

diversity of opinion, and it is evident that no one is in a position as yet to decide the points at issue. Amid all the flux of opinion, however, there is evident a desire to relate plants more closely to the interest and to the need of high school students. This desire expresses itself in an extreme form when courses in 'agriculture' are asked to be substituted for courses in 'botany.' This has brought a distinct temptation to publishers and to authors to 'meet the demand' without much consideration as to its significance. It can not mean that all that has proved good in the older method is to be abandoned, and an unorganized mass of new material substituted for it. It can not mean that high school pupils are to become apprentices rather than students. It must mean that the structure and work of plants are to be so studied that this knowledge will enable the student to work with plants intelligently. In other words, it is intended to be the practical application of knowledge, rather than practical work without knowledge."

It would be well for teachers of botany of all classes to carefully read these sentences, which gain in strength and significance to the end of the paragraph. As the writer of this review has insisted over and over again, botany wherever taught must be botany, and not some application of botany, or some study of plants not involving the orderly sequence of structural and physiological inquiry. Agriculture, horticulture, plant breeding, forestry, etc., are most excellent subjects of study for young people (and older people, for that matter), but they are not botany; rather, they require botany as a prerequisite, and must be based upon it.

Coming to Dr. Coulter's text-book we find twenty-seven chapters arranged in two "parts." Chapters I. to XIV., inclusive, deal with what may be called "pure" botany, and in these the pupil is taken step by step from the simpler to the more complex plants and their principal functions. This part of the book is intended to afford a good half-year's work for the high school pupils, and without doubt this is one of the best formulations of

this work which has yet appeared. In looking through the chapters one finds nothing which can well be omitted, nor anything which imperatively demands admission. In the second part, which is entitled "Plants in Cultivation" one finds also not a little of pure botany. Thus the chapter "What Plants Need" is plant physiology, pure and simple, as is also the chapter on "What the Soil Supplies." There is a little concession to the "practical" in the chapters on "Seeds," "Other Methods of Propagation" and "Plant Breeding," and considerably more in those on "Cereals and Forage Plants," "Vegetables," "Fruits," etc., and yet in even the most "practical" of these one sees that the presentation is by one who is primarily a botanist. All through this second part the living plant as a *plant* is emphasized, rather than the plant as a crop to be sold for such and such a sum. And here is perhaps the line of difference between the scientific conception of plant study and the conception held by those who think of plants as things to be grown for our use or pleasure. Dr. Coulter's book is a demonstration of the possibility of presenting much of applied botany in a scientific manner.

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The Evil Eye, Thanatology and Other Essays.

By ROSWELL PARK. R. G. Badger, Boston. 1913.

This volume consists of a series of entertaining essays, which, as the author states, "partake of the character of studies in that border-land of anthropology, biology, philology and history which surrounds the immediate domain of medical and general science." The subjects include *The Evil Eye*, *Thanatology* (the study of the nature and causes of death), *Serpent Myths and Serpent Worship*, *Iatro-Theurgic Symbolism*, *Giordano Bruno*, *The Career of the Army Surgeon*, *The Evolution of the Surgeon from the Barber*, *History of Anesthesia and the Introduction of Anesthetics in Surgery*, etc. The treatment in nearly every case is primarily historical, and the main purpose appears to be to show how many

customs and ideas of to-day have roots in the past which are hardly suspected by the general public. On the whole, the book makes melancholy reading, unless one can enjoy the contrast between ancient follies and our own astonishing superiority! The study of past error and confusion is certainly of value as exhibiting the weak spots in our social organism, and enabling us to be on our guard against early symptoms of decay in the societies to which we belong. Thus, the author says:

"If one attempt to scan the field of the history of medicine, to take note of all the fallacies and superstitions which have befogged men's minds, and brought about what *now* seem to be the most absurd and revolting views and practises of times gone by, and if one search deliberately for that which is of curious nature, or calculated to serve as a riddle difficult of solution, he will scarcely in the tomes which he may consult find anything stranger than the close connection, nay, even the identity maintained for centuries, between the trade of the barber and the craft of the surgeon. Even after having studied history and the various laws passed at different times, he will still miss the predominant yet concealed reason for this state of affairs. This will be found to be, in the words of Paget, the 'maintenance of vested rights as if they were better than the promotion of knowledge.'"

It is impossible to contemplate this history without asking whether to-day the "concealed reason" mentioned by Paget is not still powerful, and serving to prevent our academic institutions from readily adapting themselves to their social environment. From another point of view doubt may be expressed as to the complete validity of the author's historical method. From time to time we find fault with the professional historian, who, depending on documentary evidence, seems to over-emphasize the miseries and stupidities of former days. We like better our Morris and Scott, who offer us pictures of moving life, full of romance, adventure and high ideals. It is easy to criticize such writings, as we criticize the landscape artist who makes idyllic pictures of

suburban lanes, leaving out the tin cans, dead cats and evil smells. Yet after all, life was life in those days, and the best that is in us calls across the ages to the best that equally existed in our ancestors. Dr. Park's accounts may be true as to facts, and yet to some extent misleading to those who have not other sources of information.

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BEETLES BECOMING PARASITES

IN all the great group of beetles, 50,000 species strong, and of an extraordinary variety of external appearance and of habit, witnessing to a ready plasticity and adaptiveness, there are but few indications of a resort to parasitism as a shift for a living. The *Stylopidae*, it is true, are parasites (in the bodies of wasps, bees and leaf hoppers), but these insects are no longer considered to be aberrant beetles, but to constitute a quite distinct order, more nearly allied to the *Hymenoptera* or *Diptera* than to the *Coleoptera*.

The classic and single conspicuous example of a parasitic beetle, living all of its life (both larval and adult) on its host, is the well-known beaver parasite, *Platypsylla castoris*, common both in Europe and America. This insect lives as an external parasite among the hairs on the outside of the host's body, and feeds on the hairs and dermal scales, just as the *Mallophaga* (biting bird lice), of birds and mammals, do. It has a highly modified body, and is the only species of its genus and family.

Another small beetle, however, *Leptinus testaceus*, of the family *Leptinidae*, is known in both Europe and America as a frequenter of the nests of field mice, shrews and other small mammals of similar habit. It has also been taken from bumble bees' nests. I have recently received several specimens of this beetle which were taken from the bodies of freshly killed shrews on Forrester Island, Alaska, by Professor Harold Heath. The beetle's body is not modified (by flattening, fusion of thoracic segments, etc.) in any such extreme way as is that of *Platypsylla* or the *Mallophaga*, but it shows, nevertheless, the