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STUDIES ON THE CENOZOIC PLANTS OF HOKKAIDÔ AND KARAHUTO

III. COMPTONIPHYLLUM FROM HOKKAIDÔ AND KARAHUTO

By

Saburô ÔISHI and Kazuo HUZIOKA

With 1 Plate

(Contribution from the Department of Geology and Mineralogy, Faculty of Science, Hokkaidô Imperial University, Sapporo; No. 279)

Genus *Comptoniphyllum* NATHORST

The genus *Comptoniphyllum* was founded by A. G. NATHORST[1] in 1888 on certain fossil leaves from the Neogene Tertiary rocks of Japan, which he compared with *Myrica* (*Comptonia*) *asplenifolia* BANKE (=*pregrina* L.) now living in North America. NATHORST first distinguished two distinct specific types among the Japanese examples of *Comptoniphyllum*, namely, *C. Naumanni* NATHORST and *C. japonicum* NATHORST, the criteria of distinction being chiefly based on the basal character of the leaves and the shape of the segments. Later ENDÔ and MORITA[2] claimed the specific identity of these two types for the reason that they are hardly separable specifically from one another, the two being always connected by a series of numerous intermediate forms.

ENDÔ and MORITA recognized two valid species of *Comptoniphyllum*, namely, *C. Naumanni* NATH. and *C. Anderssoni* FLORIN. The former has been known to occur from various localities of the Japanese Miocene strata, while the latter has been known from the Due coal-bearing formation of Russian Karahuto, the Fushun coal-

(1) A. G. NATHORST: Zur fossilen Flora Japans. Palaeont. Abhandl., Vol. IV, 1888, p. 8.

(2) S. ENDÔ and H. MORITA: Notes on the Genera *Comptoniphyllum* and *Liquidambar*. Sci. Rep., Tôhoku Imp. Univ., Sec. Ser. (Geology), Vol. XV, No. 2, 1932.

mine of Manchoukuo and Tachung-kou of North China. The specimens which the present writers propose to describe in this note belong to *C. Naumanni*; they were recently discovered from Karahuto and from Osima peninsula in southwestern Hokkaidô, and they deserve description as no *Comptoniphyllum* has been reported from these districts.

Comptoniphyllum Naumanni NATHORST

Pl. XLV (I), Figs. 1–6.

1888. *Comptoniphyllum Naumanni* NATHORST: Op. cit., p. 8, pl. II, fig. 2.
1888. *Comptoniphyllum japonicum* NATHORST: Ibid., p. 13, pl. IV, figs. 2, 3.
1926. *Comptoniphyllum japonicum* KRYSHTOFOVICH: Contribution to the Tertiary Flora of Kwannon-zawa, Province of Echigo, Japan. Ann. Russ. Pal. Soc., Vol. VI, p. 8, pl. I, fig. 5.
1931. *Comptoniphyllum japonicum* ENDÔ: Cenozoic Floras. Iwanami's Geol. and Pal. Series, p. 17, fig. 11.
1932. *Comptoniphyllum Naumanni* ENDÔ and MORITA: Op. cit., p. 3, pl. I, figs. 3–16.
1938. *Comptoniphyllum Naumanni* ENDÔ: Cenozoic Plants from Tyôsen. Journ. Geol. Soc. Japan, Vol. XLV, p. 326.
1938. *Comptoniphyllum Naumanni* SHIKAMA: On the Kôbe Formation and its Flora, Ibid., p. 621.

I. OCCURRENCE IN KARAHUTO

Pl. XLV (I), fig. 5 shows the best specimen in the collection. It represents a portion of a leaf more than 7 cm. long and 1.5 cm. broad. The segments are short and broadly triangular with round apices and belong doubtlessly to the type originally described by NATHORST as *C. japonicum*. Two or three secondary nerves are distinct on each segment. Another specimen in fig. 6 shows a fragment of a leaf similar to the preceding but having segments with subacute apices directed forwards. Two secondary nerves are distinct to each segment, but the tertiaries are obscure. This specimen belongs to the type originally described by NATHORST as *C. Naumanni* and belongs also to ENDÔ and MORITA's type "with triangular segments of *C. Naumanni*".

Although the proximal portion of the leaves, by which *C. Naumanni* is chiefly distinguishable specifically from an allied species,

C. Anderssoni FLORIN, is missing among the specimens now at the writers' disposal, but the shape of the segments which in the latter species is more sharply pointed and more strongly directed forwards than in the former reminds one somewhat of the former species.

Locality: Tôro coal-mine, Tôro-mati, Nayosi-gun; Esutoru coal-bearing Beds (Miocene); coll. T. INOUE; rare.

II. OCCURRENCE IN HOKKAIDÔ

1. Specimens from the Obira Series (equivalent to the Kawabata Series; Miocene) of the Rumoe-Uryû coal-fields, Provs. Isikari and Tesio, collected by T. TOKUDA and H. TIBA.

The occurrence of this species from the Uryû coal-field has already been reported by ENDÔ and MORITA. The specimen figured in Pl. XLV (I), fig. 1 was collected by Dr. T. TOKUDA from a different locality in the Uryû coal-field; there are also at hand some other specimens collected by H. TIBA from its neighbourhood.

2. Specimens from the Sakipenbetu plant beds (Kawabata Series; Miocene) in the Asibetu coal-field district, Prov. Isikari; collected by E. TAKAHASI.

E. TAKAHASI brought back some imperfect specimens of *Comptoniphyllum* from the Sakipenbetu plant beds of Nokanan. Of these the best one is here illustrated (fig. 2). It shows doubtlessly a *C. Naumanni*.

