

= Ornatifilum =

Ornatifilum (Latin ornatus + filum , Ornamented filament) is an artificial form genus , which is used to categorise any small , branched filaments with external ornamentation .

It has been applied to microfossils of Devonian age with fungal affinities , though these taxa have since been recognized as an early growth form of Tortotubus .

= = Background = =

The form genus Ornatifilum was erected by Burgess and Edwards in 1991 to describe tubular fossils retrieved by acid maceration from the late Silurian . It was originally intended as a form genus , to facilitate stratigraphy and environmental reconstruction ; the fossils do not display enough features to classify them confidently , even at a kingdom level .

The organisms comprise tubes of around 10 µm diameter , with an ornamented , granular surface texture . These fossils were compared to late Silurian (Ludlow epoch) fossils retrieved from the Burgsvik beds by Sherwood @-@ Pike and Gray , and the genus was used when similar fossils were recovered from the Scottish island of Kerrera by Charles Wellman ten years later . Similar , unornamented filaments are known from the USA . However , these latter fossils have now been assigned to Tortotubus .

= = O. granatum = =

The type species of the genus consists of flattened filaments ? perhaps an artefact resulting from post @-@ burial pressure . Their branching is typically at obtuse angles ; the irregularly sized grana , which ornament their surfaces , are concentrated at branching points . They are often found as individuals , but sometimes group together into " wefts " , as Wellman has termed them . The filaments are septate , with the septa looking like " pinch points " where the tube is slightly constricted ? like a twisted balloon . No sign of perforation was visible in the septa ; perforate spores are only found in red algae and fungi , but their absence does not preclude their presence in one of these groups : indeed the perforations are difficult to see or image . There are no other diagnostic features of this species that allow classification in any group . Surface ornamentation is a common convergent feature , found for example in liverwort rhizoids and some fungi , so does not help in classification . The specimens recovered are most common in near @-@ shore environments ; however , they are never abundant .

= = O. lornensis = =

O. lornensis is a junior synonym of Tortotubus protuberans . It has a more complex appearance than O. granatum . For a start , its surface ornament ? which covers most of the surface uniformly ? takes an array of forms , with " grana , coni , spinae verrucae and occasionally plia " present . Further , side @-@ branches and the flask @-@ shaped protuberances occasionally protrude from the tubes , on which the ornament is larger (2 @.@ 5 µm rather than ~ 1 µm) . Such branching typically occurs in pairs across the main thread .

= = Timeline = =