ity of Munich). The new society has just held its first congress (Vienna, Austria, 18–20 April 1963) a 2½-day meeting in the course of which more than 40 technical papers were delivered. About half the papers were immediately concerned with anatomy and histology, and the bulk of the remainder dealt with either metallurgical or mathematical topics. Abstracts and preliminary manuscripts received in time were published in a proceedings volume distributed to members at the meeting; simultaneous translation in English and German was available throughout the technical sessions; and despite dreadful overcrowding of the program no parallel sessions were held. The subject matter ranged from geometrical probability to the interpretation of electron microphotographs of brain and nerve tissue.

Both the society and its congress seem of particular interest as experiments in communication. At the moment the society has 128 members, of whom 55 were registered at the congress. Throughout most of the technical session the audience included more than 40 of these. These figures reflect a very high level of membership participation, but of course it remains to be seen whether this level can be maintained as the society grows. The usual escape from the intellectually deadening atmosphere of the large society convention is the small "by-invitation-only" symposium, dedicated to intensive discussion of a single subject. There are advantages in this scheme, but there are also advantages in the normal society organization which we are perhaps sacrificing unnecessarily. Small scientific "craftunions" purposely cutting across the "industrial-union" rationale of the major professional societies might provide communication channels combining the advantages of continuing organization with those of the small ad hoc symposium.

The range of subject matter was so great and the opportunity for informal discussion so limited by language difficulty and excessive crowding of the program that specific interdisciplinary collaboration was hardly to be expected. Probably the principal effect on most of us was a rather general intellectual stimulation. It is exciting, for instance, to speculate about the possibility that the descriptive techniques and vocabulary of structural petrology might find application in the study of the orientation of cells and fibers in nerve tissues, and that, similarly, the behavior of geological materials in the plastic flow leading to isoclinal folding might find parallels in the development of convolutions in brain tissues. Interactions of this sort—and most participants experienced one or more of them—are immensely satisfying. They probably would have been more numerous had there been more opportunity for informal, off-the-floor discussion.

At the close of the technical session the organizing committee was relieved of its functions and the first business meeting of the new society elected a full set of officers, with H. Elias as its first president. The second meeting, scheduled for spring of 1966, will be held on the campus of the University of Florida, at Gainesville. F. Rhines, (University of Florida Metallurgical Research Laboratory) is in charge of program and meeting arrangements.

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Genetics: Molecular Structure and Function

A symposium on molecular studies on the structure and function of genes was a highlight of the 8th annual meeting of the Genetics Society of Canada, held at Ottawa 18 to 20 March. Topics as diverse as cereal-crop breeding and cytogenetics, genetics of vegetable crops, mutation, radiation genetics, medical genetics, genetics of swine, poultry genetics, *Drosophila* genetics, and the genetics of microorganisms were discussed.

The annual invitational lecture, delivered by Bruce Wallace (Cornell University), dealt with the genetic structure of *Drosophila* populations. He discussed the bearing of his studies upon evolutionary theory. His data indicate that mutation may not be as harmful as is often thought, for heterozygotes are, on the whole, adaptively superior to both kinds of homozygotes.

I. Takahashi (Central Experimental Farm, Ottawa) discussed his work on the DNA of bacteriophages øBS1 and øBS2. Although this DNA appears to have a typical double-helix structure, the bases include uracil rather than thymine, a characteristic usually associated with RNA. Also, glucose is attached to the cytosines and guanines. M. Ycas (State University of New York) spoke on "Reading the gene" and em-

phasized data and viewpoints that do not fit well with current theories. Data on adaptive enzymes suggest that the genes which determine them are not, as commonly thought, blocked by suppressors. Rather, these genes (and others?) are normally inactive until activity is induced by the appropriate substrate. The complexity of most enzymes and hence the probability that they must be determined in several steps is a theoretical stumbling block for the one gene-one enzyme theory. However, it may be illusory if the several determining units comprise one operand, which function (or fail) together. Finally, he expressed grave doubts that chromosomal proteins are as inert as commonly supposed. Specifically, he suggested that they might form complexes to bind materials upon which the genetic DNA acts. G. H. Dixon (University of Toronto) discussed studies by himself and G. E. Connell on human haptoglobins, studies carried out by starch-gel electrophoresis. These experiments suggest the possibility that unequal crossing over, eliminating small segments of DNA, and duplicating others, might result in losses of specific amino acids from the haptoglobin molecule while other parts of the molecule are duplicated.

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Forthcoming Events

July

5–9. Pure and Applied **Chemistry**, 22nd conf., London, England. (Div. of Chemistry and Chemical Technology, Natl. Research Council, 2101 Constitution Ave., Washington 25)

7–17. **Aerospace Education**, 7th natl. conf., Miami Beach, Fla. (Natl. Aerospace Education Council, 1025 Connecticut Ave., NW, Washington 6)

8–13. **Ionization Phenomena** in Gases, 6th intern. conf., Orsay, France. [P. Hubert, CENFAR, P.O. Box 6, Fontenay-aux Roses (Seine), France]

9–11. **Space Telecommunications**, intern. symp., Boulder, Colo. (Boulder Laboratory, Natl. Bureau of Standards, Boulder)

10–12. Meteorological Support for **Aerospace Testing and Operation**, Fort Collins, Colo. (Inst. of Aerospace Sciences, 2 E. 64 St., New York 21)

10–12. High **Magnetic Fields**, production and applications, conf., Oxford, England. (N. Kurti, Clarendon Laboratory, Parks Rd., Oxford)

10–17. Pure and Applied **Chemistry**, 19th intern. congr., London, England. (Div. of Chemistry and Chemical Technology, Natl. Research Council, 2101 Constitution Ave., Washington 25)