Letters

Iron Curtain Drops on Israeli Scientist

I planned to attend the 13th International Congress of Entomology which was held in Moscow 2–9 August 1968. All my arrangements were concluded and confirmed by the secretariat of the congress in Moscow last February. Later, however, just before the congress was to convene, my plans were completely ignored by the Soviet authorities as well as by the secretariat in Moscow. I received neither a Soviet visa nor any explanation. In fact, I did not receive any further correspondence or announcements. Even the intervention of Paul Freeman, secretary of the Permanent Committee of International Congresses of Entomology, did not help. My telegrams and letters to the Moscow congress and to Soviet authorities were unanswered (although in some cases the answer was prepaid by me). Furthermore, when I sent the manuscript of my paper (which had earlier been officially accepted by the congress) to an English participant to read in my absence, he was not allowed to do so. He was told that I was not a member of the congress, which was untrue since the secretariat had confirmed my registration, endorsed my registration fee, and accepted my paper 6 months earlier. My membership fee has not been returned to me. It should be added that no Israeli scientist received a Soviet visa to attend this international meeting.

It is clear that my experience represents political discrimination which involves not only the Soviet official authorities, but also some people responsible for the administration at the secretariat of the congress in Moscow. This discrimination appears to be carried out deliberately according to a plan. First, months before the opening of the congress, correspondence is answered and formalities appear to be arranged. Then, just before the congress convenes, when it is too late to take any drastic steps, the Israeli participant is simply ignored and excluded.

I would like to ask those scientists who take part in decisions regarding the site of future international scientific meetings to oppose holding further meetings in the Soviet Union unless participation by Israeli scientists can be assured. Moreover, in view of the "method" described above, it is doubtful whether a promise given by individual Soviet scientists could be regarded as valid; although such promise might be given in good faith, it may prove useless unless supported by a statement from official Soviet authorities.

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Aquatic Harvests

Bardach presented a good, broad view of world aquacultural practices and potentialities ("Aquaculture," 13 Sept., p. 1098). . . . But the flourishing worldwide industries based on the production of kelp extracts, marine colloids, and other chemicals (which, incidently, are frequently used as food additives), suggest areas of aquaculture not covered in the article. Although most structural polysaccharides of algae are indigestible by man, their widespread industrial application, the ever-growing commercial demand for such products, coupled with the scarcity of supply would certainly justify the evaluation of algae, especially the marine species, as products for aqua- or mariculture. Indeed, research and development programs are under way to "domesticate" such red algae as *Gracillaria* and *Suhria*, which are sources of agar-agar and Irish moss (*Chondrus*), from which carrageen is obtained.

Another important aspect of aquaculture is the collecting of lower aquatic life forms for their drug potentialities. Antibiosis is more widespread in marine organisms than in terrestrial species. Consequently, the seas offer a vast and relatively untapped source of antibiotics. One highly potent antibiotic, cephalothin, has already been successfully isolated. This is only the first of an array of promising drugs of marine origin currently under investigation. The organisms which produce these substances, however, will have to be intensely cultivated in order to generate enough raw material to make their utilization commercially feasible. Techniques to solve some of these problems (for instance, the growing of sea cucumbers for their toxins), are being investigated.

Bardach states that "paternity on the oyster bed is impossible to ascertain." This is indeed true of wild populations but does not hold for laboratory-raised larvae. Spawning in oysters can be induced by raising the water temperature; fertilization can easily be achieved between two selected specimens with the result that hatched larvae will exhibit more or less the desired characteristics. Larval food requirements are rather exact and somewhat difficult to satisfy but the impression given by the author that larvae need "flagellate algae for food" is probably too exclusive. Many other plantonic algae of the required size and lacking an indigestible (cellulose) cell-wall serve equally well. Good larval growth has even been achieved with some nonliving substitute food like corn flour. Investigations, in at least three different countries, are under way to find sources of nonliving, storable food for oysters and larvae in order to permit intensive cultivation in closed tanks—from fertilized eggs to marketable adults.

Though Bardach and this letter point out some of the many technical problems which remain, I feel there is a bright future for aquaculture as a source of food and other products needed by modern man.

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Vietnam: After Withdrawal

Jerome Wiesner is quoted as saying that "the Vietnam war is a mistake and that we should get out" (4 Oct., p. 104). Constant repetition of this statement serves to underscore its glaring defect. It should conclude: "We should get out and leave South Vietnam to the North Vietnam Communists." I know of no proponents of the above opinion who would deny that the second part follows the first as the night the day. Yet we hear the first part *ad*

nauseam, the second almost never. I am not proposing a moral judgment about the opinion itself, whether it is desirable, or reprehensible, or should be accepted as inevitable. But I have long held a moral opinion about the use of the first part of the statement without the second: it is dishonest and callous. Publishing it as the "predominant view" calls for some kind of challenge, since it reflects so unfavorably on the intelligence and moral sensitivity of the scientific community. . . .

