Some Cycadophyta from the Jurassic Toyora Series,
Prov. Nagato (Yamaguchi Pref.) Japan.

By

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(Read: Dec. 12, 1950, Received: March 6, 1951)

The flora of the Jurassic Toyora Series in Province Nagato is characterized by
the numerous species of cycadophyta. In this paper the writer report some
cycadophyta which are recently collected. They are all newly known in this area.

1. Cfr. *Pseudocenisia brevipennis* Oishi (Fig. 1)

1940 *Pseudocenisia brevipennis* Oishi; The Mesozoic Flora of Japan; Journ. Fac. Sci., Hokkaido
Imp. Univ., Ser. IV, Vol. V, Nos. 2–4, p. 322, pl. XXVIII. (Fig. 5–7).

The frond is small in general habit. The rachis is slender and narrow, about
0.5mm in breadth. The pinnae are linear and nearly parallel-sided, contracted
and decurrent downwards at the base, about 5mm in breadth at the middle portion,
and about 4 cm in length and set apart each other. The habit of the apical portion
of pinnae is not known. The angle between pinnae and rachis is about 80° in
one side and 50° in the other side of the rachis. The nerves are parallel and
forking near the base.

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Vol. V, Nos. 2–4, p. 123, 1940.)

This specimen is most resembles to the Ryôseki species of Sôma area, but in the former the pinnae are longer than the later and set apart each other.

Locality; Takazi, Kiyosue village, southern part of Toyora District.

(Collected by late Mr. Tetsuro Mizoguchi, student of Yamaguchi High-School)

2. *Pseudoecyas* ? sp. (Fig. 2)

The frond is small in general habit. The rachis is strong and stout, about 1.5 mm in breadth. The longitudinal ridges in rachis are not visible. The pinnae are long and linear, nearly parallel-sided, and acutely pointed, about 4 cm in length, and 1.5 mm in breadth at the middle portion, set apart each other. The angle between pinnae and rachis is about 60°. The nerves are prominent, parallel, and two in number.

The writer can not safely set this specimen *Cycadites* or *Pseudoecyas*, owing the lack of the knowledges on the habit of ridges in the rachis, but the writer provisionally set it in *Pseudoecyas* taking in consideration with the general habit of the frond and the nerves of the pinnae.

Locality: Ono, Kiyosue village, southern part of Toyora District. (Collected by the writer.)

3. *Pterophyllum propinquum* Goeop. (Fig. 3)

1929. *Pterophyllum propinquum* Yabe and Oishi: Notes on Some Fossil Plants from Korea and China Belonging to the Genera Nilsonia and Pterophyllum; Jap. Journ. Geol. Geogr., Vol. VI, Nos. 3-4, p. 91, Pl. XVIII, Fig. 6.


The frond is long and narrow, more than 15 cm in length, and more than 8 cm in breadth. The rachis is stout and strong, broadest in the lower and narrowing abruptly towards the apical portion.

The pinnae are long and nearly parallel-sided, obtusely pointed upwards. The bases of the pinnae are somewhat contracted but in the pinnae of the apical portion they are not so. The angles between the pinnae and rachis are variable.
at the portion. They are larger in one side and smaller in the other side of the rachis, and larger in the lower portion and smaller in the apical. The number of pinnae of each side of the rachis are not same, then the pinnae are not oppositely set nor symmetrical in size. The nerves are parallel, 25 in number per 1 cm in the large pinnae and 18 in number per 0.5 cm in the small pinnae.

The characters of this species are large size of frond and variety of shape and size of pinnae at the various portions of the fronds. In some specimen, not shown in the figure, some pinnae are seldomly becoming very broad alike that of *Anomozamites*.

The specimen shown in the figure most resembles the specimen from Hoer of Sweden and South Manchuria.

**Locality**: Ono and Takazi, Kiyosue village, southern part of Toyora District.

(Collected by the writer from Ono and by late Mr. T. Mizoguchi from Takazi).

Thanks are due to the officials of the Department of Education, for their kind courtesy to grant a fund for this study.

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**抄録**


シェバード氏の海底に関する業績は、古く本誌にも抄録されたことがある。本書は、いわば、同氏の業績の総括ともいうべきものである。

第1章は研究小史、第2章は研究手段（機械・器具）の解説である。第3章は波浪・潮汐の作用の分析、第4章は海東線の分類、第5章はなぎさと砂の移動の問題をとりあげつついていて、いずれも参考になる点が多い。

特に、われわれの興味をひくのは、第6章の大陸棚の地形と堆積物の研究で、堆積物の鉱床と離岸距離（いわば深海）との関係が地質学の常識に反してむしろ反対であること、大陸棚には基盤が露出する一般則があることなど、数々の新事実を紹介している。

第7章では大陆棚の成因を論じ、その平坦面が水流によって生じたと結論している。第8章では大陸棚層疊の主張をしていて面白い。第9章で堆芯の成因に論及し、その成因を永久の水位の変位にもとめている。第10章のりご道の研究では何ら新しい結論を得ず、第11章の深海底の研究では、その成因の説明を放棄している。

第12章は結論と應用海底地質で、米国の海底地質が第2次世界大戦と結びついて製造した資料を明らかにするとともに、大陸棚から石油を探油する現実的可能な可能性を主張している。

要するに本書は、海底地質学というよりはむしろ、海底地質学と称すべき論著で、大陸棚・深海底・海底堆積物などが、造陸運動・造山運動・地層の形成などと、統一的に、歴史的に、生成過程的にとらえられていないう論論的弱点を大きくはくらしている。そして、戦争中に結びついた海底地質学のあり方とその豊富な資料は考えさせられるが、それらを正しく統括し、指導する現論の傾斜についても、他山の石をみるであろう。しかし、彼の国でも、地質学や堆積学の常識が根本原理が変革しつつある事実を確認できる點で、本書を一読する文献として紹介する次第である。

（井戸正二）