

go even further, and substitute, for instance, iodethane for the familiar ethyl iodide, &c.

As constitutional or structural formulæ are intended to assist the student in the study of organic chemistry, we should have preferred if the well-understood abbreviations for compound radicals, advocated by some of our most eminent chemists, such as Et. for ethyl, Ay. for amyl, had been used. We observe, on p. 53, that Cfy. and Cfdy. are used for the compound cyanogen radicals; why should not constitutional formulæ generally be simplified by the use of abbreviations? The task of deciphering certain complex organic formulæ is already heavy enough, and some such shorthand expressions as the above will soon become all but indispensable. We do not for a moment blame the author alone for these sins of omission and commission. Our nomenclature and terminology are in such a state of confusion that a bold reformer should be welcomed rather than discouraged by every lover of our science.

We notice a few slips: On p. 7 " $C_n H_{2n+2}$ " should be $C_n H_{2n+2}$; on p. 13 "monad and triad radicals cannot be isolated;" but at top of p. 14 we are told that "methyl combines with methyl, and we obtain ethane or ethyl hydride." Why methyl, &c., should not exist in a free or molecular state as much as hydrogen we are unable to see. On p. 67, the oxygen in the formula for guanidine should be omitted. On p. 72, "methyl iodide $2CH_3$ " should be $2CH_3I$. On p. 111, "The vapour of ether is 2.557 times heavier than water." On p. 112 "triacetyl chloride" should be trichloroacetyl chloride. On p. 135, " $C_6 H_{13} N$ " is given in the equation, instead of $C_6 H_{12} N_2$. On p. 309, " $C_2 H_3 NH_2$ " should be $C_2 H_5 NH_2$; and others which we will not mention.

We freely admit many commendable features in Mr. Schorlemmer's new book, which will render it extremely useful, especially to the student engaged in tracing the various isomerides, but we cannot help thinking that in some respects it does not come up to some works on organic chemistry which we already possess.

OUR BOOK SHELF

Dahomey as it Is: being a Narrative of Eight Months' residence in that country, with a full account of the notorious Annual Customs and the Social and Religious Institutions of the Ffons; also an Appendix on Ashantee, and a Glossary of Dahoman Words and Titles. By J. A. Skertchly. (London: Chapman and Hall, 1874).

MR. SKERTCHLY left England in 1871 for the purpose of making zoological collections on the West Coast of Africa. On his arrival at Whydah he was induced to go up to Abomey, the capital of Dahomey, for the purpose of instructing the king, Gelelé, in the use of some guns that had arrived, on the promise that he would be back at Whydah in eight days. The king, however, detained Mr. Skertchly as an unwilling guest for eight months, treating him with the greatest consideration and kindness, and creating him a prince of the country. The greater part of Mr. Skertchly's work is occupied with a description of the protracted annual "customs," as they are called, of Dahomey, which consist of elaborate and harmless trivial ceremonies, mixed up with much that is revolting and cruel; the details of these Mr. Skertchly describes in minute and often tiresome detail. We do not think there was any need for Mr. Skertchly making so large a book on what he saw, especially as the Dahomans and their "customs" are pretty well known through pre-

vious travellers. He often questions the accuracy of Burton, who is quite able to defend himself if he feels aggrieved at Mr. Skertchly's criticisms. The author succeeded, during his stay at Abomey, in doing but little in the way of collecting, and in this work there is scarcely any details as to the natural history of the country. He has evidently a considerable admiration both for the Dahomans and Ashantees, especially for the former, whom he considers not nearly so cruel as the latter, though both equally brave and remarkably well-disciplined as soldiers. In a short Appendix on the Ashantees, he prophecies that our recent expedition to the Gold Coast would find them formidable enemies, which prophecy can hardly be said to have been fulfilled. He defends the Dahomans from the charge of intentional cruelty in the barbarously performed human sacrifices which form so important a part of their customs, and we think he succeeds; the victims, who are all either criminals, or prisoners of war, are sent as messengers to deceased kings. The work is illustrated with a number of gorgeously coloured plates, which no doubt show faithfully the dresses and manners of the people, though some of the pictures which exhibit the method of sacrificing the human victims are simply revolting, and ought to have been confined to the author's portfolio.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. No notice is taken of anonymous communications.]

Fertilisation of the Fumariaceæ

I BEG permission to make a few remarks on Mr. J. Traherne Moggridge's statement (NATURE, vol. ix. p. 423) that the flowers of *Fumaria capreolata* are at first pale or nearly white, and only attain their brightest colouring, becoming even crimson, after the ovaries are set. He then adds:—"If the reverse had been the case there is little doubt that we should have regarded the bright colouring as specially adapted to attract insects." But does Mr. Moggridge know that these flowers are visited chiefly by diurnal insects? It has often been observed that flowers which are visited by moths are commonly white or very pale; but if they are odiferous, they may be of any tint, even very dark or green. If therefore the flowers of the above *Fumaria* are visited by moths, it would be an injury to the plant had the flowers been from the first of a fine crimson. I have often seen bees sucking the flowers of the fumariaceous genera, *Corydalis*, *Delytra*, and *Adlumia*; but many years ago I watched perseveringly the flowers of *Fumaria officinalis* and *parviflora*, and never saw them visited by a single insect; and I concluded from reasons which I will not here give (as I cannot find my original notes), that they were frequented during the night by small moths. Insects are not necessary for the fertilisation of *Fumaria officinalis*; for I covered up a plant, and it produced as many seeds as an uncovered one which grew near. On the other hand, with some species of *Corydalis*, the aid of insects is indispensable. With respect to the flowers of *F. capreolata* becoming brighter coloured as they grow old, we see the same thing in some hawthorns, and with the double rocket in our gardens. But is it surprising that this should sometimes occur with flowers, seeing that the leaves of a multitude of plants assume, as they become oxygenised, the most splendid tints during the autumn?

Down, Beckenham, Kent, April 6 CHARLES DARWIN

IN the vegetable kingdom we meet very commonly with gaily-coloured chemical products, essentially connected with the normal processes of development (the chlorophyll of most non-parasitic plants, the splendid rose pigments of Floridæ, the many lively-coloured pigments of lichens and fungi), and originating from venomous infection by insects (red-coloured galls of oak-leaves) or from decomposition (red pigments in autumnal leaves). In all these cases these colours appear to us to be merely an accidental quality of the chemical products, and we do not feel induced to start the question of what use any particular colour may be to the plant producing it. But it is quite otherwise with the gay colours of flowers. Bright colours in flowers which especially attract our attention and admiration are in most cases beneficial to the plant itself which produces