LETTERS

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Deep-Sea Diving Record

I read with interest the item entitled "Deep-sea diving record" [*Science* **124**, 1141 (7 Dec. 1956)]. The dive to 600 feet is a notable achievement. May I, however, correct the statement that "The use of this mixture [oxygen and helium] is new"? The early history of the use of this mixture has been given in a U.S. Bureau of Mines Circular [No. 2670 (Feb. 1925)]; in *Nature* [**121**, 577 (1928)] by Hildebrand, Sayers, and Yant; and in *Science* [**65**, 324 (1927)] by Hildebrand.

The submarine *Squalus* was salvaged by aid of this mixture in 1939 [Behnke and Willman, *U.S. Naval Med. Bull.* **37**, No. 4 (1939)]. Max E. Nohl dived to 420 feet in Lake Michigan on 1 Dec. 1937. The preliminary work was described by Edgar M. End and M. E. Nohl [*Marquette Med. Rev.* No. 2, 53, (1938)]. There is enough credit to distribute among all who have contributed to the present status of deep diving with helium and oxygen.

JOEL H. HILDEBRAND
Department of Chemistry and Chemical Engineering, University of California, Berkeley

Gross National Product

I wish to call attention to what appear to be seriously misleading figures in Glenn T. Seaborg's article, "The future through science" [*Science* **124**, 1275 (28 Dec. 1956)].

At the end of the second paragraph, which is concerned with the *physical* well-being and growth of the United States, figures are given which purport to represent the growth of our "gross national product of goods and services" and show a more than sixfold increase from 1933 to 1955 and a more than fourfold increase from 1939 to 1955. The official Government figures show only a threefold increase in the "gross national product of goods and services" between 1933 and 1955 and only a doubling from 1939 to 1955. The actual figures for Gross National Product in constant 1947 dollars are as follows: 1933, $103.7 billion; 1939, $157.5 billion; 1955, $318.8 billion [*National Income—1954 Edition* (U.S. Dept. of Commerce), p. 216; and *Survey of Current Business* (U.S. Dept. of Commerce, Feb. 1956), p. 7].

I presume that Seaborg used the raw figures for gross national product without any adjustment for the big rise in prices which has taken place, particularly since 1939. Because of the price difference, the rise in the *money* value of gross national product bears little relationship to increases in the actual production of goods and services. Even if Seaborg had made it clear that the figures he was giving were *money* figures, they would have been misleading in the context of his discussion of physical well-being.

There is also a question of the propriety of using 1933, the bottom of the depression, as a base for measuring what purports to be a pattern of growth.

GARDINER C. MEANS
Washington, D.C.

Gardiner C. Means is quite right in pointing out that figures for the gross national product must be used with caution, but his corrected figures lend impressive support to the only point I was trying to make in my introductory paragraphs—namely, that we are a very wealthy and fortunate group of people. I was making no attempt to discuss or to minimize the ups and downs of past economic developments.

The main thesis of my address, taken as a whole, was to show that very serious economic and political reversals may affect us in the future unless we encourage the development of trained brainpower in all fields, including economic analysis.

GLENN T. SEABORG
University of California, Berkeley

About Meriones

Some recent articles [*Science* **123**, 790 (1956); **124**, 323 (1956)] dealt with the use of *Meriones* as laboratory animals. May I add some more information on this subject?

Meriones shawi is a common field rodent in Tunisia, largely used as a routine small laboratory animal. It has been bred in our institute at least since 1932 [A. Wassilieff, *Arch. Inst. Pasteur Tunis* **21**, 298 (1932)]. When laboratory-bred, it is very easy to handle and never bites. An important feature is its great natural resistance to spontaneous bacterial or viral diseases. This rodent does not need any special care other than a room temperature 18°C or above and some cod liver oil weekly in the food.

Meriones shawi is strictly a monogamous animal, and it is a rule that the same male must always be put together with the same female. When a female is surely pregnant, she must be kept alone until the young are about 1 month old. Females are mated for the first time when they are about 10 months old. They give birth to two to three litters a year, each of two to six young. They are used for reproduction till they are about 2 years old.

One may find articles describing work in which meriones have been used for viral, rickettsial, leptospiral, and other studies in *Annales de l'Institut Pasteur de Paris,* in *Archives de l'Institut Pasteur de Tunis,* and in other French reviews. Without any great risk of error, I can assume that probably all the meriones actually found in European institutes have come from our own breed.

Regarding gerbils, many attempts to breed *Dipodillus campestris* were unsuccessful. But Vermeil [*Ann. Inst. Pasteur Paris* **88**, 137 (1955)] has been able to establish in our institute a colony of *Gerbillus hirtipes* since 1951. This rodent has proved to be invaluable for studies on viruses, leptospira, leishmania, pathogenic molds, and on some human and animal endoparasites.

GÉRARD RENOUX
Institut Pasteur de Tunis,
Tunis, Tunisia