frey) and others discussed by Kerner, and I greatly appreciate having my attention called anew to such an authoritative support of my thesis as is given by Kerner.

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ALBINISM IN THE BLACK BEAR

Several notes on albinism in wild animals and birds have been published in Science. An interesting reference to albinism in the bear is given in a rather rare work upon the adventures of John Tanner during his thirty years' residence among the Indians.[1] While living on the Assinneboin River he had the following experience:

> Shortly after this, I killed an old she bear, which was perfectly white. She had four cubs, one white, with red eyes, and red nails, like herself; one red [brown?], and two black. In size, and other respects she was the same as the common black bear, but she had nothing black about her except the skin of the lips. The fur of this kind is very fine, but not so highly valued by the traders as the red. The old one was very tame, and I killed her without difficulty; two of the young I shot in the hole, and two escaped into a tree. I had but just shot them, when there came along three men, attracted, probably, by the sound of my gun. As these men were very hungry, I took them home with me, fed them, and gave each of them a piece of meat to carry home.

An interesting feature of this case is the fact that one of the young also was albinistic. Had albinism been a recessive trait, the albinistic mother could hardly have produced albinistic young unless mated to an albinistic individual or to another individual carrying albinism recessive. This latter supposition indicates prior cross and persistence of albinism in the same locality.

It is interesting to note the high fertility of this albinistic individual.

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[1] A narrative of the captivity and adventures of John Tanner (U. S. interpreter at the Saut de Ste. Marie), during thirty years residence among the Indians in the interior of North America, prepared for the press by Edwin James, New York, 1830, page 131.

BECHHOLD'S "CAPILLARY PHENOMENON" IN AGRICULTURE

H. Bechhold recently observed[1] the interesting capillary phenomenon that when a porous mass (such as a lump of earth or a block of plaster of Paris) is soaked in the solution of a salt and then dried, the salt collects almost quantitatively at or near the exterior surfaces. W. Kraus[2] has shown that this transfer of the salt is dependent upon evaporation at the exposed surfaces.

The above observations seem to me to give the scientific reason for the well-recognized value of cultivation or tilth in agriculture.

When the surface of the soil is stirred or broken up by a cultivator, hoe, or rake, besides killing weeds and "hilling up" the plants, a greater total surface is exposed to evaporation, and evaporation is therefore facilitated. The sub-surface water in rising, brings with it towards the roots, soluble substances which serve as plant food, though of course selective adsorption and differential diffusion effect some segregation. This capillary rise of water also accounts for the curious fact well known to farmers, that in dry weather cultivation will to a considerable extent furnish moisture to the growing crop.

Jerome Alexander

Ridgefield, Conn.,
June 21, 1921

[1] *Kolloid Zeitschrift*, 27, 229 (1920).

[2] *Kolloid Zeitschrift*, 28, 161 (1921).

QUOTATIONS

THE ROYAL INSTITUTION

In these days of grandiose state expenditure and trifling result, the history of the Royal Institution seems almost miraculous. It has occupied its present quarters in Albemarle-street since 1799, when it was founded by a few fellows of the Royal Society, of whom the American, Count Rumford, also founder of the Smithsonian Institution at Washington, provided the initial funds. Its purpose was severely practical—to "diffuse knowledge of useful mechanical improvements," to "teach the application of science to the useful purposes of life." But its wise governors soon found that teaching tends to be barren if it is divorced from research, and its laboratories, at

first intended to furnish the materials for demonstration, become centers of active investigation. What a chain of famous names and brilliant discoveries is associated with this private enterprise! In July, 1801, Thomas Young became the first resident professor; he was the father of all our knowledge of color vision and of the properties of the lens of the human eye, the discoverer of "interference" and the first to define "energy." Humphry Davy joined the institution in 1801, at a salary of £100 a year, a room, coal and candles, in return for which he gave his patrons lectures which drew all London, and gave the world the anæsthetic nitrous oxide, the safety-lamp, the process of electrolysis by which he discovered potassium and sodium, and many of the foundation stones of modern scientific knowledge. To Davy succeeded Faraday, a name inseparable from the history of science, and to him Sir James Dewar, the present resident professor, joint inventor of cordite, inventor of the thermos flask, the first man to liquefy hydrogen, the profoundest student of low temperatures. So far as can be traced, the sole support given by the state to this brilliant and beneficent accomplishment was a Civil List pension of £300 enjoyed by Faraday for a few years. Still more wonderful is the small total cost, amounting for the whole of the nineteenth century to only £100,620 for the professors, attendants, and laboratories with their apparatus and materials. Gifts and donations have been few and small in amount; the revenue has been derived almost wholly from fees paid by the audiences who wished to see and hear the professors. There is no institution of which London should be prouder, none for which the world should be more grateful. Fortunately it flourishes, and offers no pretext for absorption by any state department.—*The London Times.*

SCIENTIFIC BOOKS

Lake Maxinkuckee, a Physical and Biological Survey. By BARTON WARREN EVERMANN, Director of the Museum of the California Academy of Sciences, and Howard Walton Clark, Scientific Assistant, U. S. Bureau of Fisheries Biological Station, Fairport, Iowa. Vol. 1, 660 pages; 36 colored plates; 8 half tone plates; 24 text figures. Vol. 2, 512 pages. Publication 7 of the Department of Conservation, State of Indiana.

The work on Lake Maxinkuckee by Dr. Evermann and Mr. Clark is the most comprehensive and most symmetrical treatment of the organisms and their physical environment of one of the numerous small inland lakes of America, yet published. The material of the volumes is almost entirely that obtained from the investigations in the region, there being scant reference to similar work done elsewhere. It is contributory largely to aquatic biology and ecology, but it appeals to a wide range of interests among naturalists. There is much for the specialist in ichthyology, ornithology, botany, and other special fields of natural science. Persons attracted by the recreational offerings of such a body of water as Lake Maxinkuckee, such as anglers, sportsmen, and campers will find much of interest in these books. Science teachers can use the work advantageously for developing in school pupils a wider and deeper interest in nature and outdoor life. The clear and readable style is favorable for teaching purposes as well as for a general use of the publication.

The work on Lake Maxinkuckee is likely to promote proper measures for conserving wild life since it contains information pertaining to the direct and indirect relations of the animals and plants of the region to man. This value was undoubtedly recognized by The Department of Conservation of the State of Indiana and determined its assuming the responsibility of the publication and distribution of the work.

The field investigations were carried on from 1899 to 1914 by the United States Bureau of Fisheries. Dr. Evermann, who was in charge, and Mr. Clark did most of the field work, but with them were associated at different times and for varying intervals eleven other investigators, who were: Dr. J. T. Scovell, Thomas Large, Chancey Juday,