

ening the Protocol can be foreseen if it were interpreted as permitting the use of chemical agents in war which are customarily used in peacetime. In wartime, for example, riot control agents can be used to increase the lethality of conventional weapons. Thus it is important to develop ways of defining acceptable peacetime uses of chemical and biological agents in the general context of a prohibition of their use in war.

As an outgrowth of previous Pugwash Conferences, an experimental system of laboratory inspection for biological weapons has been developed by the Peace Research Institute in Stockholm. Field inspection trials have been carried out in both Eastern and Western countries. It was felt that this experiment had yielded fruitful results, both in regard to the technical problems of verifying observance of nonproduction agreements and in arousing the interest and active participation of several countries, in both the East and West.

In recent years, Pugwash Conferences have included discussions of the ways in which science and technology may help to narrow the gap between the more developed and the less developed countries, since this gap is as much a threat to peace as the arms race between the developed countries. In one working group at Sochi, food supplies and population growth were considered. In addition, a novel proposal was discussed concerning the development of an International Foundation for Scientific and Technical Development. This foundation would serve to support research by scientists and technologists of developing countries in their own academic institutions and laboratories. A rather detailed outline of the structure of this foundation was presented together with the types of research to be supported by it. The group suggested that funds could come to this foundation not only from governments and intergovernmental agencies, but also directly from industries, foundations, and individuals. In addition to furthering development, the formation of such a foundation would also have an important role in solving some of the problems of the "brain drain."

Other working groups at the conference discussed European security and current military conflicts, including the Middle East and Nigeria. Scientists were present from countries on both sides of these two conflicts, and

this facilitated a frank exchange of views.

The Pugwash Conferences serve a useful function in being an unofficial channel of communication between scientists of the East and West. Previous conferences have developed useful initiatives as, for example, the London Conference in 1962, at which the idea of an automated seismograph, the so-called "black box," was introduced as a possible means for facilitating the development of a nuclear test ban treaty. However, a somewhat less tangible, but nonetheless important, by-product of these conferences develops from one's exposure to scientists who have another point of view. These personal contacts impart a sense of perspective to the problems of disarmament which cannot be achieved simply by studying the problems in the abstract. Participants come to these meetings with a wide variety of backgrounds and intellectual disciplines. They are selected by the individual national Pugwash organizations which, in the United States, consists of the Pugwash Committee of the American Academy of Arts and Sciences. Although the meetings are unofficial, many of the participants have official positions with their respective governments or have had them in the past. At the meeting in Sochi several American scientists (P. Doty, Harvard; R. Garwin, Columbia; D. Glaser, University of California, Berkeley; G. Rathjens, M.I.T.; R. Revelle, Harvard; J. Ruina, M.I.T.; H. York; University of California, La Jolla) have or formerly had responsible positions in the Department of Defense, the President's Science Advisory Committee, or Arms Control and Disarmament Agency. Experts who now hold or who have held analogous positions in other countries were present. It is possible that one of the chief beneficial effects of these meetings is that they allow in a nongovernmental context the exploration of many ideas and concepts relating to disarmament which can be discussed in a freer atmosphere than would be the case if they represented government policy.

The outstanding characteristic of the 19th Pugwash Conference at Sochi was the general sense of agreement between Eastern and Western participants concerning the necessary steps which must be taken in our search for world security. Although there were some differences in detail, there was nonetheless a feeling that there is one common road along which the United States

and the U.S.S.R. should proceed in order to achieve a more secure world. Just as the conference ended, the announcement was made of the beginning of the Strategic Arms Limitation Talks, which are now being held in Helsinki, Finland. As a small group of Russian and American conferees discussed these talks, they agreed that these SALT negotiations would have the quality of IQ tests for the two countries. It is clear that a greater degree of security can be obtained with a substantial reduction in strategic arms. It will perhaps be a test of our joint intelligence to see whether we can proceed in that direction.

ALEXANDER RICH
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Forthcoming Events

April

1. **Arkansas Acad. of Science**, Russellville. (G. E. Templeton, Div. of Plant Pathology, Univ. of Arkansas, Fayetteville 72701)

1-3. **National Pollution Control Conf. and Exposition**, San Francisco, Calif. (Nat. Pollution Control Conf. and Exposition, P.O. Box 13116, Houston, Tex. 77019)

1-4. **International Conf. on Combinatorial Mathematics**, New York, N.Y. (L. R. Neville, New York Acad. of Sciences, 2 E. 63 St., New York 10021)

1-4. **National Council of Teachers of Mathematics**, 48th annual, Washington, D.C. (J. D. Gates, Executive Secretary, 1201 16th St. NW, Washington, D.C. 20036)

1-4. **International Conf. on Thermodynamics**, Cardiff, Wales. (Meetings Officer, Inst. of Physics and the Physical Society, 47 Belgrave Sq., London, S.W.1, England)

