

whether the facts so laboriously collected by Mr. Morgan can be used to throw light on the early history of the family.

From his plan of reprinting the book as it stood, with no more annotation than was absolutely necessary, the editor has departed only in one point. The appendix containing "additional examples of the form of capture" has been re-cast and enlarged upon the basis of a paper of J. F. McLennan published in the *Argosy* in 1866, but with additions from other and more accurate sources. The reasons for adopting this course are obvious: the new matter in this appendix could not conveniently have been reserved for the promised second volume, and the facts are so arranged and explained as to confirm the author's argument, and effectually dispose of the notion that the form of capture in marriage is to be explained by maidenly bashfulness.

It will be seen from this brief account that, sparing as the editor's additions are, they make the new edition of the "Studies" well worthy of the attention of those who already possess the book in its older form. And to the not small class of students of early society who know McLennan's work only at second hand or by one hasty perusal, it may not be unprofitable to say that this is emphatically a book of which a general knowledge is not sufficient, inasmuch as some of the most important and interesting points are precisely those which are almost sure to be missed on a first reading. For this, perhaps, McLennan himself is partly responsible, for in giving to "Primitive Marriage" the subordinate title "an inquiry into the origin of the form of capture in marriage ceremonies," he seems to fix attention on what is only the starting-point of a far-reaching research. In print and in conversation one often meets with the notion that the doctrines of marriage by capture and kinship through women only are mere archæological *curiosa*, and that for the study of later law and custom it is quite indifferent whether these things are true, or whether, on the contrary, mankind started from the first with male kinship. But the importance of McLennan's researches lies largely in the demonstration that the structure of society under a system of kinship in the male line which has been preceded by kinship through women cannot be the same as would be reached by a race which has had male kinship from the first. Other writers have taught a doctrine of the priority of kinship through women, but no one except McLennan has accurately developed the consequences of the doctrine, and shown how it solves a problem which, though ignored by most writers, is of the highest importance, namely, the origin of *gentes* within a nation. Like all really original thinkers, McLennan has for one of his chief merits that he recognised the existence of difficult problems in matters which ordinary people pass over without seeing any difficulty at all. And therefore precisely those passages in his writings which on a hasty reading seem needlessly laboured and proper to be skipped are found upon re-perusal to be particularly useful and stimulating.

A word may be said in conclusion on what is promised for the second volume. It is satisfactory to know (p. 75) that it will include a short essay on the origin of exogamy. And from a note at p. 176 it may be inferred that in this essay the origin of exogamy will be sought in a state of

society where marriage by capture was an established custom. We are also promised (p. 63) an essay on the marriage law of the Australian Kamiraloï, one of those highly complex problems in which McLennan's powers of analysis ought to appear at their best. From notes on pp. 109 and 228 it appears that part at least of McLennan's hitherto uncollected essays in the *Fortnightly Review*, including the papers on Totemism, or "On the Worship of Plants and Animals" (1869-70), will also be re-published. It is to be hoped that in these reprints the editor will allow himself, in one direction, greater freedom of annotation than in the present volume. The Totem papers are in some respects the least finished of McLennan's writings, the evidence of totemism in the nations of ancient civilisation being much too largely drawn from second-hand sources. This gives an appearance of weakness to the whole structure of the argument, which has been very prejudicial to the influence of a most original and striking investigation. In point of fact a few of the detailed pieces of evidence ought to be abandoned altogether, but enough remains to leave the substance of the argument unaffected, and this ought to be clearly brought out by notes, referring to original authorities of unquestioned reputation, or giving up statements that cannot be authenticated. Even in the present volume one misses some notes of this kind. The polyandria of the Athenians (p. 235) rests on better evidence than the story which Augustine cites from Varro (Clearchus *ap.* Athen. xiii. p. 556 d.). Again, the note at p. 47, in which an attempt is made to prove the existence of the form of capture among the Hebrews from the phrase "to take a wife," ought rather to have been withdrawn than again built upon by the editor at p. 181; and what is said of the marriages of the Persians at p. 219 *sq.* requires careful revision.

