Ectromelia in U.S. Mouse Colonies

In January 1974 a laboratory at the National Institutes of Health received a small number of tumor-bearing mice from a European research institution. Soon after arrival the mice began to die and were found to have the acute form of ectromelia (mousepox). Immediate quarantine and decontamination procedures limited the outbreak to the original group of tumor-bearing imported mice and animals receiving new transplants. Fortunately none of the mice were removed from the room before or after the disease was discovered.

It has also been confirmed that ectromelia occurred in a midwestern research institution in February 1974. In both cases the source of infection appeared to be unvaccinated mice imported from Europe. Ectromelia is a highly infectious virus disease of mice. Other species of animals, including man, are not affected by the virus. This disease, which is endemic in many areas of the world, rarely occurs in U.S. mouse colonies. When introduced, however, mortality rates are generally high.

To reduce the possibility of further introduction of mousepox into this country it is suggested that all imported mice, mouse blood, and other mouse tissue products from foreign countries be accompanied by a certificate signed by a veterinarian and stating that the mice have been vaccinated at an age greater than 21 days with IHD-T strain of vaccinia virus, that a primary "take" was observed, and that the mice were derived from breeder stock that has been vaccinated for at least two generations. Tumor transplants of mouse origin should be passed at least twice through vaccinated mice to be acceptable for receipt in the United States. Unvaccinated animals received from other U.S. laboratories as well as foreign sources should be quarantined in an isolated area and tested for ectromelia before their introduction into

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existing colonies. This would include all mice that did not originate from clean, "closed" institutional or commercial colonies. It is also suggested that U.S. mice be vaccinated for ectromelia before shipment to foreign laboratories to protect those highly susceptible animals from this disease.

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Scientific Aid to Indochina

I am extremely gratified that Solang Uk (Letters, 8 Feb., p. 469) is so supportive of our task force Scientific Aid to Indochina. However, the statement made in the letter—that North Vietnam alone is to benefit from the aid —is not in accord with our principles or practices.

We have from the beginning realized that all of the people in Indochina have suffered greatly from the war, and need and deserve the help of U.S. scientists. We are currently establishing contacts with scientists in South Vietnam, and are sending books and journals of use to them. Anyone who knows of scientists in any area of Indochina who might be interested in cooperating with us in this venture should contact us immediately.

Our first large project was to help the people in North Vietnam establish a Research Institute of Agricultural Botany, for it was there that we made the first contacts and the first visit. This was—and is—an urgently needed program. It is not, however, exclusive of other projects in other areas of Indochina. Persons with ideas are urged to send them to us.

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NAS Research Associates

In a report on the "Pentagon's R & D clients" (News and Comment, 8 Mar., p. 936), Nicholas Wade writes that the "academy's work . . . [at Aberdeen Proving Ground and Picatinny Arsenal] consists of the employment of a handful of postgraduate students who work at nuclear investigations at Aberdeen and 'general physics,' including explosive materials, at Dover."

The fact is that the National Academy of Sciences administers programs of postdoctoral research associateships for 14 federal research organizations, of which eight are supported by the Department of Defense-including those at Picatinny and Aberdeen. Some of these research associates receive temporary civil service appointments from the host agencies, while others receive grants from the NAS and enjoy the status of guest investigators at the laboratories. None of them is an employed of the NAS and none of them is doing the work of the NAS. Furthermore, the work they are doing, largely of their own choice, is entirely unclassified and all are encouraged to publish.

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Library Photocopying

In his article "Soaring prices and sinking sales of science monographs" (25 Jan., p. 282) Curtis G. Benjamin describes the economic dilemma faced by the publishers of science monographs. He makes a number of observations about the reasons for declining sales of these important publications.

Benjamin states that the most important reason in recent years for the continuing annual drop in sales is the "employment of the so-called new technology and of new circulation practices of research and special libraries." He cites photocopying for interlibrary loans as contributing to the problem of reduced sales of science monographs. As the principal investigator of a recent national study on the interlibrary loan activities of academic libraries (1), I would like to offer some data on this aspect of the problem.

From a national probability sample of academic libraries, we estimated that a total of 1,940,000 loan requests were received by the interlibrary loan departments of academic libraries in 1970 for all types of publications [table 4.15, (1), p. 44]. Requests for periodical materials accounted for about 48 percent of the total, monograph requests were next at 34 percent, 6 percent were thesis and dissertation requests, and 12 percent of the total were classified as other types of publications. Of the estimated 668,000 loan requests for monographs, 3.2 percent were photocopy requests. In other words, about 21,400 loan requests received through the traditional interlibrary loan offices of academic libraries involved photocopying of monograph materials. One can only speculate on the contents actually photocopied. In some cases only the table of contents was requested, sometimes a single page including a table or figure, and at other times a chapter. I doubt that many librarians would allow the photocopying of an entire monograph.

