

ratorian, manufacturer, clinician, physician and pharmacist assures progress in drug knowledge.

Incidentally, we mention here that the hospital pharmacist should have a larger part in the progress of medicine, and to that end the importance of pharmacy in hospitals and hospital service should receive relative consideration in the interest of the public.

THE U. S. P. EXHIBIT AT THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

IT IS pleasing to note that the American Medical Association has again awarded a special certificate for the U. S. P. Exhibit. The committee in charge of the exhibit at the Portland A. M. A. meeting was composed of: Dean C. W. Johnson, University of Washington, Seattle; F. C. Felter, of the *Pacific Drug Review*; Blumauer & Frank Drug Company, Portland, Ore.; President Frank Nau, of the Portland Retail Druggists' Association; Secretary Frank Ward, of the Oregon State Board of Pharmacy; Prof. E. J. Stuhr, Oregon State College, Ore. and Dean A. C. Mickelsen, of North Pacific College, Portland, Ore.

Aside from a complete set of U. S. Pharmacopœias the exhibit included a number of drug plants, products and preparations, official in U. S. P. X. Among the plants shown are: **Cascara Sagrada**, its extract, fluidextract and aromatic fluidextract; **Digitalis**, the infusion and tincture; **Belladonna**, tincture, fluidextracts, extract, plaster, ointment, atropine; **Peppermint**, water, spirit, oil and menthol; **Hydrastis**, the fluidextract; **Uva Ursi**, the fluidextract; **Veratrum Viride**, the tincture; **Rose**, the honey, water, fluidextract, the ointment.

THE GEOLOGICAL MUSEUM OF THE SOUTH DAKOTA SCHOOL OF MINES.*

BY DR. C. C. O'HARRA, PRESIDENT.

The magnificent splendor and colossal scope of Nature's creative artistry, so profoundly expressed in the everlasting monuments known as the Black Hills of South Dakota, will provide no small measure of interest for the assemblage of pharmacists who will attend the Seventy-Seventh Annual Convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in Rapid City.

The Geological Museum, from the beginning, has been an important feature of the South Dakota State School of Mines. The collection of materials, now grown into a most worthy representation of the natural phenomena of western South Dakota, is one of the attractions which every visitor to this remarkably beautiful and rapidly developing Black Hills country endeavors to see.

The museum is not merely a collection of curiosities. It is made up of displays judiciously selected, carefully arranged and worthily displayed. Everything shown has a definite and permanent value. Some are noteworthy because of their beauty, some because of their economic and industrial interest, some because of their rarity and others because of their portrayal of life and conditions that long

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ago receded into the bygone ages of the earth. There are exquisite relief maps, ores from world-famous mining regions, minerals from everywhere, and petrifications illustrative of the many rock strata. Highly important fossilized skeletons found in South Dakota, particularly in the Big Bad Lands, collected, prepared and mounted by members of the School of Mines, add their large share of interest.

Here one may see the oldest thing in South Dakota, a quartz boulder that has been subjected to the vicissitudes of the ages, and which, according to the geological calculations of the day, has witnessed the coming and going of more than a hundred million years. Specimen after specimen show the handiwork of Nature and each one has its interesting individual story.

The museum has many fine large pieces of the unique sand-calcite crystals from the Bad Lands. One piece occupying its own glazed case weighs approximately three tons. The form of the individual crystals and their intricate arrangement with reference to one another are constant sources of wonder. A concretion made up chiefly of iron and manganese and with geometric figures covering its surface is beautifully representative of the countless concretionary masses found in such great variety and abundance within the shales which cover so much of the plains country.

The collections contain a number of banded agates. Among these is a slice, free from artificial coloring, showing in characteristic manner thin concentric shells of finely crystalline silica deposited successively from the outside walls of a rock-cavity toward the center with, near the center, more coarsely crystallized silica in the form of quartz.

One of the attractive mineral exhibits of the museum is the considerable series of gold-leaf covered plaster of paris reproductions of the world's most famous gold nuggets. The original of the largest of these, the Welcome nugget, found in Australia in 1853, was nine inches in diameter, twenty inches long, weighed 2166 ounces and had a value of \$41,883. A mineral flag occupying a prominent place in the museum measures three feet by five feet. The stars are of Black Hills aragonite, the blue field is of Arizona azurite and the stripes are of Black Hills white quartz and rose quartz. The flag weighs approximately 400 pounds. To many people the most interesting feature of the museum is the display of fossils. There is a small but well-selected collection of invertebrates beginning with those found in the very oldest sedimentary rocks and arranged in order of age leading up to the present. One may here see well-preserved forms of creatures that lived in the days when the earth was young and by means of these he in some degree may trace the harmony that was wrought on the chain of development through the millions of passing years.

Backboned animals in time appear and with these the interest increases. It is especially worthy of note in this connection that the Black Hills region, including, as it does, the White River Bad Lands, is one of the most famous vertebrate fossil grounds of the world. Perhaps no area of equal extent anywhere has provided so much convincing material illustrative of how the Creator has built up the rocks and soils of the land and, along with this, has developed the higher animals and guided them along the great highway of life. Layer upon layer of muds and sands and gravels were laid down through the unnumbered years and these were accompanied in rhythmic manner by animals and plants exquisitely fitted to the conditions of the time.

The South Dakota School of Mines through its museum has endeavored to utilize this educational asset so conveniently provided for the institution. The older rocks of the Black Hills and the ores and minerals they contain have their peculiar appeal, but the later rocks and especially the Bad Lands with their wonderful fossils help to round out in a beautiful manner the complete geological record.

The museum has on display from the fossil-bearing beds of the Bad Lands, the complete skeleton of an ancestral alligator; the head of a peccary; heads of rhinoceroses and giant pigs; male and female skulls of the bizarre antelope-like creature known as *Protocorea*; remains of camels and three-toed horses, and skulls of tapirs, titanatheres, et cetera. Three wonderful slabs, each in its separate glazed case, show complete skeletal mounts. One of these is that of the saber-tooth tiger, *Dinictis*. Another shows two beautiful skeletons, male and female, of *Oredon gracilia*. This is believed to be the finest mount of its kind in America. The third contains a superbly preserved skeleton of *Oredon cublertsoni*, and, wonderful to relate, is that of a mother accompanied by unborn twins. In so far as known this is the only discovery of the kind among mammals that has ever been made.

These skeletons all show the exquisite technique of the preparator's art and they and the many other skeletons and skeletal parts, prepared and awaiting preparation, testify to the many days of careful searching in the Bad Lands country in order that these testimonials of bygone ages may be made to serve our pleasure and inspiration.

The School of Mines in addition to the Geological Museum has important collections illustrative of Mining, Metallurgy and Biology. These are not houses with the geological display but are nevertheless open to inspection much of the year. The Black Hill Herbarium, cared for in a room adjoining the Biological laboratories, is doubtless the most complete collection of mounted Black Hills' plants to be found anywhere. They are the basis of several papers prepared and published by Mr. A. C. McIntosh, head of the department of biology, who has personally collected and mounted practically all of the specimens.



U. S. P. Exhibit at Portland A. M. A. meeting, 1929.