time to the task of managing the flood of scientific information. This attitude is untenable. Every scientist must accept his share of the responsibility for controlling scientific information. He must realize, as a matter of course, that when he adds to the cascade of scientific information, he assumes a responsibility to participate in the management of the flood.

"I believe the university has a clear duty in this connection. Our coming generations of scientists must be taught to accept their responsibility toward information—not grudgingly and with half heart, but fully and constructively. This attitude represents a change from the prevailing attitude. Scientists generally fail to see why they should be bothered with helping to manage scientific information; this they learn from their professors and colleagues who are similarly disinclined to make the necessary sacrifices.

"But sacrifices will have to be made if science itself is not to collapse. The education of every scientist will have to include instruction in handling the new and ingenious tools of information retrieval. The educational process will even more have to inculcate into all scientists a willingness to contribute time and effort in behalf of the entire scientific communication system."

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Aphids

Five projects for studying factors affecting the biological control of the arthropod pests of food crops have been proposed as part of the International Biological Programme. One of these projects concerns aphids. After consultation involving more than 100 aphidologists in all parts of the world, the project has been orientated around the green peach aphid, *Myzus (Nectarosiphon) persicae* Sulz., and other aphids associated with it on various crops. While the proposal is focused on this one species of worldwide importance, findings will also be relevant to the evaluation, selection, and implementation of biological methods to be used in biological and integrated control programs for crop aphids in general. Since the information required will be largely ecological, the project is being assisted by the publication of reviews of what is known of the biology

and ecology of the aphids and their natural enemies.

A meeting to discuss methods and work plans for obtaining more information about biological aspects of aphid control was held in England at the Imperial College of Science and Technology (Field Station), 6–7 April 1967. The coordinator of the project, M. J. Way, brought together a small group of aphid workers from various parts of the world. They were helped by a representative group of British workers including experts in insect ecology. The meeting had no formal agenda but the discussion led to a clearer understanding of fields of work in which information was most needed. Such fields include: (i) Recognition and determination of the biological properties of aphid species and biotypes; (ii) relation of aphid and host plant; (iii) the determination of predatory species and of their role in the control of aphids; (iv) the evaluation of parasites and pathogens; (v) the role of aerial movement; (vi) the sampling techniques for aphids and associated species on plants; and (vii) population dynamics.

Within these fields useful reviews of methodology were made; the comparisons of the experience of several workers with the same method were particularly illuminating. Finally, ways in which the international nature of the project could be exploited were discussed.

Three approaches seemed open: (i) Complementary studies. Development of individual projects would result in much better coverage of the fields relevant to biological control. (ii) Comparative studies. Geographic separation of the study centers would provide opportunity to study, with standardized methods, the nature and effects of the genetic make-up of the population and the physical and biotic environment. (iii) Collaborative studies. A planned sequence of observations or experiments in different centers could provide principles with predictive value as, for example, studies in aerial movement in relation to future pest outbreaks.

It was decided that a set of methodology reviews by specialists in the different fields should be prepared and published in the I.B.P. Handbook series. It was agreed that although complementary studies could be initiated soon, some collaborative studies might need to wait until appropriate methodology had been selected and tested.

It was also agreed to circulate de-

tailed proposals to aphid workers throughout the world and encourage their cooperation. Inquiries should be addressed to M. J. Way, Imperial College Field Station, Silwood Park, Sunninghill, Ascot, Berks, England.

M. J. WAY

Imperial College Field Station, Silwood Park, Sunninghill, Ascot, Berks, England

Calendar of Events

National Meetings

June

18–22. American **Medical** Assoc., 116th annual conv., Atlantic City, N.J. (The Association, 535 N. Dearborn St., Chicago, Ill. 60610)

18–22. **Health Physics** Soc., 12th annual mtg., Washington, D.C. (J. C. Villforth, Radiological Health Lab., 1901 Chapman Blvd., Rockville, Md.)

18–22. Society for **Investigative Dermatology**, Atlantic City, N.J. (G. W. Hambrick, Jr., The Society, Johns Hopkins Hospital, 601 N. Broadway, Baltimore, Md. 21205)

18–23. American Soc. of **Ichthyologists and Herpetologists**, annual mtg., San Francisco, Calif. (W. I. Follett, California Acad. of Sciences, Golden Gate Park, San Francisco 94118)

18–30. **Electron Microscopy**, workshop, Northeastern Univ., Boston, Mass. (C. Youse, Continuing Education, Northeastern Univ., 360 Huntington Ave., Boston)

19. **Scombroid Phylogeny**: Ideas and Approaches, symp. of American Soc. of Ichthyologists and Herpetologists, San Francisco, Calif. (B. J. Rothschild, Tuna Ecology Program, Bureau of Commercial Fisheries, P.O. Box 3830, Honolulu, Hawaii 96812)

19–21. Automatic **Data Processing Systems in Local Government**, 3rd annual conf., New York, N.Y. (H. Sellin, School of Continuing Education, New York Univ., New York 10003)

19–21. **Colloid**, 41st natl. symp., Buffalo, N.Y. (P. Becher, Chemical Research Dept., Atlas Chemical Industries, Wilmington, Del. 19899)

19–21. **Heat Transfer** and **Fluid Mechanics** Inst., La Jolla, Calif. (D. B. Olfe, Dept. of Aerospace and Mechanical Engineering Sciences, Univ. of California at San Diego, La Jolla)

19–21. **Microelectronics**, symp., St. Louis, Mo. (R. Pellin, Inorganic Chemicals Div., Monsanto Co., 800 N. Lindbergh Blvd., St. Louis 63166)

19–22. American Soc. for **Engineering Education**, 75th annual mtg., East Lansing, Mich. (L. Winner, 152 W. 42 St., New York 10036)

19–22. Western Soc. of **Soil Science**, annual mtg., Los Angeles, Calif. (J. L. Young, 100 Agricultural Hall, Oregon State Univ., Corvallis)

19–23. **Automating State and Local Records Making and Records Keeping**, American Univ., Washington, D.C. (P. W.