longevity of bacterial spores or other resting stages of bacteria I have been carrying on studies of historic and prehistoric materials whose age is reasonably well known and in which large numbers of bacteria might be expected. I started with soils which had been kept in sealed bottles for 25 and 33 years, respectively, and then continued with subsoils which had been in bottles unopened for 65 years. In all these samples living bacteria are very numerous and in great variety and all the soils contained either single-celled green or blue-green algae or both in vigorous condition. I then proceeded to a study of adobe bricks taken from the interior of thick walls in the California missions from structures 112 to 150 years old. All these contained enormous numbers of living bacteria, and the youngest of them also showed single-celled green algae. Following these materials, I turned to some of the Arizona pueblos whose age is definitely known to be no less than 600 years old. From material in the heart of the pueblo walls I isolated many forms of bacteria, and the total numbers, while smaller than those in the mission bricks, are still very high. I proceeded next to examine respectively adobe bricks from pre-Inca pyramids near Lima, Peru, specially collected for me from the interior of the pyramid, and adobe bricks from pre-Aztec pyramids in Mexico, also collected expressly for me under special instructions. The age of the former is estimated by archeologists to be between 1,000 and 1,400 years and that of the latter no less than 800 to 1,000 years. In both of these adobe materials bacteria, while not as plentiful as in fresh soil, are still very numerous and comprise a great variety of forms which grow on "selective" media. Space is too limited in this note to permit of giving the detailed technique employed in these experiments, which will be described elsewhere, but attention is called to the remarkable longevity of both bacteria and of simple algae as they appear, respectively, in these experiments. I may add also that some of the mission walls have been protected from water during all their history, and all my specimens, whether from protected walls or not, are found to be extremely desiccated for the reason that they come from the heart of the wall to which water does not penetrate, as examinations at the end of the rainy season clearly attest.

Many still older materials than those described will be investigated and reported upon later.

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A POSSIBLE CAUSE OF OLD AGE

HEAVY water has a higher boiling point (101.42° C.) than ordinary water. Heavy water also inhibits the growth of seedlings, which seems to indicate that it has an inhibitory effect upon the normal functioning of the protoplasm. As the human body evaporates a large proportion of its water intake, it will in the course of years become enriched with heavy water. This increase in the proportion of heavy water in the body fluids may account for the increasing inhibitory action of the protoplasm during senility.

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REPORTS

RESEARCH IN THE YALE GRADUATE SCHOOL

SEVENTY-FOUR research projects have been undertaken by students already holding the degree of doctor of philosophy or its equivalent, who are enrolled in the Yale Graduate School as research fellows. Nine countries are represented in this group, including England, Germany, Canada, Belgium, China, Czechoslovakia, New Zealand, Norway and the United States. These men and women have been trained for their research at sixty different colleges and universities, and while most of them are working either in the Sterling Memorial Library or the laboratories of the university, some are working in places so remote as the Bishop Museum in Honolulu, the Yale Anthropoid Experiment Station in Orange Park, Fla., the Navajo and Shawnee Indian Reservations and the British Museum.

In addition to the faculty, library and laboratory facilities put at the disposal of research workers, a number of research fellowships to assist this group of scholars have been established. This year forty-one research fellowships with stipends were awarded. In addition, twenty honorary research fellows have been appointed without stipend. Another group of fellows has been sent to work at Yale by educational foundations, including the National Research Council, the Rockefeller Foundation, the American Council of Learned Societies, the Commission for Relief in Belgium, the Commonwealth Fund and the Alumni Association of former German Exchange Fellows.

Fifty-two of the seventy-four fellows are carrying on scientific work, while twenty-two are studying languages, philosophy and the social sciences. Chemistry has the largest group with seventeen working at the Sterling Chemistry Laboratory and five in the lab-