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References

 V. E. Palmour, E. C. Bryant, N. W. Caldwell, L. M. Gray, A Study of the Characteristics, Costs, and Magnitude of Interlibrary Loans in Academic Libraries (Greenwood Publishing Company, Westport, Conn., 1972).

Curtis Benjamin is about 95 percent wrong in saying that ". . . the most . . . important reason" for less than hoped for sales of science monographs is "widespread and almost uninhibited photocopying . . ." of books by research and special libraries. Science librarians know from personal experience that little or no photocopying of books is done by libraries. Almost all library photocopying is of journals or technical reports, not books. It is my impression that we need not worry about the demise of scientific books until publishers stop looking for authors to write them. I assume this won't happen until scientific book publishing is really unprofitable.

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Benjamin has well pointed out the restrictive effect of "soaring" printing costs upon the circulation and even publication of the results of scientific inquiry. This economic effect is compounded when superimposed, as it is, upon the stationary or, in some cases, declining average number of pages in scholarly journals available to a growing number of young scholars. If the dictum "publish or perish" was ever justified, it is growing less so year by year.

The honest facing of this dilemma seems to require immediate and strenuous measures. I propose that the flexibility and low-volume economy of the very photocopying techniques that have caused much of the problem discussed by Benjamin can be brought to bear to solve it. The work of the young scholar, or the innovative ideas of an older one, require the testing of public exposure. Preliminary screening can usually be done among colleagues, but more is needed. An indexed and widely distributed summary of new work, standardized in format, could be made available through libraries. Those attracted by an abstract could order a ful' photocopy of the essay or monograph. Thus, a self-sustaining system could be created for presenting new data, or for gaining critical review of new interpretations.

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I think Kenneth Lowry is at least 65 percent wrong in saying "Almost all library photocopying is of journals or technical reports, not books." This may be true at the Bell Labs library and at a few other strictly research libraries. Certainly it is not true at the several hundred libraries that serve science education as well as research. I know of only one fairly up-to-date source of information on the point: the study by Stuart-Stubbs (1) of photocopying practices at 38 Canadian universities in 1971. Stuart-Stubbs found that books and periodicals of all kinds were copied in almost equal proportion. There has been no study in Canada or elsewhere of photocopying at the libraries of 4-year colleges, but spot checks indicate that undergraduates copy books far more frequently than periodicals. My own unscientific but painfully educated guess is that, of all the photocopying done today at (not by) all college and university libraries, about 65 percent is of books and 35 percent is of periodicals and technical reports.

To Kenneth Lowry and to other doubters, I can only say again that I do not claim to have absolute proof of my thesis. I only know for sure that many large library systems that used to order from two to five copies of a new monograph now order only one copy. I can only deduce that the rapid growth of interlibrary loan services, coupled with readily available copying facilities, has been responsible for this change.

In further support of my view, I can quote a recent New York Times report (2) on the new research consortium formed by the New York Public Library and the libraries of Columbia, Yale, and Harvard. Based on an interview with the president of the New York Public Library, the report said, "It [the consortium] will enable the libraries to save money by buying only one copy among them, and not four copies, of expensive sets of volumes, for instance, or little-used journals." The report then added that the consortium was to be expanded "as soon as practicable" to include other research libraries.

The report on the four-institution consortium came on the heels of the announcement of a National Science Foundation grant of \$368,000 for the establishment at Wellesley College of an academic science information center designed to serve all the Northeastern states. I think it is safe to suppose that the operators of this center will arrange to have one copy of a monograph serve the needs of the whole region.

Yes, the evidence may be presumptive, but to me it is coming through loud and clear.

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References

1. B. Stuart-Stubbs, Purchasing and Copying Practices at Canadian University Libraries (Cana-

dian Association, Ottawa, 1971).
2. E. Pace, New York Times, 24 March 1974, p. 59, sect. 1, part 2.

Rescheduling for Energy Conservation

There is confusion among policymakers over the proper steps to be taken in the face of the energy crisis. Decisions to rearrange school calendars and work schedules have been made on the basis of intuition, without reference to scientific and engineering principles. We have applied the laws of