juxta-articular nodes, their etiology and pathology; and on baciluria as a cause of pyrexias of uncertain origin in the tropics. According to the report, the time when the prophets of research had to clamor for a hearing is happily past, and there is no longer any hesitation on the part of government departments or private enterprise in appealing for assistance. Of the two possible methods of extension to meet these increased responsibilites Major Archibald advocates decentralization, by the establishment in various parts of the Sudan of local laboratories, temporary or permanent, for medical, chemical, and entomological research. This he considers preferable to the creation of new and larger laboratories at Khartoum. His recommendation has been unhesitatingly approved by the government.

IN order to present to the public more promptly the results of its scientific investigations, the Bureau of Mines issues a series of brief mimeographed reports of investigations as an adjunct to the printed publications. Besides affording a medium of prompt publication of information, the reports of investigations provide a vehicle for the publication of briefer material which would hardly justify issuance in the form of printed bulletins. These reports deal with major metals, minor and rare metals, non-metallic minerals, petroleum, gasoline, coal, coke, safety, sanitation, mine accidents and other subjects. The reports are mailed free to interested applicants as long as the editions are available. Descriptive notices of issues in the series are mailed regularly to all who desire to receive the information. Serial 2316, just issued, is a subject list of reports of investigations issued to December 31, 1921, and describes some 300 reports, whose range covers such subjects as abrasives, automobile exhaust gases, breathing apparatus, carbon black, Fuller's earth, liquid oxygen explosives, mine telephones, oil pipe lines, slate dust, valuation of oil properties, airplanes in mine-rescue work, powdered coal, helium, mine timbers, lead poisoning, smoke prevention, clays, building stones, safety in quarrying, etc. Serial 2316 may be obtained from the Bureau of Mines, Washington, D. C.

The *Journal* of the Royal Geographical Society reports that a short account is given in *Ymer* of the scientific expedition organized by Prince William of Sweden for zoological research in the region of the Kirunga volcanoes, north of Lake Kivu. The expedition left Marseilles towards the end of 1920, landed at Mombasa, and passed through the Kenya colony and Uganda to its destination. Various camps were established among the volcanoes and on the north shore of the lake, and extensive zoological collections made, including specimens of the mountain gorilla. Near the lake the barren lava-fields due to the sudden eruption of a new volcano in December, 1912, were found to be but sparsely covered here and there by new vegetation. The expedition went north to the Belgian post of Ruchuru and Lake Edward, through a district described as a paradise for sportsmen. Passing rapidly through the Semliki valley, where interesting collections were made in the outliers of the great equatorial forest, it spent some time at the Belgian post of Isumu, and made some study of the Wambutti dwarfs. Thence the return was made by Lake Albert and the Nile. The collections, which have been deposited at the Natural History Museum at Stockholm, include about 1,000 mammals, 1,700 birds, and some hundreds of reptiles and amphibia, besides a large number of insects.

UNIVERSITY AND EDUCATIONAL NOTES

SIX medical students from Polish universities have been selected to go to America to finish their studies preparatory to entering the new Institute of Hygiene recently established at Warsaw by the Rockefeller Foundation. Professor Selskar Gunn, representing the Rockefeller interests, has made the final choice of the students after a competitive examination organized by the Polish ministry of health. An endowment of $250,000 has been given for the establishment of the institute by the Rockefeller Foundation.

THE departments of engineering and medicine at the Kyushu Imperial University have just been opened to women students. Women are still barred from attendance at the Imperial University in Tokio and at most of the other higher schools.

AT Stanford University, Dr. Lewis M. Terman has been appointed head of the department of psychology to succeed Professor Frank Angell, who retired at the end of the academic year 1921-1922. Other additions to the department include Dr. W. R. Miles, professor of psychology, and Dr. Calvin P. Stone, assistant professor.

PROFESSOR J. J. THORNBER, director of the Arizona Agricultural Experiment Station, has in addition received appointment as dean of the College of Agriculture of the University of Arizona, succeeding Dean D. W. Working.

MR. CHARLES W. T. PENLAND, A.M., Harvard, has been appointed instructor in biology in Colorado College for the ensuing year. Mr. H. R. Remmers, A.M., Iowa, has been appointed instructor in psychology.

MR. R. A. BRINK, who has for the past two years been at the Bussey Institution of Harvard University, has been appointed assistant professor of genetics at the University of Wisconsin. He succeeds in this position Dr. E. W. Lindstrom, who goes about September 1 to the Iowa State College at Ames as professor of genetics, where he will organize a new department.

DISCUSSION AND CORRESPONDENCE

FILTERED AIR

IN SCIENCE of June 2, 1922, in mentioning the work of the Committee for the Investigation of Atmospheric Pollution, reference was made to the work of Dr. Owens on the amount of dust found in expired air. It has been taken for granted, I think, by many medical men that in passing through the nasal and buccal passages efficient filtering of the air took place; and that all dust particles were deposited on moist membranes and automatically removed by secretion flow. Dr. Owens' experiments seem to prove that in ordinary breathing the expired air still contained as much as 70 per cent. of the suspended impurities which entered during inspiration. So that only about 30 per cent. of the impurities in air are removed in transit through respiratory passages.

Dr. Chase S. Osborn, formerly governor of Michigan and one who had much to do with mines, referring to the above mentioned insufficient filtering, suggests that there may be something in the fact that the influx of air has not the velocity and current strength of the efflux, and states that the finding of Dr. Owens that air is not purified in its passage through the body appears to be proved without doubt by sillicosis in the Transvaal mines. He says:

> It takes very little time comparatively for a miner's lungs to fill up. He is then subject to all sorts of pulmonary diseases. Dr. Gorgas was summoned to see if he could offer anything to prevent or cure. Even when the men wear masks these do not entirely avail, as often the men are in close places and will not wear the masks.

Good water, sterilized milk and insect screens have aided materially in reducing disease. May we hope to add to the list filtered air? There seems to be no doubt but that the use of a mouth mask was helpful in combatting the spread of influenza.

ALEXANDER MCADIE

THE "PROCESSING" OF STRAW

IN a recent number of SCIENCE, Professor Harold Hibbert calls attention to the work done in Germany in converting straw into a feed of greater value by boiling it with soda and suggests that American farmers may convert a waste product into "a profitable and palatable cattle food of high nutritive value" by following the German example. Professor Hibbert has apparently overlooked the fact that this feed is extremely low in proteins. This fact was mentioned by Lorenz Hiltner in his pamphlet in 1917-18 and is recognized as being a point against "processed" straw as a feed. Various methods have been tried by the Germans to increase the protein content, some of which are mentioned by Hiltner.

The Office of Forage Crops has been interested in the development of this German work but has not been convinced of the value of the process for the American farmer. While it is not possible to make accurate estimates of the expense involved it is quite evident that the labor item would be considerable. The farmer would have to set up a plant however simple