

- 3 (2) Athecate internodes except proximal internode almost as wide as long; abcauline wall distinctly thickened and septal ridges often present; length to width ratio of hydrotheca somewhat variable, length either slightly greater than width, or length and width almost equal ..... *H. minuta* (Trebilcock, 1928)
- 4 (1) Hydrocladia divided into thecate internodes only.
- 5 (6) Paired nematothecae flanking hydrotheca either arising from a shelf-like structure, or a rounded apophysis of the internode and extending beyond the hydrotheca; no single mesial nematotheca above the hydrotheca ..... *H. heterogona* (Bale, 1924)
- 6 (5) Paired nematothecae flanking hydrotheca on a tiny apophysis of the internode, short, and extending approximately half the way up the free adcauline wall of the hydrotheca; a single median nematotheca above the hydrotheca; nematothecae truncated, with inrolled sides; one mesial nematotheca above each stem hydrotheca.  
var. *zelandica* Totton, 1930: Distal chamber of nematothecae scoop-shaped; two mesial nematothecae above each stem hydrotheca.

***Halopteris constricta* Totton, 1930. Fig. 6, a-e.**

1930. *Halopteris constricta*, Totton, p. 217, Text-fig. 56, a.

A tiny species with erect stems up to 9.0 mm in height; stems arising singly from a flattened strap-like hydrorhiza bearing long, tubular nematothecae and strengthened internally by chitinous pegs; base of stem for approximately 3.0 mm lacking hydrothecae and hydrocladia, with from one to three transverse nodes, and with one or two nematothecae; basal athecate region marked off from the rest of the stem by an oblique node; stems monosiphonic, either simple or with hydrocladia arising from the main stem, one per internode, and regularly alternate, except for the basal pair of hydrocladia which are frequently opposite and on the same stem internode; hydrocladia on taller stems may have secondary branch-hydrocladia arising from the primary hydrocladia in the same manner as the primary hydrocladia arise from the stem; hydrocladia arising from the front of the stem at the side of a hydrotheca; hydrocladia carried on a well developed apophysis of the stem internode and with from two to six hydrothecae; medial and distal stem regions and hydrocladia divided into short athecate, and longer thecate internodes by nodes that are alternately transverse and oblique; distal node of thecate internode transverse, that of athecate internode steeply oblique; hydrotheca carried about the middle of the internode; athecate stem internodes 0.15 to 0.175 mm in length; thecate internodes 0.26 to 0.35 mm in length; athecate hydrocladial internodes 0.10 to 0.125 mm in length; usually two athecate hydrocladial internodes between stem apophysis and the first thecate internode of the hydrocladium, and of these, the distal athecate internode the longer; thecate internodes of hydrocladia approximately 0.21 mm in length; width at base of stem approximately 0.10 mm measured at the base of the hydrotheca, and width of hydrocladia approximately 0.08 mm; hydrothecae large, longer than broad, set at an angle of approximately 40° to the internode axis; adcauline side of hydrotheca free from the internode from  $\frac{1}{4}$  to  $\frac{1}{2}$  the adcauline length; free adcauline side and lateral walls slightly constricted just below the margin otherwise hydrotheca almost cylindrical; margin smooth entire; abcauline length of hydrotheca 0.15 to 0.20 mm; length of free adcauline wall 0.06 to 0.075 mm; nematothecae bi-thalamic, canaliculate, and scoop-shaped; nematothecae 0.09 to 0.10 mm in length and 0.05 to 0.06 mm in maximum width; largest nematothecae are the laterals flanking the hydrotheca; mesial, non-paired nematothecae with little or no free adcauline wall; each hydrothecate internode with a basal subhydrothecal mesial nematotheca and two larger nematothecae arising from a small apophysis, flanking the hydrotheca, and reaching the level of the hydrothecal margin; each athecate internode except the proximal internode of the hydrocladium, with a single mesial nematothecae; occasionally there may be an extra mesial nematotheca above the hydrotheca and also two on the athecate internodes instead of one; a single nematotheca in the axil of each hydrocladium; gonotheca—(female), gonothecae in pairs between the mesial nematotheca and the base of the stem hydrothecae and occasionally below the hydrocladial hydrothecae; obovate, with the distal end curved round so that the lateral opening faces outwards and slightly downwards; aperture with dome-shaped operculum; terminal plug of coensarc surrounding thickened intragonothecal folds below and to the side of the aperture; gonotheca carried on a pedicel of two segments; two nematothecae on the base of the gonotheca just above the distal segment of the pedicel; length of female gonotheca excluding the pedicel, 0.91 to