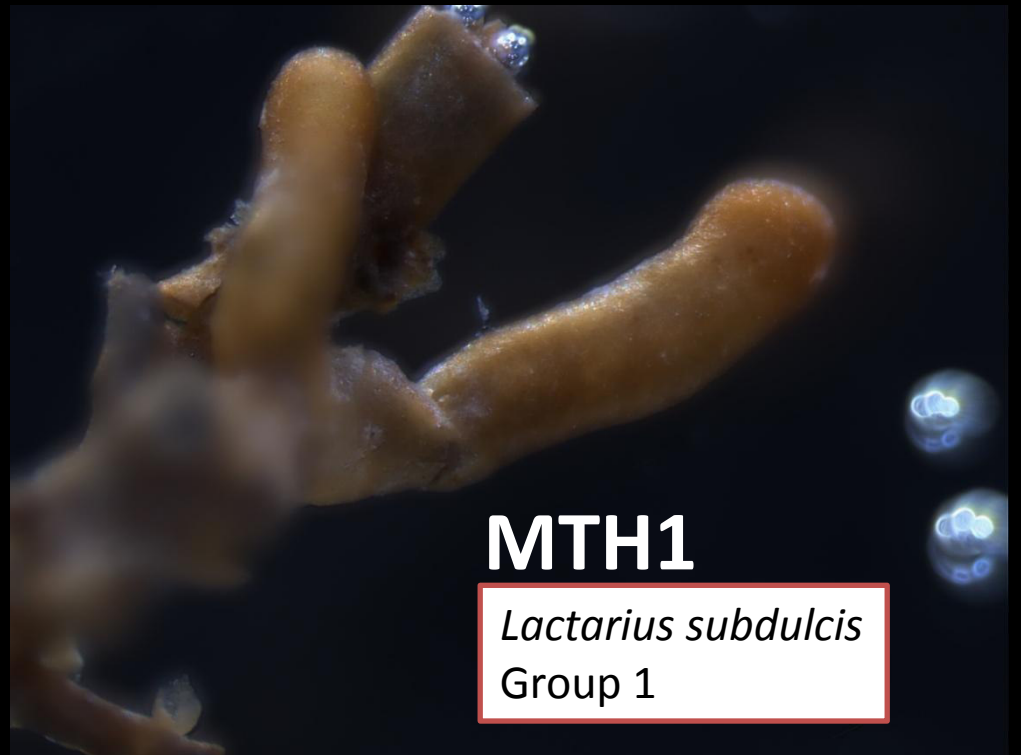


Supplementary Figure F4: Pictures of Morphotpyes found within the root Trenching experiment; caused by a severe computer problem, pictures are not true to scale. In addition a description sheet for EM is attached, with scematic schemes from and based on Agerer 1987-2001.

Pictures were partly taken by Dr. Rodica Pena, Daryl Hughes, Markus Steckel and Otilia Mazilu

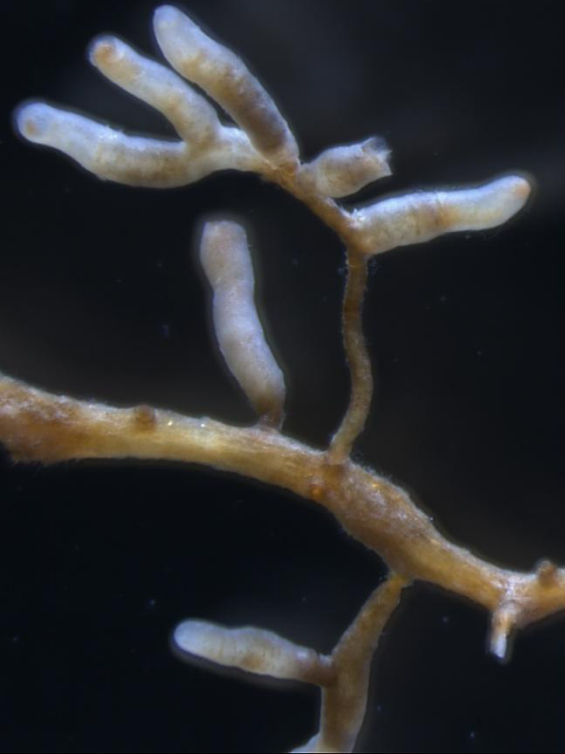
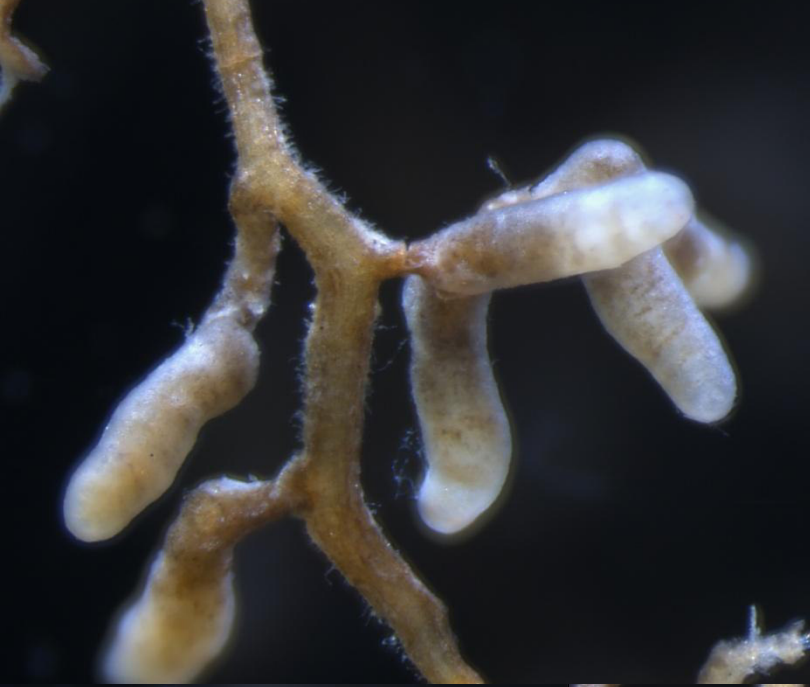


