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Supplemental description of *Pityosporites* from the Uge Member of the Taneichi Formation, Northeast Japan

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Abstract

*Pityosporites tohokuensis* n. sp. from the Santonian Uge Member of the Taneichi Formation at Taneichi is described and re-illustrated supplementally in this paper.

Introduction

The authors (1990) described and illustrated already many palynomorphs from the Santonian Uge Member of the Taneichi Formation outcropping in a long and narrow belt area along Rikuchu Coast in northeastern Honshu, Japan. At that time, they didn’t describe carelessly *Pityosporites tohokuensis* n. sp., in spite of presentation of its photos. By reason of their such mistake, *Pityosporites tohokuensis* n. sp. is described and re-illustrated supplementally in this paper.

Description of *Pityosporites tohokuensis*

*Pityosporites tohokuensis* n. sp.

Pl. 1, figs. 1 – 5 (or Takahashi & Sugiyama, 1990: pl. 65, figs. 3, 4, 8; pl. 66, figs. 3, 6)

Description: Bisaccate, pinoid pollen grains. Outline spheroidal in polar view, subprolate in side-lateral view, and suboblate in oblique view. Sacci parvi-
saccate, moderately or roughly reticulate. Central body subprolate in polar and oblique views, finely punctate or foveolate; cap 2.5—3.5 $\mu$m thick, intrarugulate. Distal furrow between sacci laevigate or finely punctate, relatively narrow. Ventral root more or less concave or convex.

**Measurements**: Overall width of grain: 60—77 $\mu$m.
- Overall length of grain: 54—68.7 $\mu$m.
- Overall height of grain: 56 $\mu$m.
- Width of central body: 48—58 $\mu$m.
- Length of central body: 54—67 $\mu$m.
- Height of central body: 39 $\mu$m.
- Width of sacci: 24—34 $\mu$m.
- Length of sacci: 47—57 $\mu$m.

**Occurrence**: Uge Member; south of Kanuka (C31), Uge harbor (A) (C39), and Uge harbor (B) (C40).

**Holotype**: Pl. 1, figs. 5a, b (or Takahashi & Sugiyama, 1990: pl. 65, figs. 4); overall width of grain 77 $\mu$m, overall length of grain 68.7 $\mu$m, width of central body 58 $\mu$m, length of central body 67 $\mu$m, width of saccus 31 $\mu$m, length of saccus 54 $\mu$m; exine (cap) 2.5 $\mu$m thick; intrarugulate; slide C 39—a.

**Name derivation**: *tohokuensis* = from Tohoku district of Honshu (Japan).

**Remarks**: Central body of *Pityosporites tohokuensis* n. sp. is morphologically subprolate in polar view and the new species is distinguished from *Pityosporites siegburgensis* Takahashi & Jux which possesses subprolate central body in having much larger size of grain and central body.

**Botanical affinity**: Pinaceae, *Pinus*.

**References**


Zaklinskaja, E. D. (1957): Stratigraphic significance of pollen grains of gymnosperms of the Cenozoic deposits of the Irtysh Basin and of the northern
Figs. 1–5. *Pityosporites tohokuensis* n. sp.

Fig. 1: Slide C40–b, X1000; figs. 2, 3, 4: slide C31–b;
figs. 5a, b: holotype, slide C39–a; fig. 5a: X600.