W. ROBERTSON SMITH

BRITISH HYMENOMYCETES

British Fungi, Hymenomycetes. By Rev. John Stevenson. With Illustrations. Vol. II. Cortinariæ—Dacrymyces. Pp. 336. 8vo. (Edinburgh: William Blackwood and Sons, 1886.)

WE are glad to welcome this second volume so speedily after the first, although we fear that expedition has been secured by some sacrifice of efficiency. It is a misfortune when the reader is impressed at once with the feeling that a volume has been hurried out to meet certain exigencies. That feeling is by no means absent in scanning these pages. As soon as p. 165 is reached, and there is no longer Fries's "Monographia" to fall back upon, *descriptions* give place to *diagnoses*, notwithstanding the remarks in the preface, which would seem to regard diagnoses with something of contempt. From p. 166 to the end the *student* must be content with the diagnoses from Fries's "Hymenomycetes Europæi," although there might have been collected together valuable notes from Fries's "Systema," "Observationes," and "Elenchus." Nevertheless some advantage has been taken of the few descriptions published in the letterpress to Fries's "Icones."

It is of considerable importance to students that a work which professes to include all British species, up to date, should satisfy all reasonable expectations. The first

volume omitted some forty species, and the present is by no means perfect. We open at p. 232, and find under the genus *Solenia* one solitary British species recorded, that of *Solenia ochracea*. Surely our author could not have been ignorant of the fact that *Solenia anomala*, P., is still more common, and was recorded by Berkeley in the "English Flora" (p. 199) fully fifty years ago. Neither could he have forgotten that another species was included in Cooke's "Hand-book" (p. 329) under the name of *S. candida*, since corrected to *S. fasciculata*. As these specimens were collected near Batheaston, by no other than Mr. C. E. Broome, and confirmed by the Rev. M. J. Berkeley, no doubt can be entertained of their being authentic. Furthermore, the name was corrected and the species figured by Berkeley and Broome in the *Annals of Natural History*, December 1870, No. 1301. The fourth species is *Solenia stipitata*, Fuckel, of which there are specimens in the Kew Herbarium. It cannot be conceded that a "Flora" satisfies all reasonable expectations when in one genus only one of four species is recorded.

Turning to an allied genus, that of *Cyphella*, we seek in vain for *C. Curreyi* or *C. albo-violascens* (which may be identical), *C. cyclos*, Cke. and Phil., *C. punctiformis*, Fries, *C. villosa*, Pers., all but one of which are well-known and widely-distributed species.

Whether the species under the genera *Stereum* and *Corticium* might have been arranged in a manner more in accordance with modern ideas, and far more useful to the student in their identification, may be left an open question. Those who are not facile in the use of the microscope may find it convenient to follow Fries, who paid little attention to microscopical characters, but surely in a large and difficult genus, such as *Corticium*, no assistance should be despised.

We observe, with some surprise, the genus *Microcera*, of Desmazières, included in a work devoted to British Hymenomycetes (p. 308) with the intimation "no British species." The fact is that *Microcera coccophila*, Desm., which is the type of the genus, has been found in Britain, and is recorded on p. 556 of Cooke's "Hand-book," and furthermore it is also true that it is not a Hymenomycete at all, but the conidia of one of the *Sphaeriacei*, and is included as such in Saccardo's "Sylloge Fungorum" (vol. ii. p. 513). This singular double error might have been avoided had some mycologist been consulted who had not confined his attention exclusively to the Hymenomycetes.

