pose of the institute not to devote itself exclusively to the study of a single disease, but to maintain a fluid interest in disease in general depending upon the availability of the specific personnel.

THE late Dr. Robert Boyd, formerly chairman of the Manchester Division of the British Medical Association, made a bequest to the association for the benefit of his professional colleagues in the Manchester area. The gross value of his estate is in the region of £100,000. Subject to certain life interests, the residue is left to the British Medical Association to be applied to capital as well as income for the purpose of endowing or contributing to the endowment of a British Medical Association House in the district of Manchester for the benefit and use of all qualified and registered doctors. The power of making regulations for the conduct and use of the house are vested in the Governing Committee for the time being of the Manchester Division of the association.

The Lancet states that the Rockefeller Foundation has given £1,200 to the University of Oxford for biochemical investigations of penicillin under the direction of Dr. H. W. Florey, professor of pathology. The foundation has made a further grant of £3,500 towards the initial equipment of the nutritional survey.

THE Langley Porter Clinic of the Medical School of the University of California, San Francisco, was opened on February 13. The outpatient department was named in honor of the late Dr. Aaron J. Rosanoff, who was largely responsible for the building of the clinic. At the time of his death he was director of the California State Department of Institutions.

ACCORDING to *Museum News,* the California Academy of Sciences, San Francisco, includes in its future plans the erection of a new wing to the African Hall and an Alice Eastwood Herbarium to house the more than 300,000 specimens collected by her during a long career as curator of the department of botany.

TO meet the growing importance of physics in industrial research, the central chemical laboratories of the Hercules Powder Company, as announced by Dr. Emil Ott, director of research, has formed a separate technical group to coordinate and develop physics work. Research by the new group at the Experiment Station, of which Dr. Robert W. Cairns is director, will emphasize electrons and optics, using such equipment as the electron microscope, mass spectrograph, x-ray diffraction cameras for crystal structure analysis and spectrographs for a complete range of light-absorption studies not limited to the visible spectrum but ranging from ultraviolet to infra-red. Dr. Willard P. Connor, Jr., formerly research associate at Princeton University, will be acting leader of the physics group.

THE *Bulletin* of the Institute of International Education writes: "The announcement was made by the Department of State on December 29, 1942, that awards of official scholarships, fellowships and travel or maintenance grants to United States students for study in the other American republics from Department of State funds were being suspended for the duration of the war. The suspension does not affect grants made before that date. In his announcement the Secretary of State emphasized that the United States Government had no thought of discontinuing the award of fellowships and travel and maintenance grants to citizens of the other American republics for study in the United States. On the contrary, he expressed the hope that the situation in other American countries would permit the continuance of the program for their students to come here under the Convention for the Promotion of Inter-American Cultural Relations. The announcement referred in every case to United States 'students' assisted by the Department of State and made no mention of any change in the procedure in regard to teachers or professors."

IT is reported in *Nature* that the People's Commissar for Education in the U.S.S.R. has instituted fifteen valuable Newton scholarships for Soviet university students. They are to be awarded to young men and women specializing in physics, mathematics, mechanics and astronomy. The Universities of Leningrad and Moscow will receive three scholarships each. Other Newton celebrations include exhibitions of portraits and books on Newton in English, Russian and other languages at the University of Moscow and the Scientists' Club.

THE latest information regarding the issue of new and revised British Standards, of which there are at present over a thousand, can be obtained from the library of the British Standards Institution, 28, Victoria Street, Westminster, London.

DISCUSSION

CAMEL, HORSE AND BISON ASSOCIATED WITH HUMAN BURIALS AND ARTIFACTS NEAR FRESNO, CALIFORNIA

BONES of *Camelops, Equus* and *Bison* have been found in association suggesting contemporaneity with Indian burials and artifacts on the open plain of the central San Joaquin Valley near Tranquillity, Fresno County, Calif.[1] The site lies in an old alluvial soil, fourteen miles east of the Diablo Range foothills, and

about thirty miles west of the Sierra Nevada foothills. Conditions at the site strongly suggest that the carcasses of the now extinct mammals were brought there by hunters of the group which built fires, buried its dead and made the numerous stone and bone artifacts which have been found in the deposit. The bones of the American camel, horse and bison occur along with bones of species still living in the San Joaquin Valley, broken in a manner characteristic of kitchen refuse, along with artifacts and in the vicinity of burials.

