

E. Kellogg, chief of the Soil Survey Division, Bureau of Chemistry and Soils, Department of Agriculture; Loyd V. Steere, agricultural attaché, Berlin; L. G. Michael, agricultural attaché, Belgrade; J. Clyde Marquis, American member of the Permanent Committee, International Institute of Agriculture, Rome; Dr. C. L. Stewart, professor of agricultural economics, University of Illinois, and Dr. John K. Galbraith, professor of economics at Harvard University. Alan S. Rogers, secretary of embassy at Rome, will be secretary of the delegation.

DR. S. A. MITCHELL, director of the Leander McCormick Observatory of the University of Virginia, gave the R. A. F. Penrose, Jr., Memorial Lecture on April 22 at the annual meeting of the American Philosophical Society. The lecture was entitled "With an Astronomer on an Eclipse Expedition."

THE James Arthur Lecture on the evolution of the human brain will be given at the American Museum of Natural History on May 5 at 8:15 P. M. by Dr. Franz Weidenreich, visiting professor of anatomy, Peiping Union Medical College, honorary director, Cenozoic Research Laboratory of the National Geological Survey of China. His subject will be "The Phylogenetic Development of the Hominid Brain and Its Connection with the Transformation of the Skull."

DR. OTIS W. CALDWELL, general secretary of the American Association for the Advancement of Science, was the principal speaker on April 15 and 16 at the second annual meeting of the southeastern biologists at the University of Georgia.

DR. G. E. M. JAUNCEY, professor of physics at Washington University, St. Louis, on April 5 gave an address on "The Vibrations and Structure of Atoms in Zinc Crystals" before the School of Mines Section of the Missouri Chapter of the Society of the Sigma Xi.

CEREMONIES installing a chapter of Sigma Xi at the Massachusetts State College were held on April 12. Professor George A. Baitzell, of Yale University, national president, directed the installation ceremony, assisted by Dean Edward Ellery, of Union College, national secretary. The main address was made by Dr. E. D. Merrill, director of the Arnold Arboretum at Harvard University. Other speakers were: Dr. Hugh P. Baker, president of the college; Fred J.

Sievers, director of the Massachusetts Agricultural Experiment Station, and Dean William L. Machmer, of the college.

THE annual meeting of the Canadian Medical Association will be held at Halifax from June 20 to 24, conjointly with the Nova Scotia Medical Society. The presidential address will be given by Dr. T. H. Leggett, of Ottawa, and the Osler Lecture on "Osler, the Last Phase, and His Influence on Medicine," by Sir Humphry Rolleston. Drs. M. R. MacCharles, of Winnipeg, and William Boyd, of Toronto, will conduct a surgical clinic on cancer; Dr. J. C. Meakins, of Montreal, a medical clinic, and there will be a symposium on poliomyelitis.

DR. T. H. BISSENETTE, professor of biology, Trinity College; Dr. W. Wedgewood Bowen, assistant professor of ornithology, Dartmouth College; Dr. Clarence C. Little, Roscoe B. Jackson Memorial Laboratory for Cancer Research; Dr. Ann Morgan, professor of zoology, Mt. Holyoke College, and Dr. Lorande L. Woodruff, professor of protozoology, Yale University, will serve as special lecturers during the eight-weeks summer session of the University of New Hampshire Marine Zoological Laboratory at the Isles of Shoals. The laboratory offers year courses for undergraduate credit in general zoology, comparative anatomy, invertebrate zoology, histology, embryology, field zoology and biology-education. There is an unusual opportunity at this station for field work in the fauna of the northern seaboard.

Nature reports that the Linnean Society of London will celebrate the one hundred and fiftieth anniversary of its foundation on May 24, 25 and 26. The president, Dr. J. Ramsbottom, will deliver an address on May 24, and on May 25 and 26 symposia on "The Concept of Species from the Time of Linnæus to the Present Day" will be held.

THE statement printed in *SCIENCE* and elsewhere to the effect that the Rockefeller and Carnegie Foundations would provide a large endowment for a medical center in Alabama is without basis in fact. At the request of Governor Bibb Graves, a conference was held recently in Birmingham in which the establishment of a medical center was considered. Funds, however, have not been granted for the purpose, nor have any been requested.

