First Glances at New Books

MAKING A LIVING—Leverett S. Lyon—*Macmillan.* Prepared to aid high school students to answer the question: "Where and how shall I fit into the world's work?" Tells in very simple and practical style what are the requirements for "jobs" of all sorts with historical background and many questions and projects for class use.

Science News-Letter, January 1, 1927

COLLOID AND CAPILLARY CHEMISTRY—Herbert Freundlich. Translated by H. Stafford Hatfield—*Dutton.* ($14). This translation puts into the hands of the English reader the most important work on the most important field of modern chemical research. It is a book following the good old tradition of German thoroughness and comprehensiveness for it contains 883 pages and cites over 1,400 authorities. Freundlich is concerned exclusively with the theory and fundamental laws of colloidal chemistry and only incidentally refers to its numerous applications in industry.

Science News-Letter, January 1, 1927

TREES AND SHRUBS OF MEXICO (BIGNONIACEAE-ASTERACEAE)—P. C. Standley—*U. S. National Herbarium.* Of value to taxonomic botanists.

Science News-Letter, January 1, 1927

THE NEW NATURAL HISTORY—J. Arthur Thomson—*Putnam.*

An admirable work from many points of view. Its exceptionally numerous, well chosen and beautifully reproduced illustrations, and its generally fine get-up are its great eye-catching qualities. Most of the full page color plates are artistically charming and naturalistically life-like and instructive. And the scientific value of all the illustrations is greatly increased by the good description matter added, mostly written, it seems, by Prof. Thomson himself.

But the chief merit of the work is, in the reviewer's opinion, the text itself. Really trustworthy accounts of the activities of animals in nature have never been more needed for educational purposes than right now.

With the growth of ecology and of recognition that psychology must become more and more psychobiological, the demand for reliable information about how animals meet their life problems under natural conditions is growing apace. However, interesting laboratory experiments in comparative psychology may be to professional psychologists for interpreting the animal mind, for those who would know animals' lives, especially to the end of knowing men's lives better, it is clear that whole sectors of the activities of animals must be known which laboratory experimentation can hardly touch. The mating activities of nearly all birds and mammals, for example, are almost wholly out of reach of laboratory or other forms of incarcerative technique.

Toward meeting the instructional requirements in these directions such writings as the chapter, "Animal Courtship," in the third volume of *The New Natural History* are exceedingly important. Their value as appraised from this standpoint would, though, be considerably greater were bibliographical references furnished.

It is high time for works on bio-natural history of such quality as the one before us be prized for something more than their esthetic and entertainment values, largely for children; their seriously educational value should be recognized not a whit less for grown-ups than for children.

The increasingly recognized importance of personality studies on human beings is surely leading to increased interest in similar studies on sub-human beings.—*Wm. E. Ritter.*

Science News-Letter, January 1, 1927

BOTANY

Leaves Cure Own Wounds

As first-aid surgeons, the leaves of common green plants have boy scouts or soldiers in battle beaten all hollow. They are constantly being wounded, by being chewed by cattle or caterpillars or other beasts big or small, or by being torn by wind or hail; yet they automatically close up the wound without complaint, effectively keeping out the germs and fungus spores that might start festering diseases, and finally healing over the spot smoothly and permanently. Dr. R. B. Wylie of the State University of Iowa, has studied how leaves "carry on" when they are hurt.

The first thing that happens after a leaf is wounded is the collapse and death of the cells of the tissues surrounding the injury. These frequently enclose air spaces, and they effectually block the "bleeding" of the sap. At the same time the cell-layers making up the upper and lower surfaces curl inwards, and often meet and overlap. If latex or milky juice is present, as it is in lettuce, milkweed and many other plants, it hardens and forms a firm seal over the larger openings. Gums, resins, slimy secretions and other substances play similar roles. This first aid bandage of plants Dr. Wylie calls the pseudocicatrice.

This is followed by the formation of the cicatrice proper, analogous to the cicatrice that forms in a flesh wound of man or an animal. The development of this more permanent healing tissue seems to be stimulated by some kind of substances released by the crushed cells of the pseudocicatrice. The permanent healing starts leisurely and develops slowly; the initial steps are rarely taken in less than twenty-four hours, and noticeable evidence of its formation may not be found in less than ten days. In general, the cicatrice is formed by the rapid division of cells, closing up the usually loose tissue in the interior of the leaf wtih a solid barrier of small, thick-walled cells, which later enlarge and develop strengthening layers of cork or woody substance.

Science News-Letter, January 1, 1927

EMBRYOLOGY

Gorilla Young Like Human

In the very early stages of development a young gorilla closely resembles man, Dr. Adolph H. Schultz, of Johns Hopkins University has found, through his study of a young gorilla fetus. This is a rare type of specimen, of which only four have been described.

"At this early stage of development," Dr. Schultz states, "gorilla and man resemble one another much more closely than in adult life, a fact which can only be understood by assuming that both had one common ancestry from which they inherited principally the same plan of growth, a plan which could only have become modified after they evolved in divergent directions."

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GEOLOGY

Sixty-five Giant Springs

To be included in the list of the largest springs in this country a spring must yield at least 65,000,000 gallons of water a day, on the average. The 65 springs that are known to be eligible for the honor have been studied and described by Dr. O. E. Meinzer, of the United States Geological Survey. Any one of these springs turns out enough water to supply a city the size of the national capital. The largest yields almost enough to meet the needs of a city like New York.

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