

some physical quality in their organisation makes certain colours attractive wherever they appear.

To Dr. Hermann Müller belongs the credit of studying not only the means by which cross-fertilisation is effected, but also the means for ensuring cross-fertilisation. He has indeed made this subject peculiarly his own, and has worked it out with valuable and striking results. He has pointed out that flowers which are incapable of self-fertilisation may run great risks of not being fertilised at all. Whereas the flowers in which self-fertilisation is possible are in no danger of becoming sterile, though they may lose the advantage of cross-fertilisation. He has shown that in many plants two forms of flowers exist, one adapted for cross- the other for self-fertilisation. This is the case with *Lysimachia vulgaris* ("Befruchtung," p. 348); when it grows in sunny places where it is freely visited by insects, it has large dark-yellow petals coloured red at the base, conspicuously coloured filaments, and sexual organs arranged so that self-fertilisation can hardly occur; the other form grows in shady ditches, and has a pale yellow corolla and inconspicuous filaments, and the style is so short that self-fertilisation will be sure to take place if no insects visit the flower.

The present volume, though it does not, as far as we are aware, add anything new in principle to the subject of self-fertilisation, contains many illustrations of the correctness of Dr. Müller's views.

We cannot pretend to give, in the short compass of a review article, any fair idea of the richness of Dr. Müller's latest work in new facts and generalisations; we conclude by expressing a hope that it may before long find a translator, or what is a much greater difficulty—a publisher in England.

FRANCIS DARWIN

OUR BOOK SHELF

Lehrbuch der organischen Qualitativen Analyse. Von Dr. Chr. Th. Barfoed. Zweite Lieferung. (Kopenhagen: Andr. Fried. Höst und Sohn, 1881.)

THE first part of this excellent book has already been noticed in these columns. The book is to consist of three parts: the second, which is now published, is characterised by the same completeness and exactness which rendered the earlier part so valuable as a reference book for the laboratory. The present part treats fully of the methods for detecting, in mixtures of varying degrees of complexity, alcohol, ether, chloral, neutral fats, volatile oils, sugar, gum, albumin, &c.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. Notice is taken of anonymous communications.]

The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

Mr. Butler's "Unconscious Memory"

MR. BUTLER appears to have somewhat misunderstood the aim and scope of my review. He says, "It is true I have attacked Mr. Darwin, but Mr. Romanes has done nothing to show that I was not warranted in doing so." Why should Mr. Butler have expected any such consideration of his case from me? If I were to assault a man in the street I should not expect the policeman to show that I was not warranted in doing so; it would be for me to show that I was so warranted. Therefore, while acting the part of policeman in this matter, my only object

was that which I stated, viz. the punishment of an offender, not the refutation of charges which I advisedly characterised as "preposterous, and indeed ridiculous." Truly it would have been a senseless thing had I for a moment imagined that such charges called for anything like a defence of Mr. Darwin. If ever in the world's history there was a book which appealed to all classes of intelligent readers, that book is the "Origin of Species"; and never in the world's history has a book been more studiously criticised or produced a more tremendous change of thought. Can Mr. Butler therefore seriously believe, that after this book has thundered through the world for more than twenty years, it required him to show in what degree it had been anticipated by some of the most celebrated writers within the last two or three generations? Surely common modesty and common sense, were either present, might alike have dictated caution in attributing to all the world an ignorance such as his own, which could be "thrown off the scent of the earlier evolutionists" by anything that Mr. Darwin could say. The publication of the "Origin of Species" could only have had the effect, whether or not its author desired it, of directing renewed attention to the works of "the earlier evolutionists"; and therefore, to put it on no other grounds, it is difficult to imagine a case in which any intentional concealment of the claims of predecessors could well be more impolitic. But the simple fact is that these predecessors had no claims to be concealed, further than those mentioned in my previous communication; that is to say, while they unquestionably and *notoriously* believed in the fact of evolution, they had nothing which deserves to be called a theory of evolution. Therefore, when Mr. Butler asks of the opening passage in the "Origin of Species," "What could . . . more distinctly imply that the whole theory of evolution that follows was a growth in Mr. Darwin's own mind?" the answer simply is that this whole theory *was* a growth in Mr. Darwin's own mind. And if Mr. Butler has not judgment enough to distinguish between the scientific value of Mr. Darwin's work and that of "the earlier evolutionists," at least he might pay sufficient deference to the judgment "of all Europe and those most capable of judging" to explain why it is that the work of all the earlier evolutionists proved barren, while the work of Mr. Darwin has produced results unparalleled in the history of thought.

But I am being drawn into a mere waste of time in thus discussing what every one must feel does not admit of discussion. My object in now writing is not to justify Mr. Butler's view that Mr. Darwin requires to be defended from any such nonsensical "attack"; I write in order to withdraw two passages from my review. Mr. Butler says I was wrong in implying that he supposed Mr. Darwin to have entered into a conspiracy with Dr. Krause; he merely supposes Dr. Krause to have acted the part of a "cat's-paw." In this therefore I stand corrected; for while reading "Unconscious Memory" it never occurred to me that Mr. Butler's view was other than I stated. The second passage which I desire to cancel is that which attributes a motive to Mr. Butler in publishing "Evolution, Old and New." He scornfully repudiates the motive which I attributed, and I therefore willingly withdraw the attribution—observing merely that I was induced to advance it because it seemed to present the only rational motive that could have led to the publication of such a book.

Two other allusions to myself may be noticed before I end. Mr. Butler says, "I suppose Mr. Romanes will maintain me to be so unimportant a person that Mr. Darwin has no call to bear in mind the first principles of fair play where I am concerned." To this I answer emphatically, No; but I do maintain that had Mr. Butler been a more important person than he is, he would not have regarded the mere omission of a foot-note of reference to his book, either as an intentional wrong to himself, or as a matter of such grave concern to the public.

Lastly, Mr. Butler says, "I maintain that Mr. Darwin's recent action and that of those who, like Mr. Romanes, defend it, has a lowering effect upon this standard [*i.e.* of good faith and gentlemanly conduct]." I am sure the world of science ought to feel very grateful to Mr. Butler for his kind solicitude on the subject of its morals and gentlemanly feeling. But he has already said in "Unconscious Memory" that he does not look to "ladies and gentlemen of science" for much sympathy, seeing that his case rests on "facts," and that among these "ladies and gentlemen" "familiarity breeds contempt of facts"; and I fear that in this his conclusion will prove better than his argument. For unless some facts and feelings are displayed other than those already exhibited, I cannot think