

The Silurian district of Girvan in Ayrshire is one that has attracted much attention from geologists, and considerable difference of opinion has existed as to the exact correlation of the several members of the formation as there exhibited with the equivalent English deposits. The fossils, though numerous, are often in a rather unsatisfactory condition as regards preservation, and it was most desirable that a careful study of all the known forms should be made by competent palæontologists. The richly stocked cabinets of Mrs. Robert Gray have furnished the larger part of the specimens described, and the completion of this first part of the work was rendered possible by the liberality of Mr. Gray.

The memoir commences with an account of the bibliography of the subject, which appears to be very full and complete, and then proceeds to the description of the lower forms of life. Any one who will take the trouble to compare the lists given by our authors with those previously published cannot but be struck by the large additions which are now made to the Girvan Silurian fauna. A single doubtful furoid and four species of *Feraminifera* are described as occurring in the Girvan rocks, and among the latter is the remarkable *Saccamina carteri*, which is so excessively abundant in some of the Carboniferous limestones. This form has been recognised as identical with the Carboniferous type by Mr. H. B. Brady himself, and its existence in Silurian strata adds another example—one of great interest to geologists—of the wide range in time of some of the lower forms of life.

Among the corals from the Girvan area Messrs. Nicholson and Etheridge enumerate no less than twenty-two forms, some being old and well-known species, but the majority are new to science; indeed several new genera of Actinozoa are established in the present work. The specimens are usually in a bad state of preservation, a difficulty which has been to some extent overcome by the authors by the employment of thin sections. The fact which comes out most strikingly from the study of the Cœlenterate fauna of the Girvan beds is that the nearest analogues of the Silurian fossils of Scotland are to be found not in the English area but in the American. The same fact, it will be remembered, was made very strikingly manifest from Mr. Salter's studies of the fauna of the Silurian limestone of Durness in Sutherland.

Of Trilobites twenty-eight species are now described as occurring in the Girvan district, and among them several forms new to science have been detected.

As the present volume only contains the first part of the results of our author's labours we do not find a full discussion of the bearing of the palæontological evidence on the interesting question of the age of the several Girvan deposits. There can be no doubt, however, that both the Upper and Lower Silurian are there represented, though the exact correlation of the different members of the series can only be successfully attempted when the fossils have been more fully worked out.

The present fasciculus is illustrated by nine very well executed lithographic plates from the pencil of Mr. Charles Berjean. We congratulate the authors on the able manner in which they have executed this first portion of their task, and hope soon to have to record the appearance of other portions of this important monograph.

OUR BOOK SHELF

Natural History Rambles. The Sea-Shore. By Prof. P. M. Duncan, F.R.S. *Lane and Field.* By the Rev. J. G. Wood. *Underground.* By J. E. Taylor, F.L.S. *The Woodlands.* By M. C. Cooke, LL.D. (London: S.P.C.K., 1879).

THESE four handy little volumes are well put together, and seem to us decidedly superior to works of a similar kind with which we used to be familiar in our youth. The evident purpose of the volumes is not to teach their subjects systematically, but to lead those into whose hands they may fall to take an interest in the common objects of nature which may be met with in an occasional walk. For this purpose they seem to us well adapted, and the information they convey on the whole trustworthy. They abound in suitable and well-executed illustrations, and might appropriately be put into the hands of any one, old and young, whose circumstances would give him a chance of using them.

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.]

Brorsen's Comet

LAST night, May 3, I observed Brorsen's comet pass nearly centrally over the star DM, + 61°, No. 873. In the principal focus of the telescope were two straight bars, 43" (seconds of arc) wide intersecting in the centre of the field. The bars are at right angles to one another, and were inclined 45° to the hour circle. With this arrangement it was easy, by moving the telescope gently about the polar axis (which is well adjusted), to determine the conjunctions in R.A. and in declination, while angles of position coinciding with the bars, and distances in parts of the breadth of a bar, could be estimated with considerable accuracy. In this manner I made the following observations of the position of the comet with reference to the star:—

Chronometer time.	Angle of position.	Dist.	
h. m. s.	°	"	
10 2 59 ...	260 ...	33	Distance measured by beats of chronometer.
10 4 31 ...	270 ...	12	
10 6 20 ...	— ...	—	Star apparently central in comet.
10 7 30 ...	320 ...	10	Star a little right of centre.
10 11 30 ...	0 ...	—	Estimated conjunction in R.A.
10 16 0 ...	45 ...	16	
10 18 15 ...	45 ...	43	
10 20 30 ...	45 ...	65	

Projecting these observations on a chart of ruled squares, it appears that at 10h. 11m. 36s. (corresponding to 10h. 11m. 14s. G.M.T.) the comet followed the star 0°68s. in R.A. and was 12" N. of it, while the nearest approach of the centre of the comet to the star was 7" at about 10h. 7m.

The moon was shining with great brilliancy (being nearly full) and made the comet faint, reducing its apparent diameter to 1½ or 2 minutes. The star is given in the DM as of the 8·8 magnitude, but I think is underrated a little. While the comet was passing over it there was no sensible diminution of its lustre. The DM position of the star for 1855° is—

$$\alpha = 6h. 7m. 25s., \delta = + 61^\circ 28'9.$$

The light of the comet has diminished rapidly since April 4. It is now less bright than a 9th mag. star.
Blackheath G. L. TUPMAN

It is to be hoped that while the comet remains with us the observations of Prof. Young (NATURE, vol. xix. p. 559), and of Mr. Christie (NATURE, vol. xx. p. 5) may be repeated and confirmed by those who possess telescopes of sufficient power.