the loyalty and discipline of their companions. It is easily understood, therefore, that those who disobeyed will leave no stone unturned in attempting justification or extenuation. It is difficult to see, however, why they keep nagging until they drive into breaking silence us who know disagreeable things about them which Stefansson has left untold. But they at least have courage—to write from Ottawa misquotations of Ottawa officials and to assert (in the face of a vote of thanks from the Canadian nation and the endorsement of two prime ministers) that Stefansson did not have the support and does not now command the confidence of the Canadian government.

Of course the two premiers named are no longer in office and a new government has taken their place. Thinking, apparently, they might have better success with the new officials the Anderson-Jenness faction of the expedition lodged with the Minister of Mines in March, 1922, certain charges against Stefansson. These were dismissed by the minister, showing that the attitude of the present government does not differ from that of the preceding.

There remain to be mentioned Mr. Jenness's insinuations that Dr. Pearl is ignorant of Arctic conditions. Mr. Jenness can hardly say the same of us (Noice, at least, has been in the Arctic six years against three for Mr. Jenness). It is curious, then, that we find ourselves so uniformly in agreement with Dr. Pearl. Of course, Mr. Jenness may explain this by our well-known loyalty to Stefansson and our support of him and his views. But we can similarly explain the Jenness attack by his well-known affiliation with the men who in 1914 disobeyed Stefansson's orders on the ground that his views were so wrong and his plans so "unsound" that he was practically "crazy," and that they were therefore "justified" in their disobedience.

Now that the views they then thought crazy have been tested and found sound, now that the methods so bitterly criticized have been proved successful, would it not be better both for those who supported Stefansson and those who opposed him to stop squabbling and turn to more constructive things?

BURT M. MCCONNELL
HAROLD NOICE

NATIONAL RESEARCH FELLOWSHIPS IN THE BIOLOGICAL SCIENCES

To the series of research fellowships in physics, chemistry and medicine now being maintained by the National Research Council, with the financial support of the Rockefeller Foundation and the General Education Board, a new series in the biological sciences has just been added. This new series is made possible by a gift of $325,000 from the Rockefeller Foundation to be expended during the five-year period, July 1, 1923-June 30, 1928. This makes a total sum of $1,325,000 to be used by the council in the maintenance of post-doctorate research fellowships in the various scientific fields already noted.

The new series of fellowships in the biological sciences (including zoology, botany, anthropology and psychology) will be awarded to persons who have demonstrated a high order of ability, for the purpose of enabling them to continue research at suitable institutions, preferably in the United States. The personnel, equipment and presumptive cooperation of institutions will be considered in determining the residence of the fellows.

Purposes. The purpose of the National Research Fellowships in the Biological Sciences is the promotion of fundamental research in these subjects. This involves not only the immediate acquisition of more knowledge through research, but also the securing of a greater number of thoroughly trained investigators. It is hoped that the establishment of such fellowships may prevent the loss of research interest in the early post-doctorate years by the premature or excessive absorption of promising investigators in teaching, and may also improve the conditions for research in the educational and other scientific institutions of this country.

The term educational or scientific institutions, as herein used, is not to be interpreted as referring exclusively to colleges, universities and technical schools, but may include such institutions as marine or fresh-water stations, museums, government bureaus or special research institutes.

Stipends. Fellowship stipends are not in-

tended to compete with the salaries of teaching and industrial positions. They are calculated to provide comfortable living conditions for exceptional research students. They will be adjusted to family responsibilities, individual circumstances and needs. The basic stipend for first appointments will be $1,800. Appointments of fellows are for twelve months and may be made at any time but usually so as to coincide with the beginning of the academic year.

Fellowship Regulations. Fellows are expected to devote their entire time to research, except that during the college year they may, by written permission of the board, give a portion of their time, in general not more than one fifth (outside preparation included), to teaching of educational value to themselves, or to attendance on advanced courses of study. They may associate graduate students with their researches. They shall not engage in work for remuneration during the term of their appointment.

Fellows are expected to submit to the board shortly before March 1 of each year a detailed report, in duplicate, on the progress of their work. They must also present an account of their research in form as for publication before termination of the fellowship. It is understood that all results of investigation by the fellows shall be made available to the public without restriction.

The publications by a fellow of the results of the investigations carried on during the tenure of his fellowship must include a suitable acknowledgment. When such publications appear the author is expected to furnish twelve copies of each paper to the secretary of the board of fellowships in the biological sciences, National Research Council, Washington, D. C.

Appointments are subject to the condition that when a fellowship has been accepted by the applicant, it will not be vacated within the year without consent of the board.

Applications. Each application for a research fellowship in the biological sciences will be considered individually on its merits. Especial attention will be given to the probability of meeting the purposes for which the fellowships were established.

Fellows will be appointed for one year, but they may be reappointed at increased stipends.

