proper spirit, even by sophisticated laymen, and I feel that self-criticism of this kind should be restricted to our own journals. Futhermore, I do not share the views regarding the grant-supported workshops. In my own area of research, in the past 2 years, we have experienced two important breakthroughs as a result of such workshops. The opportunity for personal contact which is provided by these meetings is not provided by the large open meetings. Equally important is the fact that there is no publication of the proceedings, which permits one to present recent observations which may not yet be fully documented. If the editorial should serve to make such meetings more difficult, then science will have been done a great disservice.

BERNARD L. HORECKER

Department of Microbiology, New York University School of Medicine, New York

"Organized Elements" in Carbonaceous Meteorites

In a recent article (*1*) Anders and Fitch reported on their failure to observe in preparations of carbonaceous chondrites the "organized elements" of Claus *et al.* (*2*, *3*). In other papers (*4*), Fitch and Anders have shown in detail the difficulty of using morphological criteria to determine the nature and origin of meteorite microstructures in the 5- to 30-μ range.

However, the possible occurrence of microfossils in meteorites has attracted considerable attention, and other workers have identified structures in carbonaceous chondrites that they consider to be indigenous fossil remains. These workers are Staplin (*5*), Reimer (see *3*), Palik (*6*), Cholnoky (*7*), Skuja (see *3*), Ross (*8*), Engels (*9*), and Timofeev (see *3*).

On the other hand, several persons, after examining the structures in question, have supported the view of Fitch and Anders that identification of them as microfossils is premature. Thus, Fox (*10*) has suggested that the objects are spheroids of nonbiological organic matter, together with droplets of sulfur and recent contaminating organisms. Deflandre (*11*) has similarly claimed that the objects are terrestrial contaminants and artifacts. Briggs (*12*), who examined preparations made under sterile conditions to eliminate contamination during preparation, has suggested that some of the "organized elements" are mineral grains and that others are associations of sulfur with organic matter, probably of abiogenic origin. Mueller (*13*) has recently presented evidence that one class of "organized element," which displays a very complex morphology, is a rare limonite pseudomorph of troilite.

In view of this marked disagreement it is clear that the true nature of the "organized elements" will be established only after prolonged study by many different scientists competent in various fields. Thus, contributions from bacteriologists, palynologists, micropaleontologists, pathologists, crystallographers, histologists, and organic chemists are necessary, and it is improbable that any single person is competent to identify microscopic objects in all these fields.

Since meteorites, particularly carbonaceous chondrites, are difficult to obtain for study and are at present available to only a small group, we have prepared a catalog of photographs (*14*) of meteorite microstructures for wide circulation. Copies will be sent on application to any scientist. It is hoped in this manner to obtain suggestions as to the identity of the "organized elements" from as wide a group of specialists as possible. It is also hoped that new criteria for identification will be forthcoming.

GREGG MAMIKUNIAN
MICHAEL H. BRIGGS

Chemistry Section, Space Sciences Division, Jet Propulsion Laboratory, California Institute of Technology, Pasadena

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