**MTH1**

*Lactarius subdulcis*  
Group 1

# MTH2

*Inocybe* sp. 1  
Group 2



# MTH3

*Clavulina* sp.  
Group 3



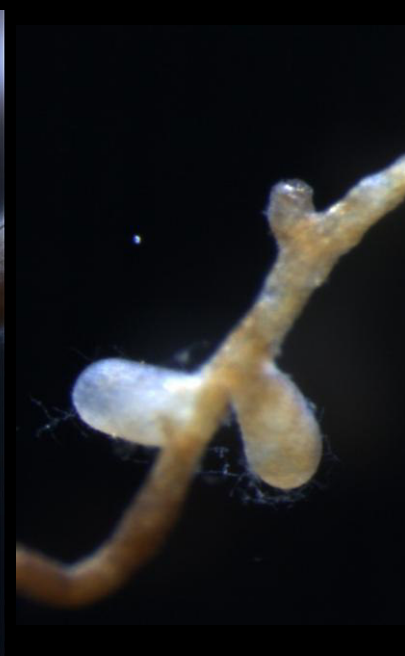
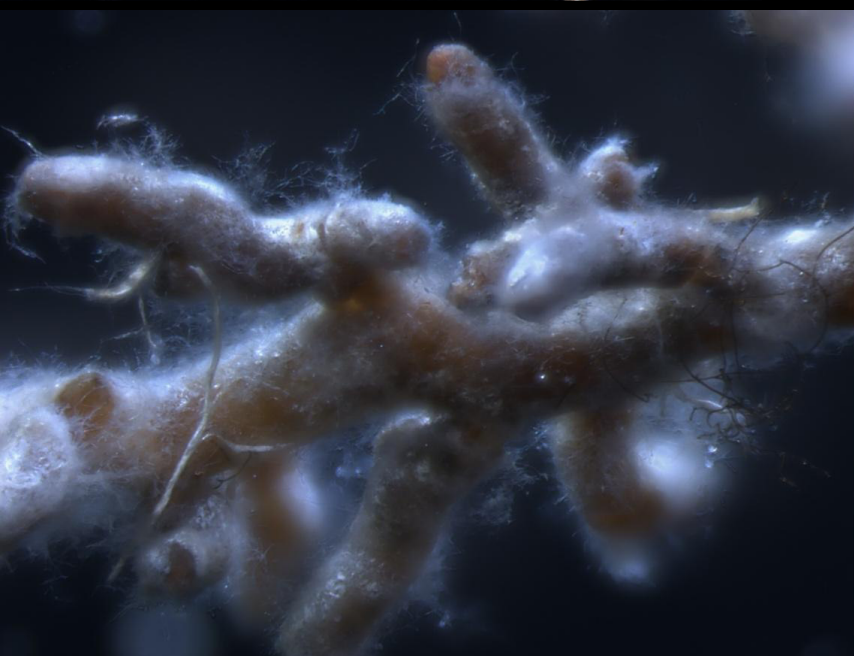
**MTH4**