The limits of species is another open question, and it is scarcely advisable to make too much of the insertion of what some may regard as doubtful species in a "Flora" wherein the author is not free to give reasons in their favour; nevertheless, we venture to hint that *Polyporus armeniacus*, Berk. (p. 215), is generally admitted to be only a resupinate condition of *P. amorphus*, Fries, and should not be continued as a distinct species. *P. Herbergii*, Rost (p. 195), is placed as an ally of *P. sulphureus* in the section "Caseosi," whereas *P. cuticularis* is found (at p. 202) in "Spongiosi." Unfortunately for this arrangement, the two species (*P. Herbergii* and *P. cuticularis*) are so closely allied that sometimes it is difficult to distinguish the one from the other, except by the difference in size of the pores, and hence some regard

them as varieties of one species. At any rate, there is no good reason why such closely-allied forms should be separated by four-and-twenty intermediate species.

The mention of localities for species throughout the work is so vague, that some explanation should have been offered. When only one locality is given, the inference which would be drawn by the majority of readers would be that no other British locality was known at the time for that particular species. That this conclusion would be wrong is manifest from *Hydnum Weinmanni* (p. 242), which may be taken as an example. The locality cited is "Bristol," but Bristol is not the only, or the most important station for this species in Britain, because it occurs plentifully in the neighbourhood of Carlisle. If the intention was simply to indicate the locality where the species was first found in these islands, then again we fancy it is inaccurate, because, as we believe, it was first discovered by the late Rev. A. Bloxam, at Gopsall. The only solution we could suggest is that "Bristol" is the locality mentioned in Berkeley's "Outlines," and it was accepted as the only authentic record, without inquiry. Some species are stated to be "common," others "frequent," and others "rare," and when, in the absence of any one of these terms, a single locality is given, it is a fair inference that only one locality was known to our author, and that was the reason why it was given. Assuming this to be the case, we fancy that a very large number of these single localities could be challenged as not unique.

In addition to a "Glossary" of five pages, we are glad to find a good index of genera and species, but we search in vain for any clue to the contractions, in some cases only a single letter, employed in quoting authorities. Under nearly every species follows a line or two, sometimes five or six lines, of hieroglyphics, to which figures are appended. It may be all clear enough to the Rev. John Stevenson what is intended to be conveyed by "Quel. t. 11, f. 1," or "Viv. t. 27," or "C. Illust., pl. 276," but who these illustrious persons are, or what they have done, to be curtailed in such wise, is nowhere indicated. Surely the author must have determined upon giving a key to these mysteries when he first commenced to employ them, and, in the hurry to issue the second volume, quite forgot the "students," even if he remembered the "scholars," and closed the book before he had finished his work.

A summary of the contents of these volumes, as they stand, exhibits the following results as compared with the last preceding work on the same subject:—

"Hand-book of British Fungi" ...	1044
Stevenson's "British Fungi" ...	1675

or, an addition of 631 species of Hymenomycetes since the year 1871. The majority of the additions have been made in the Agaricini, which stand thus:—

"Hand-book of British Fungi" ...	699
Stevenson's "British Fungi" ...	1183

or, an addition of 484 species, leaving only 147 species to be distributed over the residue of the genera of Hymenomycetes. These results are at any rate a justification, if any were needed, for the publication of a new work, especially when the older one is entirely out of print.

There can be no doubt that all that portion of the work which contains translations from the "Monographia" of Fries will be exceedingly valuable to British mycologists, and this extends through the whole of the first volume and 165 pages into the second; the only regret being that the few remaining species, which have not as yet been recorded in these Isles, were not inserted in brackets, or published as an appendix, so that the whole of Fries's excellent work might have been in the hands of every mycologist in this country. Perhaps even now such an appendix might be published, and no doubt it would meet with a hearty welcome.

Despite of such strictures as we have been impelled to make, we venture to hope that the present edition will soon be exhausted, and that its author will be called upon to prepare a new and revised edition, with a key to all the mysteries of the old one. M. C. C.

THE OCEAN

Der Ozean. Von Otto Krümmel. (Leipzig und Prag: Freytag-Lempsky, 1886.)

THE great interest which oceanographical studies have aroused within the last few years is shown in a marked manner by the publications destined to popularise the notions acquired respecting this vast and important chapter of physical geography. Not long after the appearance of the "Lehrbuch der Ozeanographie" by Boguslawski, whose untimely death has interrupted the publication of the second volume, we have a new and small manual by Dr. Otto Krümmel, whose name is already known to oceanographers.

