comical bits, the story of a new fossil discovered (p. 314); the boundary of the Caradoc Sandstone at Pentre Voelas (p. 318); and "a strange and marvellous history of a temptation and what befel thereon" (p. 323), must be read and laughed over, as also must the account of Miss Moggore and Miss Bood, natives of Murray and Darnley Islands, who *would* walk arm-in-arm with Mr. Jukes (p. 252).

Besides a vast number of letters to Prof. Ramsay, all more or less relating to geology, there are letters to Dr. Ingleby and other relatives; one on Versification (p. 377), in which two of Mr. Jukes's own verses appear. The annexed is a sample, probably intended for the Old Annual Survey Dinner: *—

> Free o'er the hills our feet shall roam,
> We'll breathe the mountain air, sir;
> Care shall not ever dare to come,
> Nor grief pursue us there, sir.
> Joyous in Nature's wildest scene,
> Where rocks lie topsy-turvy,
> And falling waters flash between,
> We'll prosecute the Survey.
> Oh, the Survey, the Geological Survey!
> Health and good humour shall be queen
> Of the Geological Survey!

We have religious beliefs considered (p. 375); views on Providence (p. 386); creeds (p. 409); political opinions (p. 405), and many other matters discussed.

But we have said sufficient to recommend the book to all who are likely to be interested in it. We would especially direct geologists to it, as being the record of the life of a man who did very much for their science—indeed, who died in its service. To his friends, who are to be found scattered far and wide, the title of the book is sufficient to recommend it to them. To his relatives and intimate companions his memory will always be dear.

It seems strange that Prof. Jukes's life should be dedicated to Prof. Sedgwick, his early teacher; but so it is—the old oak, though decayed and feeble, still puts out its green leaves; but the younger man, whom he bid God speed thirty years ago, has already rested from his labours. H. W.

OUR BOOK SHELF

The Science of Arithmetic. By James Cornwell, Ph.D., and Joshua G. Fitch, M.A. Thirteenth Edition. (Simpkin, Marshall, and Co., 1870.)

The School Arithmetic. By the same authors. Eleventh Edition. (Simpkin, Marshall, and Co., 1871.)

THESE books are too well known to mathematical teachers to need detailed notice from us. Both are very good, and stand in the first rank among the scores of arithmetics published in England. The explanations, arrangement and examples, especially in the former book, are generally very good. We will venture, however, to suggest two or three changes to the authors, which we think would render the book better still, and which our experience would make us wish to see universally adopted. The rule for multiplication of decimals given in these books is the old one of counting the decimal places. We think this becomes a rule of thumb. The method ought to be the same as that in multiplication of integers; and it is at once seen by the pupil that as in multiplying by tens and hundreds, the figures are shifted to the left; so in multiplying by tenths and hundredths, they are shifted to the right. The decimal point is brought down straight, and each line in the working has its meaning; as in the example, multiply 712·35 by 15·807:—

```
   712·35
    15·807
  ---------
  3561·75
  7123·5
   569·880
     4·98645
  ---------
  11260·11645
```

This is more certain to be understood *every time it is done* than the old counting rule, and each line means something. Again, in that schoolmaster's *crux*, the division of decimals, we have in the books before us, the old Case 1, Case 2, and Case 3; and everybody knows the result in an examination. A better method is this, which we indicate briefly. Explain first that you cannot divide until the quantities are of the same kind, and of the same denomination. You cannot divide 2*l.* by 3 pence, till you have reduced the pounds to pence. Nor can you divide tenths by thousandths, till you have reduced the tenths to thousandths. Hence, to divide 1·375 by ·0025, the dividend must first be expressed in the same denomination as the divisor, namely as ten thousandths; this amounts to marking off as many decimal places in the dividend as there are in the divisor, which is best done by drawing a line after the figure, and then dividing. It is plain that the result is integral until the figures on the right of the line are brought down. It is worth while, perhaps, to give examples of the different cases; the explanation is obvious from what has been already said—

Divide 7·9 by 4·308—

```
4·308) 7·900|00 (1·83..
       4·308
       -----
       35920
       34464
       -----
        14560
```

Divide 34·79628 by 2·5—

```
2·5) 34·7|9628 (13·91....
      25
      --
      97
      75
      --
     229
     225
     ---
      46
```

Lastly, the methods of summation by differences and interpolation are essentially arithmetical, and of considerable interest, and we think might be introduced with advantage in the larger work.

The miscellaneous questions at the end of the larger book are not particularly good. They are often tedious, and not sufficiently varied, suggestive, or difficult. Nevertheless, the books are very good, and will teach teachers as well as learners. J. M. W.

Skandinaviens Coleoptera, synoptiskt bearbetade af G. C. Thomson. Tom. X. 8vo. (Lund, 1868. London: Williams and Norgate.)

THERE are few investigations of more interest to the student of British Natural History than the comparison of our native productions with those of the Scandinavian peninsula, and no descriptive works published on the Continent, a knowledge of which is of greater importance to him, than those of the acute and laborious naturalists of Scandinavia and Denmark. The work done by these

* Alas! that this time-honoured institution of meeting "all hands" once a year should have fallen into disuse. It was a very bond of union.