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UFO Phenomena

The letters by Branscomb and Herbison-Evans (27 Sept.) present an interesting contrast in approach to UFO research. Branscomb lays down the challenge, "Find the body of . . . evidence (not proof) that the nature of some UFO's is sufficiently extraordinary to be deserving of the serious attention of the scientific community . . . ," while Herbison-Evans suggests two inexpensive devices that might be employed in observing an anomalistic phenomenon if and when it is witnessed. As Branscomb states, ". . . the rationality of science is at stake." The rules of reason and of science indicate that when apparently anomalistic data are obtained it is useful to analyze them and if there is no obvious explanation for the data, then new data should be collected or new theories developed to account for the anomalous phenomenon.

Although some reasonably hard movie-film data exist, they are of poor quality due to the apparatus employed in obtaining them. Herbison-Evans has a suggestion to alleviate this difficulty. It is my guess that the Condon report will indicate that only a very few UFO cases remain unexplained and that there is no compelling evidence for any "supernatural" phenomena. I feel the proper approach is to condition the scientific response to the magnitude of the problem. Certainly I would not advocate a NASA-sized effort unless a very unusual event took place—especially if I am correctly anticipating the Condon report.

The anomalistic data so far observed may be meteorites spiraling into Earth's atmosphere, atmospheric plasmas, entering comets, or intelligently controlled extraterrestrial spacecraft. Possibly even a combination of an unusual and not yet understood atmospheric phenomenon (that is sometimes not rationally or correctly reported because of numerous psychological factors) is the basis for many of the unexplained reports. In my view, a modest expenditure of effort in modifying surveillance-radar software, in employing apparatus such as that suggested by Herbison-Evans, and in low-cost, special-purpose surveillance systems would be sufficient. We should recognize that there may be some practical value to be gained in such research programs. What if the Tunguska event of 1908 repeated itself without benefit of the prior study of entering comets—a study that had been abandoned because of a UFO taint? What if studies of ball lightning and St. Elmo's fire are similarly rejected and fires resulting from coronal-discharge plasma balls (as occurred in Los Angeles recently) are not prevented because observations of anomalistic plasmalike phenomena are not taken seriously? Who can say at this stage that anomalistic observational phenomena are not deserving of attention?

If, as Branscomb writes, "Scientists will sooner or later realize that the credibility of science and its leading practitioners is suffering from the irrationality of the public debate itself," then I would say that the realization will not come in the form of an out-of-hand rejection of all UFO reports, but rather it will come from a more careful scientific analysis of the phenomena until they are identified and understood.

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Metric System Wins Over British

Perhaps it would be well to point out once again that the real advantage for the United States in adopting the metric system is becoming more and more apparent. Scientists who have been disappointed at the apparent lack of progress should take heart. The issue has by no means died down, despite the formidable expense to industry of conversion to metric measurements. It is ironical that the country from which we acquired our system of inches and pounds long ago realized the necessity to change to the metric system. The 1966 official British committee, which was appointed to aid in conversion, published its report in July 1968. The changeover, scheduled to begin in 1970, is expected to be largely completed by 1975. Already about 90 percent of the world population employs this system. Now seems to be the time to accelerate our own changeover by writing to our congressmen.

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Smog Comes on Little Cat Feet

Boffey's intuition serves him well. He correctly surmised that the term "smog" was coined to mean a combination of smoke and fog ("Smog: Los Angeles running hard, standing still," 6 Sept., p. 990). The inventor was a member of the health department in Chicago in the '20's. He was concerned with the loss of solar ultraviolet rays by absorption in the stable colloid formed in air by the combination of smoke from bituminous coal and the frequent fog in that sometimes fair city. He standardized the oxalic acid method of determining ultraviolet light and did some fine work in measuring diurnal and geographic variations. I regret that I don't recall the name of this pioneer. . . .

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During the years 1927–31 under the Commissioner of Health Arnold H. Kegel, the division of research of the bureau of laboratories and research made tests for ultraviolet light in sunshine. The results were published (*1*, *2*), and the authors used the term "smog" when describing a haze produced by smoke mixing with the prevailing fog. The method of measuring the effect of the ultraviolet light on uranium salts by use of a standard oxalic acid solution was described in the second paper (*2*). We regret that we do not have reprints of these articles.

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2. F. O. Tonney and P. P. Somers, *Amer. J. Public Health* **19**, No. 9 (1929).