near the coast apple scab may winter on the twigs of susceptible varieties such as Fameuse and McIntosh as a dormant stroma and produce abundant conidia in the spring. It also confirms Morse and Darrow's conclusion that under certain conditions and with certain varieties of apples diseased twigs and water sprouts may be an important factor in the propagation and spread of the disease.

Mr. J. S. Dash when a senior student at Macdonald College devoted some time to the study of apple scab and the results of his studies were embodied in an unpublished paper now in the college library. He collected scabby apples early in the spring that had lain under the snow all winter and found that about five to ten per cent. of the conidia germinated.

On November 27 of the present year the writer collected scabby apples that had lain under the trees after their fall without protection of any kind. During late fall and early winter the temperature fell below the freezing point fifteen times, rising above during the day. There were two periods of severe frost followed by mild weather, the minimum temperature of the first being 11° F. and of the second on November 26 being 1° F. Conidia were abundant on the scab spots and these were placed in hanging drops of distilled water. The spores germinated freely and vigorously and in twenty-four hours showed many germ tubes over 100 microns in length. By count of the spores present in a number of microscopic fields in several hanging drops it was found that over 26 per cent. had germinated. Only those with well-developed germ tubes were counted. The conidia were examined immediately after being placed in the distilled water, and there could be no doubt whatever that the germ tubes had developed while in the water.

It would seem from these observations that the conidia are more resistant to low temperatures than is generally supposed. As material is available it is hoped to carry on further experiments along this line during the winter and spring.

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SCIENTIFIC EVENTS

BARON DAIROKU KIKUCHI

BARON DAIROKU KIKUCHI died suddenly at his villa at Chigasaki, Japan, on August 19. Baron Kikuchi was graduated from the University of Cambridge, England, with the rank of "wrangler." He became professor of mathematics in the Imperial University at Tokyo and later its president. He was for a time the Imperial Minister of Education and a member of the Emperor's Privy Council at the time of his death.

He was active and influential in the organization of the Japanese National Academy of Sciences, the National Educational Association and in the development of all the scientific and educational interests of the empire. He was the author of many contributions to scientific journals and several books, including a notable volume on "Japanese Education," consisting of a series of lectures delivered at the University of London in 1907. Baron Kikuchi made several visits to the United States, lecturing in our principal cities and at several of our leading institutions of learning. He was looking forward to another visit to America in the very near future, and his many friends in this country will learn of his death with profound regret.

THE PRODUCTION OF POTASH IN THE UNITED STATES

MORE potash has been produced during the first six months of 1917 than was made during the entire year 1916. The reports received by the United States Geological Survey, Department of the Interior, have been reduced to terms of the commercial unit commonly used to measure the available or water-soluble potash (K_2O) in the product, and only material actually sold by the producer during this period is included. The weight of the materials handled was therefore much greater than represented by these figures.

This table includes practically all potash produced.

The Nebraska alkali lakes still lead, having yielded about one third the entire production. There are now at least four important operators in this field.

SUMMARY OF THE PRODUCTION OF POTASH IN THE UNITED STATES, JANUARY TO JUNE (INCLUSIVE), 1917

Source	Available Potash (K_2O)	Value at Point of Shipment
Natural salts or brines ...	7,749	$2,808,240
Alunite and dust from cement mills and blast furnaces	1,867	746,576
Kelp	2,143	1,348,095
Distillery slop, wool washings and miscellaneous industrial wastes	2,153	876,714
Wood ashes	111[1]	84,414
	14,023	$5,864,039

The production from Searles Lake, Calif., would undoubtedly be materially assisted by passage of the legislation now before the House of Representatives dealing with the leasing of potash-bearing lands. Continued uncertainty as to the status of titles to this property has hampered development of this important deposit.

No production is reported from feldspar or other silicate rocks, but considerable quantities of potash salts and potash-bearing fertilizers were obtained from the dusts in cement mills and blast furnaces.

The production from kelp was about 15 per cent. of the total, as it was in 1916.

Potash from distillery slop and other organic sources made 15 per cent. or more of the total.

The production of potash from wood ashes, including "first sorts," "pearlash" and other grades, is supposed to have been much greater than it was in 1916, but reports from these producers have been much delayed and the figures obtained thus far are probably not representative. The potash made from wood ashes thus far reported amounted to 222 tons, which is assumed to average at least 50 per cent. K_2O. This is perhaps too low, but definite information as to the grade of this material is difficult to obtain.

The prices quoted range from $3.50 to $6 a unit, a unit meaning 1 per cent. of potash (K_2O) in a ton of the material as marketed—that is, a product carrying 25 per cent. K_2O may be sold at $4 a unit, which would be $100 a ton for the material marketed.

The figures given seem to indicate that the production for 1917 will exceed 25,000 tons of potash (K_2O) or two and one half times that made in 1916. This is about 10 per cent. of the average normal yearly consumption of the country before the war, showing the need of further stimulating domestic production of potash.

[1] Only 25 reports of production from wood ashes have come in, some of the larger producers not having made returns.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

THE annual report of the Conservator of the Museum of the Royal College of Surgeons of England, as abstracted in the *British Medical Journal*, contains a review of work done in the museum. Professor Keith states that besides routine investigations carried on by the staff, Dr. Colin Mackenzie had not only continued his inquiries into the anatomy and physiology of Australian mammals, but acting also as a member of the honorary staff at the Military Orthopedic Hospital, Shepherd's Bush, had found it advantageous to combine his work at the hospital with a research, bearing on his cases, in the workrooms of the College. The comparative anatomy of the muscles of the forearm appears to throw much light on their exact significance in man which may prove of value in surgery. The specimens of bone grafts which accompanied Major E. W. Hey Groves's Jacksonian Prize Essay are distinguished in the report as of particular merit. Many preparations of value have been added to the pathological, teratological, and particularly to the anthropological series; the latter include prehistoric human bones unearthed during trenching operations, not only in home drill but also at the front. The four complete skeletons of gorillas, each representing a different stage of growth, collected in the German Cameroons, and generously purchased and presented to the museum by Sir John Bland-Sutton, will provide an opportunity of illustrating various stages in the growth of that anthropoid which, in a structural sense, is man's nearest relation. Among drawings ac-