

stock are placed under *Portlockia* McCoy, which is emended with subgeneric rank to receive them.

(5). The other *Phacopid* stock is that of the group of *Phacops glocheri* Barrande. *Phacopidella* Reed is now restricted to it. This confines it to the later Silurian stratigraphically and to the Tethys (Bohemia) realm geographically. Wedekind's generic name of *Glocheria*, also applied to this group, is untenable, being preoccupied by *Phacopidella* Reed.

REFERENCES.

1819. McMurtrie, Sketches of Louisville and the falls of the Ohio, Louisville, 1819.
1839. Emmrich, H. F., De Trilobites. Dissertatio petrofactologica, etc., Berolina, 1839, 56 pp., 1 plate.
1843. Goldfuss, A., Syst. Übersicht der Trilobiten, Neues Jahr. Min., etc., 1843, pp. 537-567, pls. 4-6.
1846. McCoy, Frederick, Silurian Fossils Ireland, Dublin, 1846, 72 pp., 5 pls.
1852. Barrande, J., Systeme Sil. Centre de la Boheme, vol. 1, XXX, 935, pp., 51 pls.
1855. Sedgwick, Adam, and McCoy, Frederick, British Pal. Rocks Foss., London, 1855, 830 pp., 25 pls.
1864. Salter, J. W., Mon. British Trilobites, Pal. Soc., 1864, 224 pp., 30 pls., text figs.
1880. Hoernes, R., Jahr. Geol. Reichsanst., Wien, Bd. 30, Heft 4 (1880), pp. 651-686.
1893. Vogdes, A. W., Bibliog. Pal. Crust., Occas. Pap., Cal. Acad. Sci., No. 4, 1893, 412 pp.
1905. Reed, F. R. C., The classification of the Phacopidae, Geol. Mag., (5), 2, pp. 172-178, 225-228.
1911. Wedekind, R., Klassifikation der Phacopiden, Zeitschr. Deutsch. Geol. Ges., 1911, 63, pp. 317-336.
1913. Clarke, J. M., Foss. Dev. do Parana, Mon. Serv. Geol. Min. do Brasil, vol. 1, 353 pp., 27 pls.
- 1913a. Raymond, P. E., Trilobita in Zittel-Eastman Textb. Pal., 2nd ed., vol. 1, pp. 692-729, text figs.

INSTINCT MINUS EXPERIENCE.

The more we study nature the more obvious it becomes that the mysterious intuition called instinct is not as perfect as some of the old school observers imagined. Just what this inherited memory is we are as far from thoroughly understanding as ever; but study, observation and experiment are bringing

to light some of its limitations. We know that it does not spring into being, perfect and complete, like Minerva fully armed from the head of Jove, but is often only a starting point, a suggestion or a natural aptitude requiring experience and practice for the full development of its possibilities. This was admirably illustrated by a nest built by a pair of Baltimore Orioles in a garden in Ottawa South last spring.

The nest was hung from near the end of a long horizontal bough of Manitoba maple. When first started the nest was some ten or twelve feet from the ground, but the subsequent weight of the foliage brought it down until almost within reach of the hand and with the added weight of the first rain, it almost trailed on the ground; whilst a twist given to the branch by unequal loading spilled out the contents. The nest itself was very shallow and so poorly constructed that it could be seen through in every direction and the contained eggs were visible from below. Attempts were made to prop up the branch and correct its twisting but without effect and after three eggs had been spilled out as fast as deposited the nest was deserted.

The illuminating part of the episode lay in the fact that this pair seemed to be young birds and probably this was their first attempt at nest building. The male was certainly a yearling as was indicated by his dull colour. The age of the female could not be ascertained by her plumage, but her association with a juvenile mate makes it probable that she too was in her first breeding season.

To these familiar with the beautifully woven and deeply pocketed Oriole's structure hung from the pendant tips of high flexible branches, this slovenly, ill-judged nest is a curiosity. Fundamentally it followed oriole tradition but in execution it violated every principle of oriole construction. It was hung from a horizontal instead of a pendant branch; it was shallow instead of being deeply pocketed, and thin and open instead of being thick and densely woven and indicated that whilst the inherited ideal was there the fault lay in poor judgment and the lack of technical ability. It is to be regretted that absence from the city prevented the observer from discovering where the new nest, that was immediately started, was located and comparing it with the first abortive attempt to see what advance in skill, if any, had been made, and what had been learned by experience.

P. A. TAVERNER.

Geological Survey,
Ottawa, Ont., Aug. 10, 1918.