Applications must supply evidence of their research capacity, training and intentions. This will usually include the following items:

1. A doctor's thesis or its equivalent.
2. Reports of other research work in printed or manuscript form.
3. (*a*) Academic and personal record; (*b*) an outline of the proposed research program, including the institution at which it is planned to work. These items should be presented on blanks which are provided by the secretary of the board.

In addition to the foregoing, endorsements of responsible scientists, including estimates of the applicant's qualifications, will be required. These communications should be sent directly by the writers to the secretary of the board of fellowships in the biological sciences, National Research Council, Washington, D. C.

Cooperation of Institutions. It is anticipated that institutions at which fellows are received will waive fees and will extend the usual facilities and services accorded other research workers.

Administration. The special funds for National Research Fellowships in the Biological Sciences will be administered by a board appointed by the National Research Council. The board, as at present constituted, consists of the following persons:

Frank R. Lillie (chairman), professor of zoology, University of Chicago, and chairman, Division of Biology and Agriculture, National Research Council; H. H. Bartlett, professor of botany, University of Michigan; Raymond Dodge, professor of psychology, Wesleyan University, and chairman, Division of Anthropology and Psychology, National Research Council; C. E. McClung, professor of zoology, University of Pennsylvania; T. H. Morgan, professor of experimental biology, Columbia University; W. J. V. Osterhout, professor of botany, Harvard University; C. E. Seashore, professor of psychology, University of Iowa; E. L. Thorndike, professor of educational psychology, Teachers College, Columbia University; and Clark Wissler, curator of anthropology, American Museum of Natural History.

The board is now ready to receive applications for these fellowships. All communications should be addressed to the Secretary, Board of Fellowships in the Biological Sciences, National Research Council, Washington, D. C.

VERNON KELLOGG,
Permanent Secretary, N. R. C.
WASHINGTON, D. C.

SCIENTIFIC EVENTS

POPULATION OF THE UNITED STATES

THE population of the continental United States on January 1, 1923, was approximately 110,100,000, according to an estimate announced by the National Bureau of Economic Research. This showed an estimated gain of 4,500,000 since the 1920 government census.

These figures are necessarily preliminary, said the bureau, for the final census figures on births and deaths are incomplete after the end of 1920. Enough data is available, however, to show that since January 1, 1921, the rate of increase in population has been accelerated noticeably, the present rate approaching that of pre-war years.

This more rapid gain in population has been brought about partly by increase in net migration, but has been decidedly reinforced by a reduction in the death rate. At the present rate of growth the population at the 1930 census will reach 120,000,000.

The estimates by half years are as follows:

Year and Date:	Population
1920—January 1	*105,710,620
1920—July 1	†106,381,000
1921—January 1	†106,821,000
1921—July 1	‡107,785,000
1922—January 1	‡108,533,000
1922—July 1	‡109,184,000
1923—January 1	‡110,100,000

*Census figures.
†Final estimate by this bureau.
‡Preliminary estimate.

It is probable that the revisions to be made in all estimates, except that for January 1, 1923, will be relatively slight.

The census bureau has made its estimates of the population for the intercensal years on the assumption that the rate of growth is the same as in the preceding decade. This process, which is termed a straight line extrapolation, has mainly its simplicity to commend it, for, when applied, errors of considerable size gradually accumulate as changing conditions affect population growth. For example, the official method showed a population for January 1, 1920, nearly two millions greater than that given by the actual census count on that date.

The method of the National Bureau of Economic Research is also relatively simple. The number of births and deaths have been estimated for each half year and the increase of population due to excess of births over deaths has been calculated. This amount has been corrected by adding the excess of immigration over emigration for each half year. The population for June 30, 1910, has been estimated from a smooth curve, and figures have then been built up for each half year until the census of 1920.

The estimate thus arrived at for January 1, 1920, is in error by approximately half a million, or only about one fourth of the corresponding error from the official method. The census work of the bureau has been under Dr. Willford I. King, formerly assistant professor of political economy of the University of Wisconsin.

THE FAUNTHORPE INDIAN EXPEDITION

PRESIDENT HENRY FAIRFIELD OSBORN, of the American Museum of Natural History, received on March 21 a cablegram from Mr. A. H. Vernay, of the Faunthorpe Museum Expedition to India, announcing that he had been successful in securing two exceptionally fine rhinos, a male and female, through special permission from the Maharajah of Nepal, and that the party had also secured a pair of tigers and a bear. Thus far, however, efforts to secure specimens of the pink-headed duck have failed and Mr. Vernay believes this species to be extinct, although further efforts will be made.

President Osborn states that the acquisition of the rhinos is of the first importance, not only because these animals are rapidly disappearing, but also because the Indian rhino is the largest member of that family now in existence.

Mr. Vernay's decoded message states that great difficulty was experienced in reaching the hunting grounds and that success was possible only through the assistance rendered by the