic Games in Montreal, and more locally, the 1978 Commonwealth Games to be held in Edmonton), I suspect that a request such as the scientific community might make would fall on unhearing ears.

Thus, the system within which we operate requires that much of the financial support to make public our work must be provided by us, the working scientists. This is a second paradox of publishing!

G. E. Ball