style and is illustrated in a very attractive manner. But we feel that an opportunity has been missed of producing a volume which should open up one of the most marvellous pages in the book of nature, in a manner to interest a wide class of readers and attract many new votaries to the study of these most beautiful and in many respects most instructive members of the great class of insects.

OUR BOOK SHELF

The Quarterly Journal of Microscopical Science. (London: Churchill.)

THE twenty-first volume of the second series of the above journal—published during the four quarters of this year—lies in its complete form before us, and it seems to merit more than a passing record at our hands. The volume contains over 650 pages of text, and, besides woodcuts, thirty-four plates, many coloured, and the majority of double size; but it is not the quantity of the material, gratifying though it be to see that the British school is not wanting in this respect, so much as the quality of the contributions that we would call attention to. In the importance of its Memoirs this journal, now in its majority, may fully claim to rank on the level of the highest of those comparable to it published in Germany, and its editor and his assistants are to be congratulated on seeing that all the subjects coming under their province are so fairly dealt with. It is not proposed to treat here of the individual memoirs from a critical point of view—no one individual could write such a criticism—but as a general *résumé* of the work done. Slightly classified, vegetable histology and physiology is enriched by the papers on *Welwitschia mirabilis* by F. Orpen Bower; on the development of starch grains, by F. W. Schimper; on the water glands in the leaf of *Saxifraga crustata*, by W. Gardiner. As contributions to zoology may be mentioned the memoir by G. Busk on Polyzoa; by H. B. Brady on Reticularian Rhizopods; a most important paper on Limulus an Arachnid, by the editor; to embryology the researches of Lankester on Limnocodium, Scott on Lampreys, Wilson on Actinotrocha; to anatomy the memoirs, on the head cavities and nerves of Elasmobranchs, by Dr. Marshall; on the nasal mucous membrane, by Dr. Klein; on the Branchiate Echinoderms, by Herbert Carpenter; on the organ of Jacobson, by Dr. Klein; on the lymphatic system of the skin and mucous membrane, by Dr. Klein; on the Wolffian duct and body in the chick, by Adam Sedgwick; on the cranial nerves of Scyllium, by A. Milnes Marshall; and on the structure and significance of some aberrant forms of Lamellibranchiate gills, by Dr. K. Mitsuri. Nor must the papers by Mrs. Ernest Hart on the micrometric numeration of the blood corpuscles; by J. F. Dowdeswell on some appearances of the blood corpuscles; nor those by Dr. Cunningham on microscopic organisms in the intestinal canal, and Prof. Lister on the relations of micro-organisms to disease, be overlooked. The value of this volume will thus be apparent to the reader who knows of the subjects of which the above is a condensed list. One thing alone, to our mind, the volume needs, viz. a really efficient index to its valuable contents. The two pages and a half of index to these 650 pages of matter form an index only in name. Would it not be well to have an index volume published to the twenty-one volumes of this series, and then with volume xxii. commence a yearly index which would be both a help and a service to the student?

Essays on the Floating-Matter of the Air in Relation to Putrefaction and Infection. By John Tyndall, F.R.S., LL.D. (London: Longmans and Co., 1881.)

To reprint these essays in an easily-accessible form was a happy thought of the author's. It is of vast importance to the public at large that they should at least know what views are being held by a large majority of working and thinking men on the subjects of putrefaction and infection. Quite apart from the question of how germs originate is the question of what evils arise from their presence; and although, with most of those who have investigated the matter, we regard it as well proven that, except from a pre-existing germ, no new germ arises, yet we would be prepared almost to overlook this part of the matter in our anxiety to see proper notions diffused as to the effects produced by these "floating matters of the air." The benefits that mankind has gained by the researches of the biologist, chemist, and physicist into this subject are already beyond calculation; nor is there yet any apparent limit to them. From the pages of this small volume some ideas may be gleaned of what the modern treatment of surgical cases has gained by a knowledge of this subject; nor do we think the day far distant when medicine may reach to the rank of surgery through an insight into the germ causation of febrile disease. The history of the silkworm disease in Italy and France bears witness to the enormous value, even if measured in a commercial sense, of the labours of Pasteur, Quatrefages, and others in working out from this point of view the parasitic diseases that caused at one time the almost total destruction of the silk industry in Europe; and the history of Pasteur's researches on fermentation, even when told in a few words, as in the fourth chapter of this volume, does it not tell of discoveries full of benefit to one portion at least of mankind? Prof. Tyndall well writes: "The antiseptic system of surgery is based on the recognition of living contagia as the agents of putrefaction." Keep these away, destroy them either by an excess of cold or heat, and the putrefaction is prevented. But this is true not of surgery only; it makes itself felt in the routine of every-day life. An account was laid before the Academy of Sciences of Paris, in May of this year, of an examination of the feeding-bottles in use at a *crèche* in Paris. The milk for the children put into these contracted a nauseous odour. Of thirty-one examined, twenty-eight contained in the caoutchouc tubes or nipples germs (microscopical microbes), and even in some cases there were masses, more or less abundant, of fungoid vegetations. The milk found remaining in some was acid, with numerous bacteria; and this in spite of what was thought to be cleanliness. No wonder Prof. Tyndall writes of such material—such matter out of place—as dirt. We cannot all contrive to live in the grand, pure air to be found in such places as the Bel Alp; but all could help towards making the air of their dwellings freer from the contagion of dirt; and if right and accurate notions were held on such matters by all interested in them, prevention would soon be seen to be much better than cure. This little volume will be found exceedingly interesting reading, and its contents will furnish the reader with abundant material for thought, which perhaps may, in floating through his brain, take root there and bring forth a crop of good fruit.

E. P. W.

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 ensure the appearance even of communications containing interesting and novel facts.*]

The Struggle of Parts in the Organism

MR. ROMANES, in his letter published in your number of Oct. 27 (vol. xxiv. p. 604) draws a distinction between the "Argument from Design as elaborated by the Natural Theologians of the past generation," and another argument from design which he