DISCUSSION

THE DECLINE OF INTERNATIONAL COOPERATION IN ASTRONOMY

INTERNATIONAL cooperation in science depends to a large extent upon the exchange of publications between different countries. Before the world war this ex-

change—in astronomy at least—was exceedingly well organized. Since 1914, however, it has never been completely normal, and the events of recent years show that the present trend is distinctly away from international cooperation.

TABLE I
ASTROPHYSICAL JOURNAL—FOREIGN SUBSCRIPTIONS

Country	Present subscribers	Number discontinued since 1931
Canada	16	3
Australia	12	1
South Africa	8	2
East Africa	1	..
Belgium	5	..
Bulgaria .....	..	1
Austria	3	2
Egypt	2	1
Denmark	3	3
Czechoslovakia	6	1
China	4	16
Ceylon	1	..
England	34	12
Estonia .....	..	1
France	16	5
Finland	1	..
Germany	48	21
Greece .....	..	1
India	23	2
Hungary	1	..
Netherlands	7	5
Italy	11	7
Ireland	5	2
Japan	36	33
Poland	6	4
Portugal .....	..	1
Palestine	1	1
Norway	1	2
New Zealand	3	1
Manchuria	1	..
Lithuania	1	..
Latvia	1	1
Korea	1	..
Jugoslavia	1	3
Java	1	..
Sweden	5	2
Siam	2	..
Scotland	7	6
Rumania	2	..
Russia	13	29
Spain .....	..	2
Syria	1	..
Switzerland	5	4
Turkey .....	..	2
Chile	1	..
Brazil	1	2
Argentina	2	3
Philippine Islands ..	2	..
Mexico	3	1
Cuba	1	..
Samoa .....	..	1
Wales	2	2

An analysis (Table 1) of recent and former mailing lists of the *Astrophysical Journal* reveals an alarming decline in foreign subscriptions. While the subscriptions in the United States in March of 1938 are practically identical with those of 1928, the foreign subscriptions have decreased by about one quarter. A breakdown by countries shows that the decline was 80 per cent. in China, nearly 70 per cent. in Russia, nearly 50 per cent. in Japan, about 40 per cent. in Italy and over 30 per cent. in Germany. Spain, Portugal, Greece and a few other countries, formerly represented by one or two subscriptions each, have dropped out completely. The decrease was relatively small in France, 24 per cent.; in England, 26 per cent.; and in the British dominions, 12 per cent. The general trend, which is shown by these figures, is so unmistakable as to arouse serious concern over the future of international cooperation in astronomy.

Since no other science depends upon universal cooperation to the same extent as does astronomy, it

is quite natural that the effects of nationalistic trends in many countries are more acutely felt by the astronomers than by representatives of other sciences. During the world war, and again during the period of inflation in central Europe, many European observatories were unable to obtain American periodicals and observatory publications, and many years were required to build up the leading scientific libraries in central Europe. Immediately after the world war, the Germanistic Society of America undertook to pay for many subscriptions in Germany and Austria, and credit was extended to numerous institutions in Europe by the University of Chicago Press. It is unlikely that similar efforts will now be made on behalf of Chinese, Japanese, Russian and other scientific institutions.

Although the decline in foreign subscriptions will seriously interfere with the progress of American scientific journals, it should be pointed out that our domestic subscriptions are large enough to safeguard their existence. The *Astrophysical Journal* has in recent years been increased in size, and it has, we hope, been maintained on the same high level on which it was started by George E. Hale in 1895. At the same time the subscription price is considerably lower than that of several European journals of the same character. The problem is, therefore, not primarily concerned with the financial status of the journals. It is much more a question of maintaining the channels for the exchange of scientific information between America and other countries. It is difficult to ascertain all the causes for the decline. Financial difficulties arising from militaristic tendencies account for part of it; increased difficulties imposed by foreign governments upon the purchase of periodicals from abroad has doubtless discouraged a number of subscribers. It is to be hoped that international organizations such as the international scientific unions will take notice of this threat to international cooperation and will urge upon their members the necessity of continuing the exchange of scientific publications.

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SNOWSLIDE EROSION

A HURRIED visit was made on July 17, 1937, to the eastern base of Mount Jackson in Glacier National Park to examine the site of snowslide striations and boulders which had been noted previously.¹ A large number of new grooves were found to have been cut since the previous summer, many of which, like those seen in 1936, had retained boulders at their terminations.

Much of the higher portion of the limestone surface

¹ J. L. Dyson, *Jour. Geol.*, 45: 5, 549-557, 1937.