*Inocybe maculata*



**MTH5**

*Tomentella cinerascens*



# MTH6

*Amanita* sp. (*vaginata* or *mortanii*)  
Group 5



MTH7

*Inocybe* sp. 2







**MTH8**

*Sebacina* sp. 2



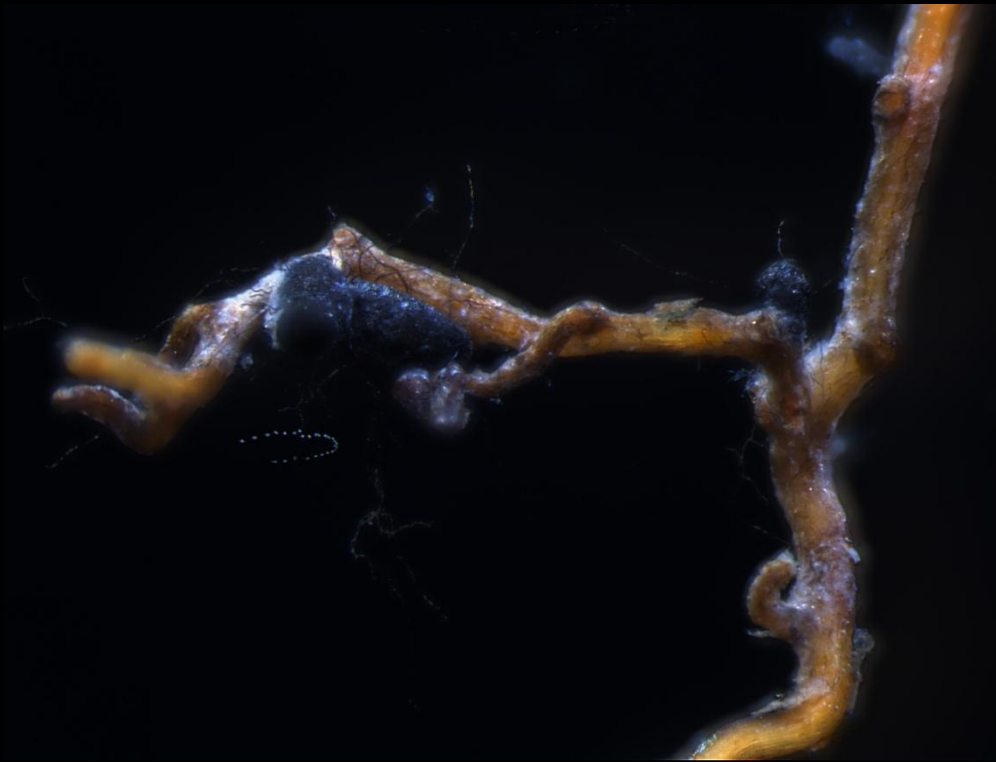
**MTH9**

*Amanita* sp.  
Group 5



