

both with violet to right and with violet to left under the measuring microscope, as an observer may have a large systematic difference in his mode of making a setting on the dark lines of the comparison spectrum and the white lines of the stellar spectrum (on the negative). The writer has a large systematic error of this kind, which is reversed in sign but of the same size when the measures are made on a positive copy of the negative. By measuring the plate in both directions this systematic difference appears to be wholly eliminated. Each plate is reduced by itself, independently of any standard plate of a solar or metallic spectrum, with the aid of the Cornu-Hartmann formula in its simple form, the 'fit' of which can be checked up at the position of each comparison line and the wavelengths corrected accordingly. The first star found by the Bruce spectrograph to be a spectroscopic binary is γ Orionis. Four of the first plates, taken by Mr. W. S. Adams and the writer, yield the following velocities:

1901, Nov. 27,—	68	km.	per	second.
Dec. 6, +13	"	"	"	"
Dec. 18, +54	"	"	"	"
Dec. 19,—56	"	"	"	"

The period is not yet determinate. In concluding the paper the proposal was made that the six or seven observatories, which now include in their work the determination of stellar velocities in the line of sight, should cooperate in regularly observing a short list of fundamental velocity stars. The comparison of the results obtained for the same stars with the different spectrographs and different observers, using different sources of comparison spectrum and different lines of the stellar spectra, could hardly fail to be of great value both in indicating causes of error in the separate instruments and in establishing with a high degree of accuracy the velocities of these fundamental

stars. (To be published in *The Astrophysical Journal*.)

W. S. EICHELBERGER,
For the Council.

THE RELATION OF THE AMERICAN SOCIETY OF NATURALISTS TO OTHER SCIENTIFIC SOCIETIES.*

I AGREE in general with all that has been said, and find myself in especially close accord with the remarks of Professor Trelease—so much so, indeed, that I might well refrain from saying more. Yet there are two points in the discussion to which I should like briefly to call attention.

We are all agreed that the object of our meetings is to spread the method and temper of science among the people—to inoculate the community with the spirit of science. Now, while the great central scientific meetings, so well described by Professor Minot, attract the attention of the whole country for a brief time, they do very little and can do very little in extending the influence or the real temper of science. This must be done, if at all, by the teaching, example and lives of those who are devoted to science, scattered through the country and making their influence felt daily throughout the year. It is, therefore, of the utmost importance that the local centers of science, and especially the smaller centers, remain vigorous. By these small centers I do not mean the great universities, or even the smaller colleges. The life of science in institutions of this character does not need the stimulus of meetings. Even at the present time men thoroughly trained in the methods of science are teaching in the normal schools and in the larger high schools throughout our country and the number of such teachers is rapidly increasing. One most im-

* Part of the discussion before the American Society of Naturalists received after the report had been published in the issue of SCIENCE for February 7.—Ed.

portant object of scientific meetings is to furnish to these men, most of whom are working singly in their schools and communities, a stimulus to continue the scientific work for which they have been trained, and an opportunity of bringing the results of their study before a sympathetic audience. This opportunity, however, can be afforded only by a local meeting, and any arrangement of meetings which sacrifices the local gathering to the national meeting will have a disastrous effect on the spread of the scientific temper in the country, because it will necessarily weaken these local scientific centers which, from their number, are quite as important as the more conspicuous and stronger centers of science in our great institutions.

I may perhaps be permitted to call attention to a second matter suggested by the discussion, although it is one in which I am not in any way officially interested. I must own that I look with some concern on the change of the American Association for the Advancement of Science from a general gathering to one composed of professional scientists. It has always seemed to me that a most important part of the work of this Association has been in serving as a common ground of meeting for the professional scientists and those who, without professional knowledge, were interested in science. Its meetings have served as an important means of communication between the professional scientific world and the community, reaching the community in the best of all ways—through those individuals who, though without special knowledge of science, have yet a personal interest in it. This function certainly ought to be performed by some organization and it will be of no small concern to science if the American Association decides to abandon this function.

E. A. BIRGE.

UNIVERSITY OF WISCONSIN.

ALPHEUS HYATT.

ALPHEUS HYATT died suddenly of heart disease at Cambridge, Mass., January 15, 1902, a few months before the completion of his sixty-fourth year.

He was born at Washington, D. C., April 5, 1838; prepared for college at the Maryland Military Academy and passed a single year at Yale College. After a year's travel in Europe, he entered the Lawrence Scientific School at Harvard in 1858, graduating with the degree of Bachelor of Science in 1862.

He enlisted in the volunteer militia in 1862, served for nine months, and at the close of the Civil War was mustered out in 1863, as Captain of the 47th Massachusetts Infantry.

Returning to Cambridge, he resumed his studies under the guidance of Professor Louis Agassiz, the greater part of his time being directed to work upon the fossil Cephalopoda. In 1867 Mr. Hyatt went to Salem, Mass., and was associated with Messrs. Putnam, Packard, and Morse in the care of the natural history collections of the Essex Institute, and of the Peabody Academy of Science, and in the editorial management of the *American Naturalist*. He remained in Salem until 1870, when, on May 4, he was elected custodian of the Boston Society of Natural History. By yearly choice Mr. Hyatt remained the scientific head of the Society until his untimely death.

He held professional chairs in Boston University and in the Massachusetts Institute of Technology, and was at one time or another officially connected with the Museum of Comparative Zoology, and the United States Geological Survey.

Professor Hyatt was a member of the National Academy of Sciences (1875), the American Philosophical Society (1895), the American Academy of Arts and Sciences (1869), and of other leading scientific so-