

Alexander B. DOWELD: *Abies praefirma* and *Abiespollenites ananovae* (*Abietaceae*),  
New Replacement Names

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Summary: Junior homonyms of fossil species, *Abies protofirma* Tanai 1961 (non Zaklinskaja 1957) and *Abies minor* Ananova 1974 (non Velenovský 1885), are replaced with new names respectively, *A. praefirma* Doweld and *Abiespollenites ananovae* Doweld. The validity of the fossil species *A. minor* Velenovský 1885 is no more affected by the devalidated species name *A. minor* Gilibert 1792, which is in the works now suppressed by *The International Code of Nomenclature for Algae, Fungi, and Plants* (*Opera utique oppressa*).

The homonymy of some fossil species of *Abies* from the Japanese Archipelago, Central Asia and Siberia was found during the editorial works for *The International Fossil Plant Names Index* (IFPNI), which plans to list all fossil plant species from 1820 (IFPNI 2014–). Since homonymic fossil species names of *Abies* (see below) are in current use and have no synonyms, new replacement names are proposed in accordance with *The International Code of Nomenclature for Algae, Fungi, and Plants* (Melbourne Code: McNeill et al. 2012). New nomenclatural acts (*nomina nova*) were registered through a pilot registration version in *The International Fossil Plant Names Index* (IFPNI 2014–), with unique persistent registration bar codes (LSIDs) listed under each newly proposed fossil plant taxon.

*Abies praefirma* Doweld, **nom. nov.** ≡ *Abies protofirma* Tanai in J. Fac. Sci. Hokkaido Univ., Ser. 4, Geol. 11: 295 (1961), *nom. illeg.* non *A. protofirma* Zaklinskaja in Trudy Geol. Inst. Akad. Nauk SSSR 6: 75 (1957)

≡ *Abiespollenites protofirmus* (Zaklinskaja) Krutzsch, Atlas Mitt. Jungtert. Disper. Spor. Pollen Mitteleur. 6: 20 (1971).

**Holotype:** [fossil seed scale] JAPAN. Okayama Pref., Tomata-gun, Kamisaibarasan, Onbara; Pliocene (GSJ-4059, Geological Survey of Japan); figured in Tanai in J. Fac. Sci. Hokkaido Univ., Ser. 4, Geol. 11: pl. 1, fig. 10 (1961).

Etymology: From extant *Abies firma* Siebold & Zucc.

IFPNI: 2C436F0C-257F-48F2-9525-4A6B85401E1B.

The fossil species *Abies protofirma* was described by Tanai (1961) on the basis of seed scale remains from the Pliocene sediments of Okayama Prefecture, Japan (Japanese Archipelago). However, it is a junior homonym of another fossil species of *Abies*, *A. protofirma* Zaklinskaja (1957), based on fossil pollen from the Eocene sediments of Central Asia (Northern Cis-Aralia, Kazakhstan). Although *A. protofirma* Zaklinskaja was later recombined into a specialized fossil pollen genus *Abiespollenites* Thiergart ex Raatz (1938), a modern repository of all fossil species based on pollen in accord with current concepts of fossil plant classification, *Abies protofirma* Tanai as a later homonym should be replaced by a new species name (*Abies praefirma* Doweld). The new name originates from the similarity of the separate seed scales, on which the Japanese fossil species was based, to the seed scales of extant cones of *Abies firma* Siebold & Zucc.

***Abiespollenites ananovae* Doweld, nom. nov.** ≡ *Abies minor* Ananova, Pyl'tsa Neogen. Otlozh. Juga Russk. Ravn.: 128 (1974), nom. illeg. non *A. minor* Velenovský, Gymnosp. Böhm. Kreideform.: 33 (1885) nec *Abies minor* Chlonova in Trudy Inst. Geol. Geofiz. Sibirsk. Otdel. Akad. Nauk SSSR 3: 52 (1960), nom. illeg. ≡ *Abiespollenites minor* Krutzsch, Atlas Mitt. Jungtert. Disper. Spor. Pollen Mitteleur. 6: 20 (1971). [*Abies minor* Gilibert, Exercit. Phyt. 2: 412 (1792), nom. deval. (ICN, Art. 34 & Appendix VI: Opera utique oppressa)].

**Holotype:** [fossil pollen] **RUSSIAN FEDERATION.** Rostov region, Miuss peninsula, Taganrog; Miocene (Serravallian) (prep. 36, St.-Petersburg State University. St.-Petersburg, Russian Federation); figured in Ananova, pl. 12, fig. 1 (1974).

Etymology: In honour of Elena Nikolaevna Ananova (1917–1988).

IFPNI: 03BBB45B-8133-4F01-94F3-BB7B25925624.

Another fossil species of *Abies*, *Abies minor* Ananova (1974), was described on fossil pollen from the Upper Miocene (Serravallian) sediments of the southern part of Russian plain, Miuss peninsula, Sea of Azov shore (Rostov region, Russian Federation). However, it is a later homonym of another fossil species, *A. minor* Velenovský (1885: 33), which was based on the fossil remains of pinaceous foliage in the Upper Cretaceous (Cenomanian) sediments of Central Europe (then Bohemia, now Czech Republic). Therefore, a new legitimate name is needed for Ananova's fossil pollen species, which should be transferred into the specialized fossil pollen genus *Abiespollenites* Thiergart ex Rantz (1938), in which all dispersed fossil pollen attributable to modern genus *Abies* L. is reposit. The epithet *Abiespollenites minor* Krutzsch (1971: 20) is known as validly published already in that genus, being based on the additional later homonym of fossil pollen *Abies minor* Chlonova (1960: 52), described from the Danian/Palaeocene boundary

sediments of Siberia (Bol'shoj Dubches river, near mouth of Nikitina river, Krasnojarsk territory, Russian Federation). Therefore a new epithet is proposed for the fossil species of Ananova (1974), *Abiespollenites ananovae* Doweld, nom. nov.

In addition, it should be noticed that since all Gilibert's main works, including *Exercitia Phytologica* (1792), are currently listed in the Appendix VI "Opera utique oppressa" of the International Code of Nomenclature for Algae, Fungi, and Plants (McNeill et al. 2012), the earliest known binomen *Abies minor* Gilibert (1792: 412), which is treated as not validly published at the rank of species (ICN, Art. 34), did not affect the validity of the fossil species *A. minor* Velenovský (1885: 33).

#### References

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A. B. Doweld: モミ科モミ属の新置換名, *Abies praefirma* と *Abiespollenites ananovae*

日本列島, 中央アジア, そしてシベリアのモミ属の化石種の学名については *The International Fossil Plant Names Index* (IFPNI) にまとめられているが, *The International Code of Nomenclature for Algae, Fungi, and Plants* (メルボルン規約: McNeill et al. 2012) との整合性を図った。この流れの中で, *Abies protofirma*

Tanai などについては *Abies praefirma* Doweld, *Abies minor* Ananova などについては *Abiespollenites ananovae* Doweld の新置換名を提唱した。

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[Gaertnerian Institution],  
The International Fossil Plant Names Index)