pital. It is planned to raise an endowment fund of twenty million dollars. The ceremonies in connection with the inauguration of Dr. Robert E. Vinson as president of the university will take place on October 9, 10 and 11.

SIR WILLIAM MULOCK has been unanimously elected to succeed the late Sir Edmund Walker as chancellor of the University of Toronto.

DR. GRAHAM EDGAR, professor of physical and applied chemistry in the University of Virginia, has resigned to join the staff of the research division of the General Motors Corporation.

DR. GEORGE K. K. LINK, who for a number of years has been an investigator in market pathology in connection with the U. S. Bureau of Plant Industry, has been appointed associate professor of plant pathology at the University of Chicago.

AT the Washington University School of Medicine appointments have been made as follows: Dr. David Preswick Barr, assistant professor of medicine at Cornell University, professor of medicine; Dr. Stephen Walter Ranson, professor of anatomy and head of the department of anatomy at Northwestern University Medical School, professor of neuro-anatomy, and Dr. Arthur Isaac Kendall, professor of bacteriology and dean of the Northwestern University Medical School, professor of bacteriology and hygiene.

DR. O. RECHE, of Hamburg, has been appointed professor of anthropology at the University of Vienna, which has been vacant since the death of Professor Pöck two years ago. At the University of Graz, Dr. Otfried Müller, of the University of Tübingen, has accepted the chair of anatomy which had been vacant for many years, and Professor Alfred Wegener, director of the meteorological division of the naval institute in Hamburg, has been appointed professor of meteorology.

DISCUSSION AND CORRESPONDENCE

THE RECENT DISCOVERY OF PLATINUM IN SOUTH AFRICA

DR. PERCY A. WAGNER, of the South African Geological Survey, has just sent me a copy of *Industries Bulletin* No. 101 of the survey, on "Platinum in the Waterberg district," prepared by himself and Tudor G. Trevor. As this gives full details regarding this recent much-heralded discovery, an abstract of the bulletin will be of interest.

The deposit is some 90 miles north of Pretoria and ten miles from the railroad to Pietersburg. The prevailing country rock is a felsite interspersed with a felsite tuff, and underlain by a granite which bears an intrusive relation to it. While in places this granite is exposed, at the principal platinum workings it is probably 500 feet beneath the surface. There are many later faults in the region, and the main platinum lode occupies one of them.

This main lode can be traced at the surface without a break for a distance of two and a half miles, and the best assays have been obtained from a branch of this lode. The lode is described as a quartz-impregnated fault zone, ranging from six to 28 feet in width, with poorly defined walls as a rule. The richer branch lode is from two to five and a half feet in width and is roughly parallel to the main lode and seems to be a branch fissure, rather than a fault. The lode filling varies much in character, but often consists of numerous quartz stringers separated by strips of felsite, sometimes of considerable width. More commonly the lode matter is conspicuously brecciated, angular fragments of pink felsite and of earlier-formed quartz combs or patches of specularite or hermatite lying in a matrix of later white quartz interspersed with druses, and invariably exhibiting a comby or radial-fibrous structure. There must have been several periods of brecciation and quartz deposition, and the quartz deposition and brecciation were evidently very closely connected, at least four generations of quartz being present.

In places the lode matter presents a bright green color, or is banded or streaked with green, owing to the presence in considerable amounts of a leek-green chromium mineral, evidently a chlorite. Nickel and copper were tested for with regative results, but one sample of the ore, containing perhaps 10 per cent. of the chlorite, gave 0.40 per cent. Cr_2O_3.

The platinum is rarely visible in the ore, but can be recognized by a lens. The individual grains range from 0.015 to 0.5 mm in diameter, and clearly belong to an early stage of the mineralization. It is frequently observed in intimate growth with specularite, being often enclosed in that mineral. It also occurs intergrown with quartz, and sometimes coated with secondary oxide, which makes it possible that at greater depths it will be found intergrown with or imbedded in pyrite. The later white quartz is probably barren of platinum.

The platinum bullion runs from 20 to 40 per cent. palladium, and sometimes contains small quantities of iridium, but this is often absent. The other metals of the platinum group have not been found, unless possibly traces of osmium. There is no evidence of iridosmium. Careful search was made for sperrylite, but none was found, nor has gold been recognized.

