

Conferva zygodontis from Norfolk

Mary Ghullam & Robin Stevenson report on a curious form of *Zygodon rupestris* from Norfolk.

In January 2013 the Norfolk and Suffolk Bryology Group held a field meeting at Hunstanton Park, in north-west Norfolk. A group led by Mary found a curious *Zygodon* growing on an elder, at TF694407; unidentifiable in the field, it was collected for subsequent identification.

After an abortive attempt to find gemmae to enable a positive identification, and in order to avoid unnecessary damage to the plant, the specimen was passed to Robin who was also struck by the very distinctive appearance of the plant - one which he had never seen before. The top of the growing stem was wholly occupied by a mass of light green material, giving the whole plant something of the appearance of a member of the Asteraceae, with the leaves forming a rim of 'petals' surrounding a central mass formed, not by tube florets, but protonema. Having taken photographs the plants were searched more thoroughly and enough gemmae found to confirm its identity as *Z. rupestris*.

Photographs were circulated to Chris Preston, Mark Hill and Tom Blockeel, asking them if they had seen anything similar. They were accompanied by a guess that the protonemal growth was, perhaps, initiated by some sort of damage to the original growing tip - possibly by grazing organisms of some sort.

Chris Preston responded by suggesting that the protonemal growth resembled that occasionally found on *Orthotrichum* species and referred to as *Conferva orthotrichi*. Googling '*Conferva*' revealed it to be a genus of filamentous algae; Googling '*Conferva orthotrichi*' produced

a reference (Dillwyn 1809), in which it is stated that: '*C. orthotrichi* grows in very thick entangled tufts on the upper branches of mosses, having its roots in the leaves and stem, which it often so completely covers as to leave scarcely any part of them visible. It is of a rich chestnut colour, dull and without glofs (sic) when dry.' This sounds remarkably like rhizoidal growth.

Pursuing the matter further, Hooker & Taylor (1827) refer to *Conferva orthotrichi* growing on the leaves of *Orthotrichum lyellii* - i.e. what we would now recognise as filamentous gemmae.

From this it appears clear that, at that early date, confusion existed between algae, bryophyte gemmae, and (possibly) rhizoids and protonema. If, for historical reasons, we should wish to preserve this usage then, Tom Blockeel assures us, the correct nomenclature in this instance should be *Conferva zygodontis*; however, we doubt whether algologists would thank us for attempting to preserve the term!

Both Mark and Tom were prepared to accept that this unusual growth of protonema was possibly initiated by some form of damage. Janice Glime, to whom the photograph was also submitted, was inclined to put the blame on isopods. Richard Fisk has subsequently told us that he has observed a similar phenomenon on *Zygodon conoideus*.

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References

- Dillwyn, L.W. (1809)** *British Confervae*. London: W. Phillips
- Hooker, W.J. & Taylor, T. (1827)** *Muscologia Britannica*. London: Longman, Reese, Orme, Brown & Green.