tions were made during the evenings of June 5 and 6, 1920, from a house boat on the Tachin River, in the district of Sarm Prarm, Nakorn Chaisri, Siam. A distinct flashing of dark and light was observed. A whole tree of flies would flash all together at regular intervals of, by count with a watch, between 105 and 109 flashes a minute.

Frequently entire trees filled with fireflies are observed at the College of Agriculture, Los Baños, Laguna, Philippine Islands and it was at first thought by the writer that an extremely rapid flashing in unison took place. After, however, observing the distinct flashing in unison of the fireflies in Siam it can be stated with certainty that no such synchronal flashing took place at Los Baños.

Determinations made by H. E. Woodworth, of the College of Agriculture, Los Baños, on fireflies from Siam, showed these flies to be of the genus *Calaphotia*. Professor Woodworth states that the firefly at Los Baños is of the same genus, but of a different species. Neither species has been determined.

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Franz Steindachner

To the Editor of Science: I read with much interest the article of Dr. Jordan on Franz Steindachner. I had the great pleasure of visiting Dr. Steindachner twice; once in 1878 and again twenty years later in 1898. He was living in the simple way described by Dr. Jordan on the occasion of both my visits. His maiden sister at that time, however, was living and was keeping house for him in a perfectly simple manner.

I do not wish to speak of Steindachner's great achievements in ichthyology. I want to add my little tribute to his value as a friend. The simplicity of his life, the wonderful clarity of his character and his devotion to his friends make him almost as renowned as his achievements in the investigation of fishes. At the time of my last visit he had achieved the full distinction of head superintendent of the Royal Imperial Museums. He enjoyed to a remarkable degree the confidence of the Emperor Franz Josef. Through a special permit from the imperial palace I was permitted under his guidance to visit the castle with all of its belongings in which the heir to the throne was murdered a few years before.

I was particularly struck with the amity and friendship shown him by the people with whom he worked. As a host he was the essence of geniality and at the same time of simplicity. I carried letters to him on my first visit from friends in Harvard who knew him when he was a resident of Cambridge. He had a great admiration for this country and he numbered many personal and professional friends on this side of the water. While war broke up all political and many social relations with Germany and Austria, I feel quite certain all the personal friends of Dr. Steindachner on this side remained loyal to him through his later years of sorrow and distress, due to the exigencies of the war. The grief for him as a friend is more poignant than the regret of his loss to science.

H. W. Wiley.

Scientific Books

Chemische Krystallographie. By P. Groth. Leipzig, Wilhelm Engelmann. Vol. I., 1906; II., 1908; III., 1911; IV., 1917; V., 1919. 4,443 pages, with 3,342 figures; 8vo, cloth.

All persons interested in crystallized substances will be delighted to know that this monumental work, in the preparation of which Professor Groth spent several decades, has been finally completed. Notices of the publication of the first three volumes have already appeared in Science.[1] Vol. IV. was issued in 1917 and Vol. V. late in 1919.

According to the original plan it was thought that all the available material could be conveniently published in four volumes; the first two to be devoted to inorganic, and the last two volumes to organic compounds. The aromatic organic compounds, however, proved to be much more numerous than had been

[1] Vol. XXV., 143–144; Vol. XXVIII., 843; Vol. XXXIII., 253.

anticipated, so that two large volumes have been necessary to describe them. These two volumes contain 1,846 pages and 1,783 figures. In these volumes the treatment used in the others has been followed.

Chemists and crystallographers, the world over, are greatly indebted to Professor Groth for this most important reference work, which is a critical survey of all the crystallized material described thus far. As is generally known, Professor Groth has devoted his life to problems in chemical crystallography. He was the founder of and for many years the editor of the *Zeitschrift fuer Krystallographie und Mineralogie*. Hence, he was peculiarly fitted to undertake this very difficult and time-consuming task.

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SPECIAL ARTICLES

THE CHANGE IN THE FAT OF PEANUT-FED RABBITS

IN the course of our investigation of the soft pork of peanut-fed hogs it occurred to me that if an animal in starving used its liquid fat first, this would make it possible to overcome the softness of the pork on peanut-fed hogs. If the animal used the liquid fat first in starving it would be reasonable to suppose that if both liquid and solid fat were fed at the same time he would use a greater proportion of the liquid fat to meet the energy requirements of his body. Then it would be possible to attack the soft pork problem in two ways. One would be to feed peanuts alone for forty or fifty days then starve the hog for some eight or ten days so as to remove the liquid fat as much as possible, and afterwards finish the feeding with other feeds. The other way would be to feed the peanuts not alone for forty or fifty days as is the custom but to feed them with some feed that would produce solid fat and in this way the animal would use a greater percentage of the soft fat that was fed than he would otherwise. We got some results this past spring which indicated that it is much better to feed the hogs peanuts with other feeds for seventy days than it is to feed for forty or fifty days with peanuts alone, then to finish with other feeds.

To determine whether an animal in starving uses the liquid fat more rapidly than it does the solid fat, rabbits were fed on peanuts and alfalfa for six weeks. One of the rabbits was killed at the end of the feeding period and the others were killed after starving three, five and seven days. The iodine numbers of the kidney fat and the back fat were determined. Two series of rabbits were treated in this way but the results of the last series only will be given.

Rabbit No.	Iodine Number of Back Fat	Iodine Number of Kidney Fat
1	96.23	98.00
2	78.34	97.92
3	70.98	95.33
4	66.22	92.36

The per cent. of the livers extracted by ether, were rabbit 1, 8.15, rabbit 2, 17.04 rabbit 3, 19.18, rabbit 4, 20.09. It was expected that the ether extract of the livers would increase in starvation and it was thought that the iodine number of this extract would increase but in this last we were disappointed as the iodine number was practically constant, showing the values from 98 to 104.

Our results indicate that the liquid fat of an animal during starvation is used more rapidly than the solid fat, that the liquid fat of the back or subcutaneous fat is used more rapidly than that of the kidney. It is our intention to repeat this work, beginning in about a month, using pigs instead of rabbits.

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THE AMERICAN SOCIETY OF MAMMALOGISTS

THE third annual meeting of the American Society of Mammalogists was held in the United States National Museum, Washington, D. C., May 2–4, 1921. Officers elected for the