All bone on the site, whether human (four individuals were still wholly or partly articulated in a semi-flexed position), of animals, both extinct and modern, or of the numerous bone awls and other implements, is very heavily mineralized, with about twice the specific weight of ordinary dry bone and with greatly increased hardness. Out of more than 100 San Joaquin Valley archeological sites investigated by W. Massey, G. Schmidt and the writer in 1939, the Tranquillity site was the only one on which such mineralized bone occurred.[2] It was the condition of the bone which prompted further work, rather than the identification of the extinct species, which was not completed until this year (1942).

Faunal remains include two extinct species: *Camelops sp.*—mandibles, teeth, astragalus; *Equus sp.* (presumably the extinct American horse)—several teeth *Bison sp.* (not necessarily an extinct species, but unknown in the local fauna in historical times) is represented only by a tooth and orbital fragment. In addition, there was much unidentifiable fragmentary long-bone material on the site which seemed too large for any but the foregoing animals. Other forms are still surviving species: pocket gopher, badger, coyote, fox, jackrabbit, dwarf elk, antelope and salmon.[3]

Artifacts include a wide range of chert and obsidian point types, scrapers, blades and a drill; metate, mano (the latter very abundant); pestles, and mortar fragments (few); side-notched net-sinkers; grooved end stone (a possible "Charmstone"); two steatite sherds; asphaltum lumps; much burnt clay, some with stick, reed and mat impressions; bone awls, points and spatulate objects, all heavily mineralized; 56 obliquely lopped-end *Olivella* shell beads, associated with the burials, and a miscellany of broken stones of various kinds, none obtainable from the immediate neighborhood. The artifacts, while generically "Californian," are not like those of any recent archeological culture from the Central San Joaquin area, though they are similar to those from certain "early" cultural complexes described from elsewhere in the state.

In the light of finds from other parts of the continent, the occurrence of the extinct *Camelops* along with horse and bison in an archeological site is not surprising.[4] What makes the site especially interesting are the human burials, which seem to belong to the same horizon as the artifacts and extinct animals. If further work on the Tranquillity site were to establish the contemporaneity of the skeletal materials beyond question, we could determine the physical type of an early Indian population in North America for which there has been so far a great paucity of skeletal data. The writer hopes that a more detailed description of the site and its materials may be published, as there is little likelihood of further work on the site until after the war.

GORDON W. HEWES

WASHINGTON, D. C.

[1] The collections from the Tranquillity site are now in the University of California Museum of Anthropology, Berkeley.

[2] Gordon W. Hewes, *American Antiquity*, 7: 123–33, 1941.

[3] Faunal remains secured in the early work on the site were identified by Dr. Chester Stock, California Institute of Technology, Pasadena, as elk, bison, gopher, *Canis* sp., and camelid. Dr. Stock hesitated to identify generically on the basis of a single Camelid astragalus. Later and fuller collections, including mandible material, enabled Drs. Stirton, Vanderhoof, Camp and Wells, Department of Paleontology, University of California, to identify the camelid as *Camelops* sp. The later collection also included *Equus* teeth and badger bones, not present in the material sent to Dr. Stock.

[4] See the papers by F. H. H. Roberts, Jr., and Julian Steward in "Essays in Historical Anthropology of North America," *Smithsonian Institution, Miscellaneous Collections*, vol. 100, 1940.

PURE NATURAL NITROGEN GAS[1]

REFERENCE by Science Service on January 1, 1943, to an earlier account of the finding of pure nitrogen gas in a well as one of the notable discoveries of the year is misleading and the subject is perhaps worthy of brief comment. In SCIENCE of February 27, 1942, Mr. Harold J. Cook reports that 100 per cent. pure nitrogen gas was found at a depth of only 156 feet in a well drilled on the W. H. Cross ranch near the southern rim of the Powder River Basin, Wyoming. The gas is said to have developed a rock pressure of 11 pounds in 10 minutes and it is suggested that because of its purity the gas may have value in the present war emergency.

High-percentage natural nitrogen gas wells have been known for many years and are particularly common in the Permian Basin of Texas and New Mexico. Here nitrogen gas may be confined under pressures as high as 1,500 to 2,000 pounds per square inch. Analyses of some of these gases show them to contain

[1] Published by permission of the Director, Geological Survey, U. S. Department of the Interior.