Dealing with the latter class the report says: "Of the 9,162 experiments 1,109 were simple inoculations into the skin of guinea pigs, which were anesthetized in order to keep the animals motionless during the introduction of a minute quantity of the fluid to be tested for the purpose of standardization. Of the remaining 8,053 experiments in this table, comprising all the cases in which any serious operation was involved, 4,324 were performed under license alone, or under certificate C, and therefore came under the provision of the act that the animal must be kept under an anesthetic during the whole of the experiment, and must, if the pain is likely to continue after the effect of the anesthetic has ceased, or if any serious injury has been inflicted on the animal, be killed before it recovers from the influence of the anesthetic."

AN attempt is being made to preserve the Indian totem poles in the vicinity of Hagelton, Kispiox, Hagwelgate, Gitsegyukla and Kitwanga, British Columbia. The poles at Gitsegyukla and Kitwango may be seen from the Canadian National Railway car windows. So far as known this Canadian government railway is the only one in the world from which totem poles may be viewed. The work is being carried on under the Canadian Department of Indian affairs. Harlan I. Smith, of the National Museum of Canada, is in charge in the field and is assisted by T. B. Campbell, in the engineering problems, and H. F. Ballentyne in the art and architectural work.

THE U. S. Department of Agriculture reports that the nation-wide drive to eradicate bovine tuberculosis up to April 1 included 10,201,492 cattle under supervision; 6,777,624 cattle in herds successfully passing the first test; 1,187,908 cattle in fully accredited herds; 617,810 cattle tested during March, 19,841 cattle reacting to the test during March; 3,498,072 cattle on the list to be tested, and sixty-nine counties recognized as free from bovine tuberculosis. Reports show unusual interest in tuberculosis eradication on a county-wide basis. In the first three months of the year, the number of counties having less than 0.5 per cent. of the disease increased from fifty-three to sixty-nine. Veterinary officials of the Bureau of Animal Industry consider that such progress is proof of the practicability eventually of freeing entire states from bovine tuberculosis.

WE learn from the *Journal* of the American Medical Association that, in accordance with plans prepared by the committee to investigate the health hazards of tetra-ethyl gasoline, the U. S. Public Health Service is carrying on chemical and clinical studies in various parts of the country of the manufacture, distribution and use of this gasoline product. Surgeon General Cumming has detailed Dr. J. F. Leake to assume charge of all these investigations and to cooperate with the director of the Hygienic Laboratory and with medical officers of the section of industrial hygiene and sanitation. Two fields of study have been determined on. One of these will be in a Middle Western city where tetra-ethyl lead gasoline has been in use for several years. In this city investigations will also be carried on in an experimental garage where this gasoline has never been used. Identical experiments will also be carried on in an Eastern city.

THE Federation of Bird Clubs of New England has been presented with Milk Island, off Rockport, for a bird sanctuary. This island, the gift of Mrs. Roger W. Babson, will be presented to the state by the federation. The island comprises about fifteen acres. The officers of the federation will present it to the state as a bird refuge in perpetuity, and the island will be known as the Knight Bird Refuge in memory of Mrs. Babson's father and mother. By this gift the Commonwealth of Massachusetts will have by the end of this year seven islands for bird sanctuaries, acquired either as gifts or by purchase by the federation. These islands are Egg Rock in Lynn Harbor, Ram Island, off Mattapoisett, Carr Island, off Newburyport and the Merrimack River, Tern Island, off Chatham, Smith's Island, off Nantucket, and Penikese in Vineyard Sound.

THE American Museum of Natural History announces that the museum architects, Trowbridge and Livingstone, are collaborating with Howard Russell Butler, of Princeton, in the preparation of plans for the proposed new astronomical hall which is to occupy the place of the present auditorium. This hall will include five floors and will cost $2,000,000. The first floor will be devoted to the museum's large collection of meteorites. On the second floor will be a great hall, extending through the third floor, for astronomical models and exhibits, while the astronomical hall proper will extend from the fourth floor through the fifth and sixth floors and will be capped by a huge dome, which will represent the heavens with the constellations.

UNIVERSITY AND EDUCATIONAL NOTES

DR. G. B. FRANKFORTER, of the University of Minnesota, has become professor of chemistry at Stanford University.

