

NOMENCLATURE NOTES

GLEICHENIACEAEPHYLLUM SAN-MARTINI, A NEW NAME FOR GLEICHENITES SAN-MARTINI HALLE EMEND. HERBST 1962

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GLEICHENITES SAN-MARTINI was erected by Halle (1913) to encompass some fertile fragmentary fronds collected from Albian deposits near Lago San Martín, in Patagonia. Later studies and collections allowed emendation of this species based on more complete specimens collected from Aptian outcrops at the Anfiteatro de Ticó, Estancia Bajo Tigre, and the Meseta Baqueró (Herbst, 1962). *Gleichenites san-martini* has been also recorded from the Kachaike Formation (Albian) at other sites close to Halle's locality (Baldoni and Ramos, 1981; Longobucco *et al.*, 1985; Passalia, 2007).

Gleichenites was proposed by Goeppert (1836) with a brief diagnosis (“*Frons dichotoma pinnata. Fructificatio hucusque ignota*”) to include five species (*G. linkii*, *G. neesii*, *G. artemisiaefolius*, *G. crithmifolius* and *G. neuropteroides*), which were Paleozoic sterile fronds with dichotomous branching pattern. This genus has been widely used in the literature to include fern fronds similar to extant *Gleichenia microphylla* R.Br. However, a nomenclatural irregularity started when Goeppert's original five species of *Gleichenites* species were transferred to peridospermalean taxa, such as *Eremopteris* and *Sphenopteris* (*e.g.*, Schimper, 1869). Since Goeppert did not propose a type species for the genus, it is unclear which genus is *Gleichenites* senior synonym. In any case, the genus *Gleichenites* poses a nomenclatural problem under the International Code of Nomenclature for algae, fungi and plants (McNeil *et al.*, 2012). A number of possible solutions to this problem were proposed by several authors (see summary in Vera and Pas-

salia, 2012). The most recent scheme to accommodate fossil “*Gleichenia*-like” fronds of unequivocal gleicheniacean affinities (*i.e.*, having dichotomously branched fronds with arrested laminar buds) has proposed their referral to *Gleicheniaceaphyllum* Crabtree *emend.* Nagalingum *et* Cantrill 2006 (Nagalingum and Cantrill, 2006). Other superficially similar fronds that cannot with certainty be allied with the Gleicheniaceae ought to be assigned to *Korallipteris* Vera *et* Passalia 2012. Since *Gleichenites san-martini* has dichotomous fronds with arrested laminar buds (see Limarino *et al.*, 2012, fig. 4.1) it should be re-assigned to *Gleicheniaceaphyllum*.

SYSTEMATIC PALEONTOLOGY

Order GLEICHENIALES Schimp., 1869

Family GLEICHENIACEAE

Genus *Gleicheniaceaphyllum* Crabtree *emend.*

Nagalingum *et* Cantrill 2006

Type species. *Gleicheniaceaphyllum falcatum* Crabtree 1988; original designation. Albian of Southwestern Montana, United States of America.

Gleicheniaceaphyllum san-martini (Halle)

Vera *et* Passalia, *comb. nov.*

1913. *Gleichenites San-Martini* Halle, p. 22–23, pl. 1, figs 14–15.

1962. *Gleichenites San-Martini* Halle *emend.* Herbst, p. 142–143, figs 1–5, 12–13, 16.

1981. *Gleichenites san martinii* Halle *emend.* Herbst, Baldoni and Ramos, p. 749–750, lam. 1, fig. 2.

1985. *Gleichenites sanmartinii* Halle *emend.* Herbst, Longobucco *et al.*, p. 306, lam. 2, figs 3–5.
 2007. *Gleichenites sanmartinii* Halle *emend.* Herbst, Passalia, p. 568, figs 3.4, 9.13.

Diagnosis. As in Herbst (1962, p. 142–143).

Holotype. NRMS165300 (Swedish Museum of Natural History, Paleobotany Collection).

Type locality and stratigraphic unit. “Locality ‘b’, 10 km SE of the south end of Bahía de la Lancha” (Halle, 1913), Santa Cruz Province; Kachaíke Formation, Albian.

Other localities and stratigraphic units. Anfiteatro de Ticó, Estancia Bajo Tigre and Punta del Barco localities, Santa Cruz Province; Punta del Barco Formation (Baqueró Group), Aptian; Bajo Comisión, La Potranquita and Cerro Mirador localities, Santa Cruz Province; Kachaíke Formation, Albian.

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