2-4. **Michigan Acad. of Science, Arts, and Letters**, 74th annual, Detroit, Mich. (T. G. Overmire, MASAL, 1721 Washtenaw, Ann Arbor, Mich. 48104)

2-4. **Eastern Psychological Assoc.**, Atlantic City, N.J. (W. W. Cumming, 353 Schermerhorn Hall, Columbia Univ., New York 10027)

2-4. **Association of Southeastern Biologists**, Lakeland, Fla. (D. C. Bliss, Box 278, Randolph Macon Woman's College, Lynchburg, Va. 24504)

6-8. **Mineralogical Soc. of Great Britain and Ireland**, London, England. (P. Wilkinson, Dept. of Geology, Univ. of Sheffield, Sheffield-S1 3JD, England)

7-10. **American Optical Soc.**, Philadelphia, Pa. (M. E. Warga, The Society, 2100 Pennsylvania Ave., NW, Washington, D.C. 20006)

8-11. **American Acad. of Oral Pathology**, San Diego, Calif. (S. M. Standish, c/o Indiana Univ. School of Dentistry, Indianapolis 46202)

9-10. **Metabolism and Biological Func-**

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tions of Polyamines Conf., New York, N.Y. (L. R. Neville, New York Acad. of Sciences, 2 E. 63 St., New York 10021)

9-10. Metal Cleaning Symp., Cleveland, Ohio. (W. M. Mueller, American Soc. for Metals, Metals Park, Ohio 44073)

9-10. National Conf. on Rural Health, 23rd, Milwaukee, Wis. (B. L. Bible, Council on Rural Health, 535 N. Dearborn St., Chicago, Ill. 60610)

9-11. American Assoc. for Cancer Research, Philadelphia, Pa. (H. J. Creech, The Association, 7701 Burholme Ave., Philadelphia 19111)

10-12. American Soc. of Internal Medicine, Philadelphia, Pa. (E. E. Daieske, 525 Hearst Bldg., 3rd at Market, San Francisco, Calif. 94103)

12-17. Biomedical Engineering Soc., 2nd annual, Atlantic City, N.J. (D. S. Gann, Case Western Reserve Univ., Cleveland, Ohio 44106)

12-17. Federation of American Societies for Experimental Biology, Atlantic City, N.J. (J. F. A. McManus, FASEB, 9650 Rockville Pike, Bethesda, Md. 20014)

12-17. American Soc. of Hospital Pharmacists, Washington, D.C. (J. A. Oddis, ASHP, 4630 Montgomery Ave., Bethesda, Md. 20014)

12-17. American Inst. of Nutrition, Atlantic City, N.J. (J. Waddell, 9650 Rockville Pike, Bethesda, Md. 20014)

12-17. American Pharmaceutical Assoc., Washington, D.C. (G. B. Griffenhagen, Div. of Communications, 2215 Constitution Ave., NW, Washington, D.C. 20037)

13-15. International Symp. on Very Long Baseline Interferometry, Charlottesville, Va. (J. W. Findlay, Natl. Radio Astronomy Observatory, Edgemont Rd., Charlottesville 22901)

13-16. American Industrial Health Conf., Chicago, Ill. (H. N. Schulz, AIHC, 55 E. Washington St., Chicago 60602)

13-16. American Acad. of Pediatrics, Washington, D.C. (G. E. Hughes, 1801 Hinman Ave., Evanston, Ill. 60204)

13-17. American Physiological Soc., Atlantic City, N.J. (R. G. Daggs, APS, 9650 Rockville Pike, Bethesda, Md. 20014)

14-16. Computer Graphics Intern. Symp., London, England. (M. L. V. Pitteway, Computer Science Dept., Brunel Univ., Uxbridge, Middlesex, England)

14-16. Conference on Nondestructive Evaluation, Los Angeles, Calif. (J. A. Fellows, American Soc. for Metals, Metals Park, Ohio 44073)

14-17. International Geoscience Electronics Symp., 2nd annual, Washington, D.C. (R. Bernstein, IBM Corp., 18100 Frederick Pike, Gaithersburg, Md. 20760)

15. Idaho Acad. of Science, Pocatello. (M. J. Bigelow, Chemistry Dept., Idaho State Univ., Pocatello 83201)

16-18. Nature of the Sol'd Earth, Francis Birch Symp., Cambridge, Mass. (E. C. Robertson, U.S. Geological Survey, 8001 Newell St., Silver Spring, Md. 20910)

16-18. Ohio Acad. of Science, Wittenberg Univ., Springfield. (J. H. Melvin, 505 King Ave., Columbus, Ohio 43201)

16-18. Population Assoc. of America, Atlanta, Ga. (A. F. Ferriss, Russell Sage Foundation, 1755 Massachusetts Ave., NW, Washington, D.C. 20036)