DR. HILDING BERGLUND, a native of Sweden who has been an assistant professor in the Harvard Medical School since 1923, has been elected professor of

medicine and head of the department of medicine in the University of Minnesota Medical School. He succeeds Dr. S. Marx White, who has resigned to devote his full time to private practice.

DR. BURTON CLARK has been appointed associate professor in the department of geology at the University of South Carolina.

JOHN GIESEN, assistant professor of zoology in Marquette University, Milwaukee, has resigned to become head of the department of zoology in Holy Cross College, Worcester, Massachusetts.

DR. FREDERICK H. ALLEN, director of the All-Philadelphia Child Guidance Clinic, has been appointed associate in psychiatry, and Dr. Richard H. Paynter and Dr. Phyllis Blanchard, psychologists of the clinic, instructors in psychology in the graduate school of medicine at the University of Pennsylvania. They will have charge of the instruction in psychiatric and psychological methods in child guidance work of the neuro-psychiatric fellows of the Commonwealth Fund of New York City.

AT the New York Homeopathic Medical College and Flower Hospital the following appointments are announced: Dr. J. George Brody, professor of physiology and pharmacology; Dr. Laura Florence, assistant professor of histology and embryology; Dr. Hans Anderson, assistant professor of pathology; Dr. C. Saul Danzer, assistant professor of experimental medicine; Dr. Gregory Schwartzman has been promoted to be professor of bacteriology.

DR. WINFRED OVERHOLSER, a member of the Massachusetts Commission on Mental Diseases, has been appointed professor of psychiatry in the faculty of the Boston University School of Medicine to succeed Dr. N. Emmons Paine.

NORMAN C. MILLER, head of the engineering extension department of Pennsylvania State College, has resigned to become director of extension teaching at Rutgers University.

PROFESSOR H. V. A. BRISCOE has been made director of the department of chemistry at Armstrong College, Durham, in succession to Professor W. N. Haworth, now professor of chemistry in the University of Birmingham. Professor Briscoe has been for several years professor of inorganic and physical chemistry in Armstrong College. Dr. G. R. Clemo, of the British Dyestuffs Corporation, has been appointed professor of organic chemistry in the college.

PROFESSOR HANS CLOOS, of the University of Breslau, has been appointed professor of geology and paleontology at the University of Bonn, to take the place of Professor G. Steinman, who has been made professor emeritus.

DISCUSSION AND CORRESPONDENCE

BOTANICAL CRITICISM

ARE American botanists excessively polite?[1] Certainly they do not indulge in mutual criticism as a major activity. Most of us will agree that without discussion knowledge can not prosper. It is coming to be pretty generally admitted that the badly crowded programs at botanical meetings stifle even the most necessary discussion. On the whole, however, botanical criticism is not a matter of machinery, but of atmosphere. The columns of many journals are open, and publication is easy—too easy, the mathematicians and chemists tell us.

One may as well grant that our civilization is one which makes a specialty of avoiding friction. It has even been eliminated as bargaining from the age-old business of retail selling. "Knocking," as a source of friction, is a capital social offense and in the mind of the average man comprehends criticism in all its phases. But may we not also grant that science rises above such considerations?

The cause of inadequate criticism is not so patent. To put it bluntly one can not have criticism without having the critical attitude of mind. And the only truly critical mind is the educated mind.

As a matter of course science must attract large numbers of youths who are fascinated, not by the ideas involved, but by the manipulations to be performed. Any botanist who knows his field can name instances where the ideas of one man are at present engaging the hands of anywhere from five to fifteen other men.

Skill is a noble thing, but it does not guarantee an intellectual atmosphere. It is essential to know a good preparation from a bad one, or to distinguish a correlation from a coincidence, but that is not enough. In reality science consists not of things nor of events, but of ideas. So far as the scientist is concerned ideas have relative values. It is the task of criticism to assign these values. The great strategists in science have been great selectors in the field of ideas.

Naturally the business of criticism is no child's play. It is work for good minds that have been severely trained. One recalls a well-known teacher of botany who took actual pride in his "discovery" that it required no especial ability to become a botanist! If this opinion were very widely shared one would not have to look far for an explanation of the dearth of botanical criticism.

In addition to the need for ability there is the question of adequate training. The writer has been

[1] Rose, D. H., and Stevens, N. E., "The excessive politeness of American botanists," SCIENCE, 61: 656–657, 1925.