3. Specimens from the Kunnui Series in the Osima peninsula, Prov. Osima; collected by S. ÔISHI and K. HUZIOKA.

C. Naumanni occurs from the diatomaceous earth exposed along the sea coast of Abura near Setana, Setana-gun, Prov. Osima, but its occurrence is very rare. Two specimens (figs. 3, 4) have been discovered from this locality, of these the one in fig. 3 is a leaf nearly complete and the preservation is splendid.

III. REMARKS

C. Naumanni is widely distributed in the Japanese Islands and Tyôsen. It is also noteworthy that the occurrence is almost confined to the strata of Miocene age. The geographical distribution of the genus *Comptoniphyllum* in Asia is thus very wide, ranging

from the southern part of Russian Karahuto (about N. L. 51°) in the north as far as southeastern Honsyû (about N. L. 35°) in the south.(1)

EXPLANATION OF THE PLATE XLV (I)

The figures are in natural zise.
The specimens are in the Department of Geology and Mineralogy, Faculty of Science, Hokkaidô Imperial University, Sapporo.

Comptoniphyllum Naumanni NATHORST.

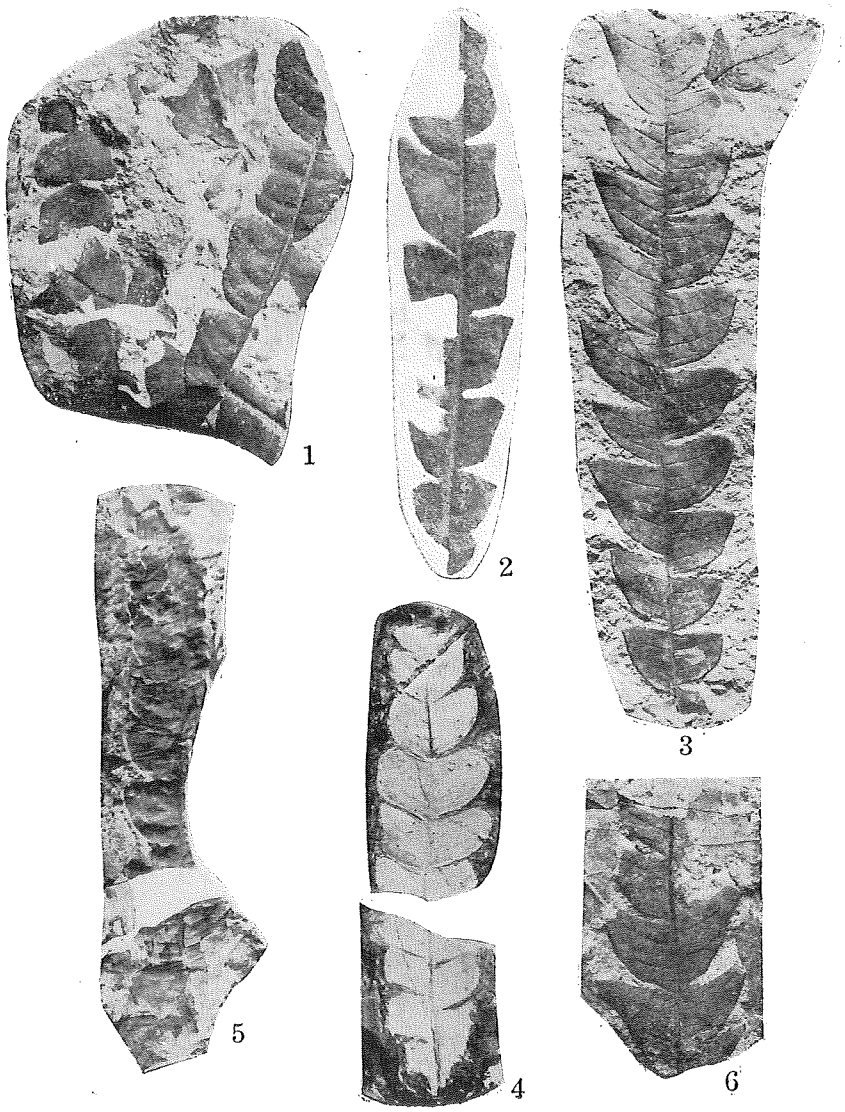
Fig. 1. Imperfect leaves. Loc. Horonitatibetu-gawa, Uryû-gun, Prov. Isikari, Hokkaidô, Obira Series.

Fig. 2. A nearly complete leaf. Loc. Nokanan, Sorati-gun, Prov. Isikari, Hokkaidô. Sakipenbetu Plant Beds (Kawabata Series).

Figs. 3, 4. Nearly complete leaves. Loc. Abura near Setana, Setana-gun, Prov. Osima, Hokkaidô. Kunnui Series.

Figs. 5, 6. Imperfect leaves. Loc. Tôro coal-mine, Nayosi-gun, Karahuto. Esutoru coal-bearing beds.

After the manuscript of this paper was completed, the writers came across a short note by Mr. E. SAKAI which announced the new occurrence of *Comptoniphyllum* in Honsyû. The locality is Ôta-mura, Titibu-gun, Saitama Prefecture, and the specimen has been determined as *Comptoniphyllum* sp. (E. SAKAI: A New Localiy of *Comptoniphyllum*. Journ. Geol. Soc. Japan, Vol. XLVII, No. 557, 1940, p. 79.)



Kumano photo.

S. Ôishi and K. Huzioka: Comptoniphyllum from Hokkaidô and Karahuto.