the many references to insectivorous insects; for it is quite as important that a cultivator should know what insects to protect and encourage, as to recognise those which it is to his advantage to suppress. Several of the coloured plates afford illustrations of the insect foes of insect pests, and not merely of the familiar hymenopterous parasites, but of such friends to the cultivator as the species of Syrphus which devours the cabbage aphis, and of the Australian ladybird, a species of Novius, which orange-growers both in Australia and in California have found so effective an ally in keeping their groves free of the dreaded cottony-cushion scale, *Icerya Purchasi*, Maskell.

In noticing the first part of this work we appealed to the author to add to its international value by appending in every case the authority for the systematic name. We are glad that Mr. French has been able to adopt this suggestion. The agricultural entomologists of the United States are great offenders in this respect; indeed, they sometimes give no systematic names to the injurious insects which are made the subjects of their bulletins, whilst they not infrequently coin trivial names which are certainly not elegant, though they may be expressive. Hence it becomes difficult to know with any degree of certainty what is the precise species referred to; confusion consequently arises, and the bulletin has only a local value. In connection with the trivial names themselves, there is room for improvement. For instance, in the volume before us, descriptions are given of the "green peach aphis" and the "black peach aphis"; but as it is the aphis and not the peach to which the colour refers, the names "peach green aphis" and "peach black aphis" would be more descriptive. This is no mere quibble, for in the volume itself the principle is conceded in the name of the "cherry green beetle." In the year 1892, when *Plutella cruciferarum*, Zell.—an insect described in this volume as the cabbage moth—wrought tremendous destruction amongst the cruciferous crops of England and Scotland, the newspapers teemed with descriptions of the ravages of the "diamond-back turnip moth." This naturally led to inquiries, perhaps ludicrous, as to the nature of diamond-back turnips; but our Board of Agriculture set a good example by describing the pest in an official leaflet as the "turnip diamond-back moth," and thus reverting to the name by which John Curtis made the insect familiar half a century ago.

We welcome this second instalment of a valuable publication, and trust Mr. French may be encouraged to bring to a successful conclusion a work of the highest economic importance to agriculturists and horticulturists.

OUR BOOK SHELF.

Proceedings of the Edinburgh Mathematical Society. Vol. i. Session 1883. (London: Williams and Norgate, 1894.)

FROM time to time we have noted the annual volumes of this Society from vol. ii. to vol. xi., which appeared last year. The volume before us fills up a lacuna and now makes the series complete. In the early days of the Society the publication of *Proceedings* was not contemplated, and when an access of members rendered publication possible, the cost of printing absorbed the

major part of the funds, and each session's subscriptions have only sufficed for the current session's volume. Some few years since a special appeal was made and funds sufficient to warrant publication obtained. The result is the admirable piece of geometrical work before us. For, in fact, the volume is almost entirely one man's work. The first president was Dr. J. S. Mackay, whose edition of Euclid for the Messrs. Chambers in 1884 gave ample evidence that there was an elegant and specially learned geometer in our midst. The article on "Euclid" in the *Encyclop. Britannica* confirmed this discovery. It has been long known that Dr. Mackay had large stores of notes, and we are glad to find that he has found an outlet for much of this interesting matter. At the second meeting of the Society the president read a paper on the triangle and its six scribed circles. A portion of this paper was given in abstract in vol. ii., and was considerably enlarged in vol. xi., under the heading "History of the Nine-point Circle." In the long interval, with the permission of the Council, Dr. Mackay has amassed a collection of notes, divided into twenty sections, filling more than 1600 quarto pages of manuscript. A selection has been made which most nearly corresponds with what was actually communicated to the Society in 1883. The nine-point circle is accounted for above. The sections embraced in the present instalment treat of the centroid, the circumcentre, the incentre, the excentres, the orthocentre, Euler's line, relations among the radii, and area. They occupy pp. 6–128, and are accompanied by sixty-eight lithographed figures. Each property is traced back, as far as can be ascertained, to the first discoverer, the author having had the assistance of French, German, and Belgian mathematicians in addition to the aid of personal friends in Great Britain. The result is a rich repertory of almost, if not quite, all that is known on the special points indicated above.

We sincerely hope that Dr. Mackay may be recouped for the vast amount of work he has gone through, and the expense to which he has been put, by an appreciative and purchasing audience. This will encourage him to put his remaining notes into the hands of some publisher, or possibly he may adopt the present mode of publication.

The only other paper is a collection of notes on Plücker's first equation connecting the singularities of curves, by Dr. C. G. Knott. These are printed in the form in which they were handed over to the committee eleven years ago.

The Starry Skies. By Agnes Giberne. (London: Seeley and Co., 1894.)

THIS small book will be found a very useful addition to the series in which it is published. It is written in a clear and intelligible style, and should just suit those young readers who wish to obtain some of the more elementary ideas about the world on which we dwell, the moon, and the planetary and stellar systems in general. Great tact seems to have been shown throughout in the choice of suitable examples for giving the reader a good mental grip of distances, sizes, shapes, &c., of the heavenly bodies, without over-burdening his or her mind with too much detail. The clear print and the not too liberal use of dark type render the book very pleasant reading, while the questions and answers at the conclusion of each chapter will be serviceable. The illustrations throughout are very good indeed; the majority of them being excellent reproductions from the more or less important recent photographs. Among them we recognise Roberts' Andromeda nebula, the Pleiades, a fine Orion picture, cluster in Hercules, and several others nearly equal in quality. As a book for the young, we can heartily recommend these pages on the starry skies.   W. J. L.