This little treatise is clearly written, and the most important general notions concerning the physical geography of the sea are well stated, and discussed with ability. The author has succeeded in expressing briefly the essential notions about the ocean, which have been recently acquired by the *Challenger* and other deep-sea expeditions.

The author describes, in the first place, the ocean's surface and its subdivisions ("Die Meeresflächen und ihre Gliederung"); discusses the relation of oceanic and terrestrial areas from the point of view of their respective size; indicates the distribution according to hemispheres; and points out the classification he has adopted into *oceans*, properly so called, with their general systems of ocean currents, and *secondary seas*, which are more or less cut off from the great oceans. The *secondary seas* are again subdivided into *interior*, or *inter-continental*, and *border seas*, situated on the outer edges of the continents. The volume of oceanic water is then estimated. In the second chapter the interesting questions connected with the deformation of the level and surface of the ocean, owing to the attraction of the continental masses, are examined. The depths and contours of the ocean basins are next pointed out, and the work of the *Challenger* and other deep-sea expeditions, together with the apparatus employed, is described. The observations of the *Challenger* upon the nature and distribution of deep-sea deposits are summarised. The physical and chemical properties of sea-water are set forth in a special chapter—the salinity of the ocean, its distribution and origin; the gas contents; the transparency and colour, are, in turn,

treated of. After having made known the principal phenomena regarding the temperature of the ocean and its distribution, Krümmel treats of the glacial phenomena of the Arctic and Antarctic Oceans, pointing out the limits of the floating ice and icebergs in each region, and the influence of these regions on the questions of general oceanic circulation. The last chapter is reserved for a consideration of the movements of water, such as currents, waves, and tides.

Such is the general order and method of this manual. There is no attempt to give any general notion of the life of the shores, deep sea, and surface of the ocean, or of any of the phenomena due to organisms. The author shows himself to be everywhere *au courant* with the most recent discoveries in his subject. It would appear, however, that he has not had an opportunity of consulting the "Narrative of the Cruise of the *Challenger*," published last year, or he would have embraced in his descriptions some additional interesting details and general views. The work is illustrated by many woodcuts and small charts, some of which are instructive, others conveying little information to the reader, but when the low price of the book (one shilling) is remembered it would be unfair to criticise closely these illustrations. Dr. Krümmel has attained the object he had in view—to popularise in a scientific manner our knowledge relative to the physical geography of the sea, a subject full of interesting questions for all cultured minds. J. M.

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. No 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 insure the appearance even of communications containing interesting and novel facts.]

On the Connection between Chemical Constitution and Physiological Action

AS regards Dr. Brunton's letter in last week's NATURE (p. 617), I would express myself as more than satisfied with the personal explanation, but Dr. Brunton has not noticed the most important point to which I wished to call attention, viz. that whatever may be the value of my experiments, as showing a connection between physiological action and chemical constitution, the researches of Crum Brown and Fraser have really no bearing on the subject, for the simple reason that they had no knowledge of the chemical constitution of the reagents they employed. There is an old receipt for cooking a hare which commences "*First catch your hare*," and in attempting to show the influence of change in chemical constitution on physiological action, it is well first to get a constitution. In the last edition of Watts's "Organic Chemistry" (1886) it is stated, "All these bases (the alkaloids), like the amines, are derivatives of ammonia, but their molecular structure is for the most part unknown." Even as regards inorganic compounds, our knowledge of their chemical constitution is not the most definite, but I believe that the arrangement of the elements in isomorphous groups expresses most clearly the resemblance in the chemical constitution of their compounds.

After again reading carefully Dr. Brunton's paper, I must confess that I cannot find anything showing the connection between chemical constitution and physiological action, except, perhaps, in the case of the alcohols. Here we have a class of bodies in which the different members of the series have probably the same relation to each other as the elements in the same isomorphous group, and it is an interesting fact that not