Cuts and shafts have been sunk to depths ranging from 12 to 40 feet, and have revealed the fact that the platinum is very unevenly and erratically distributed through the lodes, and that the rich ore is confined to shoots. The richest ore thus far opened is

in the branch lode, which has in places given very rich values. A general sample over a width of three feet assayed over 9 ounces per ton, another over 12 inches adjacent to this gave 137 ounces, while a picked specimen ran 173 ounces. Samples taken about every foot in depth across the lode to the depth of 10 feet ran from a trace to 17 ounces, with an average of three ounces. The sample at 10 feet carried about five ounces. Other samples for a distance of 480 feet along the lode show platinum in workable quantities.

On the main lode outcrop samples of 20 inches across the lode for a distance of 50 feet gave an average of over four ounces, at three feet down over 48 inches 0.25 ounces, and at four feet down over 60 inches 1.2 ounces. Farther on a sample over three feet ran 1.35 ounces, while another sample from different parts of the trench gave 0.6 ounces. In the prospecting shaft fair values were obtained at the surface and then barren ground was struck; at 35 feet the shaft again entered ore, and at 37 feet a sample over 24 inches showed 0.35 ounces, while one adjacent to it over the same width gave only 0.5 pennyweights.

Exposures on the main lode that proved to be platiniferous represent a vertical range of 150 feet and there is no reason to believe that the character of the lode is different at considerably greater depths. The same or similar lodes occur in the neighborhood, and platinum has been found in lodes at least ten miles from the main platiniferous lode. Of course the whole region will need and is apt to receive much further investigation before it can be determined whether it will become an important platinum producer. The present conclusion of the authors of the paper is the following: "As to what dimensions production will ultimately attain, it is impossible to make any forecast. The writers do not anticipate a very large output, but, on the other hand, see no reason why, with ordinary good fortune, the company (now working the deposit) should not have a successful career."

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CORRECTION OF NET ENERGY VALUES

THE direct object of the work of the Pennsylvania Institute of Animal Nutrition has been from its inception and remains the measurement of the net energy values of feeds and the use of these values in the statement of feeding standards for farm animals.

During the life of Dr. H. P. Armsby, the former director of the institute, numerous important contributions were made to the literature of the subject above indicated, and at the time of his lamented death on October 21, 1921, an extensive accumulation of results of experiments remained in an unfinished condition. As a consequence the staff of the institute is now bringing to completion the results of seven years' animal experimentation.

As these materials are assimilated there are coming to light improvements of understanding of the general project such as place us under obligation to recompute and to correct all the net energy values which have been published from the institute. Dr. Armsby himself regarded these results as "tentative" (to use his own word), and therefore subject to revision.

The theoretical basis and the general method of work which has been followed can not be challenged; and the general order of the net energy values remains as previously reported, but the recent progress alluded to has the effect radically to alter certain values which have long been questioned, to improve very greatly the agreement of repeated estimations on the same feed and to place net energy values in general on a new plane of accuracy.

This improved situation is due mainly (1) to an improved understanding of the effects of change of position of the experimental animal on the heat outgo, and a more accurate method of computation of such effects, and (2) to a change in method of computation of net energy values which gives full and proper recognition to the fact that the energy of maintenance is a part of the net energy.

The general recognition of the net energy conception as one which promises great improvement in our understanding of the nutritive requirements of farm animals and the extensive use which is being made of net energy values seem to us to require this notice of a forthcoming revision of the published figures.

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PALAEONTOLOGISCHE GESELLSCHAFT

IN an account of recent papers by European workers on the habitat and origin of the Eurypterida (*Amer. Journ. Sci.*, March 1924), Dr. R. Ruedemann says that some of those papers were read at a "meeting of the German Paleontological Society." It should be pointed out that the society to which he refers, though it has a German name, has always been an international society. The president is an Austrian. Holland, Sweden and Great Britain are represented on the committee and the last annual meeting was in Vienna. The society has numbered distinguished American paleontologists among its members (was not Dr. Ruedemann himself one?) and hopes to attract many more. The secretary is Dr.