

Time has not yet shown whether the new generation of breeders raised from selected ova of the largest trout, in their turn produce still finer ova and fry, but there can be little doubt that this will be the case.

The history of the gradual improvement of the piscicultural apparatus given in Chapters VIII. to XVII. is extremely interesting. A detailed account is contained in these chapters of the increasing amount of stock, and of the hatching operations in succeeding seasons. But enough has been said to show the character and value of the first part of the work. The second part will contain descriptions of the experiments which have been made at Howietoun since the establishment reached its present complete and efficient condition.

J. T. C.

HARMONY AND COUNTERPOINT

Elements of Harmony and Counterpoint. By F. Davenport, Professor of Harmony, &c., Royal Academy of Music. (London: Longmans, 1887.)

YEARS ago, when the laws of musical sounds, like the laws of Nature before Newton, lay hid in night, it was not unusual for clever and ingenious writers on music to invent what they called "systems of harmony." They found certain combinations and progressions in use by the best composers, and they conceived it to be their duty to explain, or account for, or justify these by some kind of imaginary natural principles, more or less fanciful, which they conjured up out of their inner consciousness, to fit the case. But, unfortunately, these writers widely disagreed among themselves as to the principles on which their theories should be based, and the result was such a mass of contradiction and confusion that the very name of theoretical harmony became a by-word and a scandal, until the Newton of musical acoustics, Helmholtz, arose, and, by explaining the real nature of musical sensations, swept away these fanciful inventions into deserved oblivion.

Among these systems, however, was one, published in 1845, by a Dr. Alfred Day, which had the great good luck to be admired and patronised by no less a personage than Sir George Macfarren, the Principal of the Royal Academy of Music. So far as we know, this admiration has not been widely shared by musicians in general; but it would be idle to ignore the great weight that such an opinion must carry, and it is this, no doubt, that has preserved for Dr. Day's work an existence which might otherwise have terminated long ago.

It is natural that Prof. Macfarren should wish this system followed at the famed institution over which he presides, and the little book before us appears to be intended as a cheap manual for the purpose. No one need object to this, for, when it comes to the practical teaching of harmony, it matters little whose system is followed so that the orthodox forms of writing are taught and recommended. That system is the best which renders this knowledge easiest to acquire. It is a feature of Dr. Day's book, that he lays down strict laws, pretty copiously and peremptorily, as to what ought or ought not to be done, and Mr. Davenport has conscientiously carried out this plan. His work bristles throughout with such rules, and we may safely say that if any

student can succeed, either with or without the professor's help, in mastering them, he ought to be competent to write very good harmony. If he is of an inquiring mind, and wants to know *why* he is strictly enjoined to do so and so, or strictly forbidden to do so and so, he should postpone his curiosity till he has finished his academical course, and in the meantime be content with the Dicta of Doctor Day.

We must do Mr. Davenport the justice to remark that he has added to the work an original feature of his own which is worthy of all praise, namely, the combination of *counterpoint* with harmony-teaching. It is the general custom to give the harmony examples in the form of pianoforte chords, and this produces the anomaly that when rules have to be stated affecting the motion of certain notes, an idea of part-writing must enter which is somewhat foreign to the general system. Our author has taken the bull by the horns, by requiring the student *ab initio* to write his harmony in separate parts, putting each part on a separate line with its proper clefs. This is an excellent idea. Counterpoint is the highest and most perfect style of musical writing, but it has been much neglected in late days, and Mr. Davenport has hit upon a happy mode of encouraging its cultivation, which cannot fail to benefit his pupils.

PEARLS AND PEARLING LIFE

Pearls and Pearl-ling Life. By Edwin W. Streeter, F.R.G.S. (London: George Bell and Sons, 1886.)

THE book before us, according to the preface, and as far as we are aware, is the only work in the English language which is entirely devoted to the history of pearls. The introductory chapter is immediately followed by one which gives a brief historical account of pearls in connection with India, China, Persia, Palestine, Egypt, Ancient Greece and Italy, and Europe in the Middle Ages. This is succeeded by a *résumé* of the ancient ideas respecting the origin and supposed medicinal qualities of pearls, and by a few words on "breeding" pearls. The next chapter treats of the different kinds of pearl-forming mollusks, both marine and fluviatile. The writer then gives an account of the true mother-of-pearl shell, describing its geographical distribution, the different varieties, its structure, the parasites found within the shells, and their external enemies, their method of getting rid of extraneous substances (stones, small shells, &c.) accidentally introduced within the valves of the shell, and the uses to which the mother-of-pearl is put. The sixth chapter, although headed "The Origin and Formation of Pearls," also refers to the different kinds, such as *bouton* pearls, *baroque* pearls, and *coq de perle*, the mode of life of the oyster, the positions in which pearls are found, &c. It also treats of the qualities which regulate the value of pearls. The next chapter gives a short account of the Sooloo Archipelago, the natives as pearl-divers, and their method of dredging. Then follows a good description of the fisheries of North-West Australia and Torres Strait, and this is succeeded by an interesting chapter entitled "Pearling Life at the Present Day," which is practically descriptive of pearling expeditions made by Mr. Streeter's vessel, the *Sree Pas Sair*, from Singapore