

*Thuiaria quadridens*, n. sp. (Pl. XXXI. figs. 2, 2a).

*Trophosome*.—Stem monosiphonic, pinnately branched, joints at irregular intervals. Hydrothecæ alternate, deep, subcylindrical, adnate to the internode for somewhat more than half their height, and then diverging at a rather high angle; margin divided into four teeth, two of which are narrow and situated at the epicauline side, and two broader at the apocauline.

*Gonosome* not present.

*Locality*.—Station 314, between Cape Virgins and the Falkland Islands; lat. 51° 35' S., long. 65° 39' W.; depth, 70 fathoms.

*Thuiaria quadridens* was dredged from the same ground with *Sertularia implexa*. It is a rather slender form of much elegance, and attains a height of nearly two inches.

*Thuiaria pharmacopola*, n. sp. (Pl. XXXI. figs. 1, 1a, 1b, 1c, 1d).

*Trophosome*.—Stem strongly fascicled below, becoming monosiphonic distally, sparingly branched, set with alternately disposed pinnæ. Hydrothecæ opposite, adnate to the hydrocaulus for nearly their entire height, cylindrical, deep, terminating in an oblique orifice whose apocauline margin forms an acute tooth.

*Gonosome*.—Gonangia borne upon the front of the pinnæ, each springing from a point in the interval between two pairs of hydrothecæ, urniform, with the roof raised as a conical projection which carries the circular even orifice on its apex, and is surrounded by about six compressed spines.

*Locality*.—Station 75, off the Azores; lat. 38° 38' 0" N., long. 28° 28' 30" W.; depth, 450 fathoms.

*Thuiaria pharmacopola* is a large and beautiful species. It grows to a height of upwards of six inches, while the pinnæ, which are rather closely set, may attain a length of more than one inch. The stem towards its base is thick and densely fascicled, but becomes monosiphonic towards its summit. The hydrothecæ composing each pair in the pinnæ are approximate, but not connate. The intervals which separate the pairs from one another are short, and joints occur here and there in the pinnæ, but at long and very uncertain intervals.

A transverse section of the stem near its base (fig. 1c) presents an areolar structure resulting from its fascicled composition, the component tubes being very thick-walled and inseparably adnate to one another. Such a section affords a good illustration of the difference between the more common forms of fasciculation and the true perisiphonic fasciculation of the Perisiphonidæ.