

SPHENOPTERIS VALIDA, Dawson, sp.

[= *Sphenopteris artemisiaefolioides*, Crépin].

Plate IX, figure 21. Plate X, figures 22, 23 and text fig. 2.

1848. *Sphenopteris artemisiaefolia*, Sauveur (non Sternberg), Vég. foss. terr. houill. Belg., pl. XX, figs. 1, 2 (not 3).
 1862. *Cyclopteris valida*, Dawson, Quart. Journ. Geol. Soc., vol. 18, p. 319, pl. XVII, fig. 52.
 1868. *Cyclopteris valida*, Dawson, Acadian Geol., ed. 2, p. 547, fig. 192B.
 1871. *Cyclopteris (Aneimites) valida*, Dawson, Foss. Pl. Devon. Upp. Silur. Canada, Geol. Surv. Rep., p. 46, pl. XVI, fig. 190.
 1876. *Eremopteris artemisiaefolia*, Boulay (non Sternberg), Terr. houill. Nord France, vég. foss., p. 28, pl. 1, fig. 6.
 1881. *Sphenopteris artemisiaefolioides*, Crépin in Mourlon Géol. Belg., p. 60.
 1885. *Archaeopteris Sauveuri*, Stur, Carbon-flora Schatslarer Schichten, pl. XXXVI, fig. 2.
 1887. *Sphenopteris artemisiaefolioides*, Zeiller, Atlas, Flore foss. Valenciennes, pl. XIV, figs. 2 and 3.
 1888. *Sphenopteris artemisiaefolioides*, Zeiller, Flore foss. Valenciennes, p. 132, pl. XIV, figs. 2, 3).
 1888. *Cyclopteris valida*, Dawson, Geol. Hist. Pl., p. 73, fig. 23B.
 1910. *Aneimites (Triphylopteris) valida*, Dawson in Matthew, Silur. Fl., Bull. Nat. Hist. Soc. New Brunswick, vol. 6, p. 248.
 1910. *Sphenopteris artemisiaefolioides*, Crépin in Renier, Docum. l'étude Paléont. terr. houill., pl. t. X XII.
 1911. *Cyclopteris (Archaeopteris) valida*, Dawson, Matthew, Trans. Roy. Soc. Canada, series 3, vol. 4, p. 12.

The St. John specimen was originally described by Dawson (1862 p. 319) as follows:—"Tripinnate; primary divisions of the rachis stout and wrinkled. Pinnæ regularly alternate. Lower pinnules nearly as broad as long, deeply and obtusely lobed, narrowed, and decurrent at the base, regularly diminishing in size and breadth toward the point, and the last pinnules narrowly obovate and confluent with the terminal pinnule. Nerves delicate, several times dichotomous."

M. Zeiller, who has had the advantage of dealing with larger and more complete specimens than the Canadian ones, thinks that the frond was probably quadripinnate, and as he notes (1888 p. 132) the frond is characterised by the lower pinnules being pinnatifid, and the upper simple. This is seen in further Canadian examples and is illustrated in figure 22 pl. X of the present paper, and more clearly perhaps in text fig. 2.