35. *An Occurrence of a New Permian Phyllocarid in South Chosen.*

By

Teiichi KOBAYASHI

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The material dealt with in this paper was collected by SHIRAKI from a black slate of the Jido series exposed on the southern slope of Mt. Taikwa, Kwasan-ri, Eishun-men, Tanyo-gun, Chiusei-hoku-do, Chosen¹⁾ and submitted me for its description for which generosity thanks of the writer are due to Mr. Takuji SHIRAKI, then a staff of the Fuel Investigation Office at Keijo.

The black slate which yields the phyllocarid is located just above the coal measure D. According to HATAE²⁾ the limestones of the .iro series below this coal measure contain the Uralian *Palaeofusulina-Schwagerina* fauna while in the limestone of the Koten series which is overlain by the Jido is found the Moscovian *Fusulina-Fusulinella* fauna. On the other hand KAWASAKI³⁾ through his palaeobotanical study agreed with Yabe⁴⁾ in regard to the lower Permian age of the rich Jido flora mostly obtained from the coal measure D.

On the slabs of black slate at hand are found thirteen carapaces of phyllocarids besides a pinnule of *Pecopteris* sp. which are, however, not well preserved. Nevertheless this occurrence is worth while to record, because it is the discovery of phyllocarid or Archaeostraca in the Upper Palaeozoic formation in Eastern Asia, although a few phyllocarids, such as *Sinocarid*⁵⁾ and *Tuzoia*,⁶⁾ have already

1) 忠清北道丹陽郡永春面華山里太華山南坂

2) N. HATAE (1935), The Foraminiferal Fauna in the Limestones of the Heian System in the Vicinity of Neietzu, Kogen-do, (Jour. Geol. Soc. Japan, Vol. 42,) pp. 362-363.

3) S. KAWASAKI (1934) The Flora of the Heian System, Pt. 2, (Bull. Geol. Surv. Chosen Vol. 6, No. 4), p. 260.

4) H. YABE (1919), Report on the Anthracite Formation in Heian-do, Chosen, (Korea) (Bull. Geol. Surv. Chosen Vol. 1, pt. 1)

5) H. MANSUY (1912), Silurien de Si-Yang-Tang et de Nano-Tsou, (Mém. du Ser. géol. de l'Indochine Vol. 1, Fasc. 2.)

6) Ch. E. RESSER and R. ENDO (1912) in RESSER's New Lower and Middle Cambrian Crustacea, (Proc. U. S. Nat. Mus. Vol. 76, Art. 9), p. 9, pl. 3, figs 2-3.

been known to occur in the Lower Palaeozoic formations of Yunnan and Manchuokuo. Furthermore, the fossil is a new form.

The phyllocarid is widely distributed in the Palaeozoic formations of Europe, America and Australia from Cambrian to Carboniferous, but its Permian occurrence is still meager.¹⁾ None is known from the Mesozoic and Tertiary. However, it recurs in the recent marine water. That is the Nebalidae which is regarded by most authors as the descendant of this kind of animal.

The fossil and recent phyllocarids have generally the marine habit. Lately RUEDEMANN²⁾ emphasized the common inclusion of *Caryocaris* in the pure graptolite shale which he compared with the deposit of the sargasso sea of to-day. However, the phyllocarid is sometimes found also in the coal measure. *Cryptozoe* in Illinois is such an example. *Coreocaris* represents another instance, because, according to Siraki's observation, the black slate of the Jido series is by no means of the marine origin.

Coreocaris eishunensis, new genus and species.

Figs. 1—3.

Carapace thin, composed of two valves which are anchylosed on the dorsal side; each valve triangularly subovate, surrounded by an entire margin and narrowed toward the front; dorsal margin nearly straight; surface marked by a few concentric irregular folds near the margin.

Fig. 1. Holotype

Fig. 2. Paratype

Fig. 3. Paratype

The specimen in fig. 2 is 9.3 mm long and 2.5 mm broad and shows two valves united along the dorsal margin. In the anterior of

1) A. W. VOGDES (1893), A Classified and Annotated Bibliography of the Palaeozoic Crustacea, 1698-1892, to which is added a Catalogue of North American Species, pp. 262-264.

G. GÜRICH (1929), *Silesiocaris* von Leipe und die Phyllocariden überhaupt. (Mitteil. aus dem Min.-geol. Staatinst. Hft. 11)

2) R. RUEDEMANN (1934), Palaeozoic Plankton of North America, (Geol. Soc. Am. Mem. 2), pp. 36-37.

another specimen or the holotype (fig.1) are observed irregular depressions which are probably the scars of the attachment of the body. A small prolonged spot located at a point close to the anterodorsal margin might be an impression of oculo, because this position and outline are approximate to those of *Emmelozoe*.¹⁾ Two appendages, long anterior and short posterior, seen behind the anterior extremity are presumably the antennule and antenna respectively.

In the third specimen (fig. 3) is preserved the abdominal part of the body which is projected behind the carapace. It is composed of four subsquare segments in addition to the telson. This telson may be composed of two spines, on one of which the serration is to be seen on the lower side.

With regard to the bivalved nature this may be referable to the Ceratiocaridae or Ceratiocarina, but the telson, so far as I can see, consists of two spines, instead of three as usual in the family.

Among the upper Palaeozoic genera of the family *Colpocaris* MEEK, *Acanthocaris* PEACH, *Cryptozoe* PACKARD, *Macrocaris* MILLER and *Stringocaris* VOGDES (i.e. *Solenocaris* MEEK), the first genus²⁾ has an antero-dorsal sinuation and arcuate dorsal margin; the second³⁾ is said to have an anterior snout. The present form is distinguished from *Cryptozoe*⁴⁾ by its anterior outline and straight dorsal margin. *Macrocaris*⁵⁾ has a carapace pointed in front and hind and ornamented by anastomosing striae. Further, its abdomen is relatively large and composed of more than twelve segments. Hence it is also beyond comparison with the Korean form. The outline of carapace is much more elongated in *Stringocaris*⁶⁾ as well as in *Caryocaris* than in this form.

*Nothozoe*⁷⁾ from the Ordovician of Bohemia is rather similar to this in the outline, but still less triangular than the Korean form. Thus, none of these genera have this species in its fold, and therefore a new genus is instituted for this Korean form.

1) T. R. JONES and H. WOODWARD (1887), Monograph of the British Palaeozoic Phyllocarida (Palaeontogr. Soc.) p. 69.

2) S. A. MILLER (1889), North American Geology and Palaeontology, p. 539.

3) ZITTE-EASTMAN'S Text-Book of Palaeontology, 1913, p. 751.

4) A. S. PACKARD, jr. (1886), Discovery of the thoracic feet in a Carboniferous Phyllocaridan (Proc. Am. Phil. Soc. Vol. 23), p. 381. pl.

5) MILLER (1889), Op. cit. p. 709, fig. 1236.

6) MILLER (1889), Op. cit. p. 567, fig. 1058.

7) J. BARRANDE (1872), Système Silurien du Centre de la Bohême I, Suppl. p. 536, pl. 23, figs. 15-21, pl. 27, figs. 1-4.

南鮮産二疊紀木葉蝦類新屬に就いて (摘 要)

小 林 貞 一

素木卓二學士採集の忠清北道丹陽郡永春面華山里太華山南坂の寺洞統より産出せし木葉蝦類を研究するに新屬新種にして、其の特性類似諸屬との比較識別を記す