twigs, the scouts took samples for further examination. Any that showed the characteristic dark streaking under the bark were sent to the federal laboratory at Bloomfield, N. J., for culture. Specimens from elms in territory never before infected were also cultured at the Experiment Station. All those found diseased have been removed and burned so that beetles under their bark can not carry infection to healthy elms.

During the cold months the federal men will engage in elm sanitation work. This consists of looking for elm material infested by bark beetles and material which may be attractive for beetle breeding next spring. When it is necessary to remove trees, owners have the choice of cutting the wood and storing it in an approved manner, or of turning the job over to the government completely. Logs may be stored in tight cellars or bins from which the beetles can not escape, or debarked and left outdoors. The federal method is to burn all the elm wood.

EXPEDITION TO THE BADLANDS OF SOUTH DAKOTA

ACCORDING to a bulletin of the National Geographic Society, after three months spent in prospecting and in excavating fossil bones in the Badlands of South Dakota, an expedition, sent out jointly by the National Geographic Society and the South Dakota State School of Mines, has completed its season's work with an unusually large and valuable collection of specimens. The one hundred and seventy-five or more specimens, weighing several tons, are now at the School of Mines in Rapid City, S. D., where the work of preparing and mounting them for exhibition is being carried on. Preliminary investigations indicate that they include several species and genera new to science. Probably included in that category will be a rhinoceros represented by a skull twenty-eight inches long, and a pig (also represented by a skull) which, when alive, measured fully eight feet from snout to tail.

Among other specimens found by the expedition were fossil bones of tapirs, little three-toed horses (the remote ancestors of present-day horses), protoceros (remotely related to deer and antelope), the little-known ancodus and a number of small rodents. Rarest of the specimens are bones of birds—only a few have previously been found in the Badlands. The principal find in this group was a fossil egg still firmly held in its matrix of rock. A few plant fossils were found of fossil hackberry seeds and petrified hackberry wood.

The expedition, led by Dr. Joseph P. Connolly, president of the School of Mines, and James D. Bump, curator of the School of Mines Museum, including seven other members, established camp in an eroded region twenty-five miles from the nearest highway. Its work was carried on in the summer sunshine where mid-afternoon temperatures frequently reached 120 and 130 degrees Fahrenheit. Some of the heaviest specimens were found near the tops of high, slender pinnacles and had to be lowered by block-and-tackle.

The material collected by the expedition is particularly rich in rare specimens because the work was confined to geological formations in which very little work had been done heretofore. These are the Channel Sandstones, so called because the beds were formed by deposits filling stream channels worn in the clay surfaces in Oligocene times, probably thirty million years ago. The surrounding clay—now turned to shale—is softer and much more easily worked, and from it have come most of the specimens previously collected.

PORTRAITS OF DISTINGUISHED CHEMISTS

The News Edition of the American Chemical Society states that "Portraits of Distinguished Chemists," published by the *Journal of Chemical Education,* consists of reprints of particularly important frontispieces which have appeared in the journal from time to time. These pictures, carefully printed on the finest grade of coated paper, in addition to their chemical interest have an artistic quality that entitles them to a place in a living room or library.

"There are 48 portraits, divided into three series of 16 each, printed on separate sheets, 8 by 10.5 inches in size, and similar in every respect. Their instructive value is increased by descriptive legends stating the important facts of each man's career, his dates and reference citations. These legends are visible when the portraits are framed."

Each series is enclosed in a portfolio of deep red cover stock on which are printed the names of the chemists whose portraits it contains. A list of these names follows:

SERIES A

Svante Arrhenius, Adolf von Baeyer, M. Berthelot, Robert Boyle, Stanislao Cannizzaro, Madame Curie, J. H. van't Hoff, Michael Faraday, H. Le Châtelier, Justus von Liebig, Dmitri Mendeléeff, Louis Pasteur, Sir William Perkin, Joseph Priestley, Sir William Ramsay, Friedrich Wöhler.

SERIES B

Francis W. Aston, Robert W. Bunsen, James Mason Crafts, John Dalton, Emil Fischer, J. Willard Gibbs, W. F. Hillebrand, Irving Langmuir, Henri Moissan, Walther Nernst, Wilhelm Ostwald, T. W. Richards, Benjamin Rush, Paul Sabatier, Benjamin Silliman, Benjamin Thompson.

SERIES C

Joseph Black, Herman Boerhaave, Irène Joliot Curie, Sir James Dewar, Victor Grignard, Fritz Haber, Charles