# MTH10

*Cenococcum geophilum*



**MTH11**

*Tomentella* sp. 1



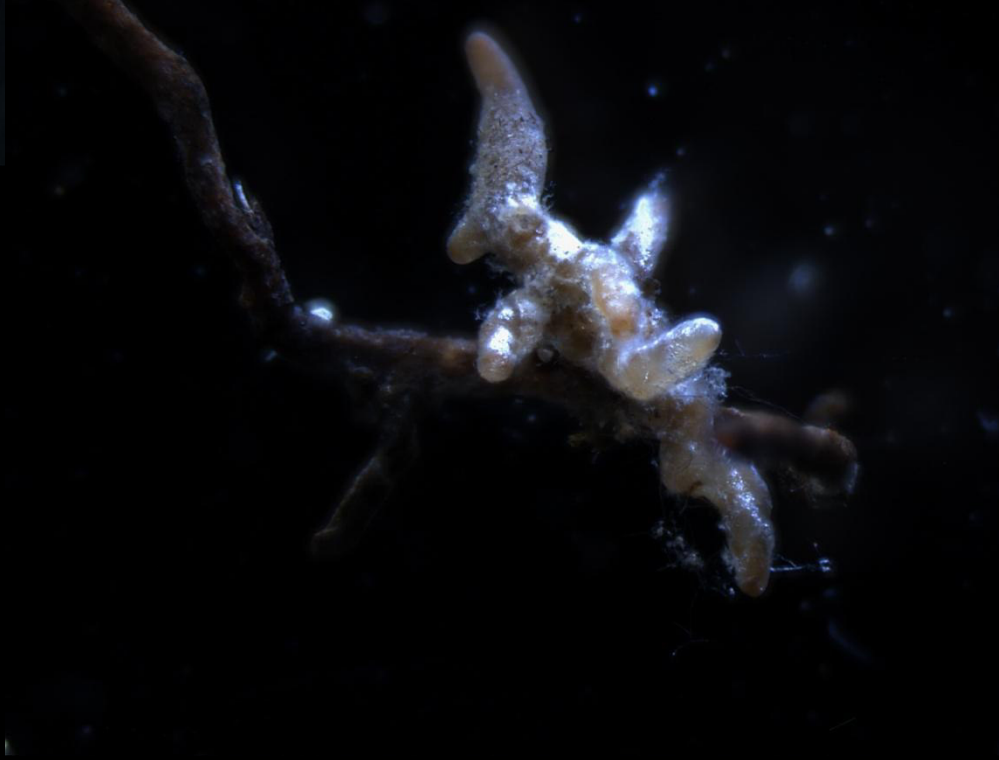
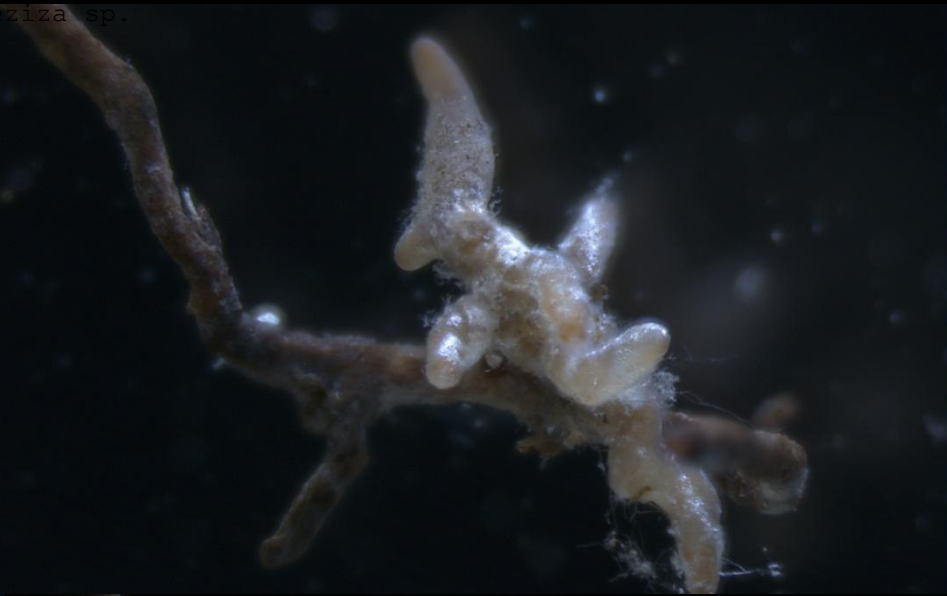


**MTH12**

Uncultured ectomycorrhiza (Pezizaceae) 1

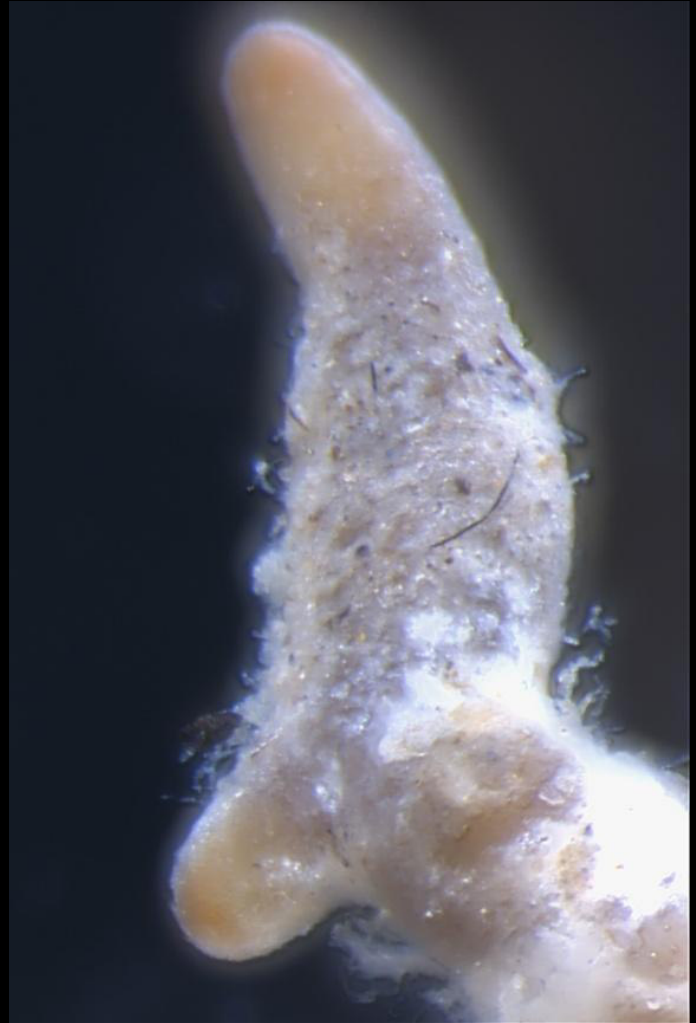


Peziza sp.



# MTH13

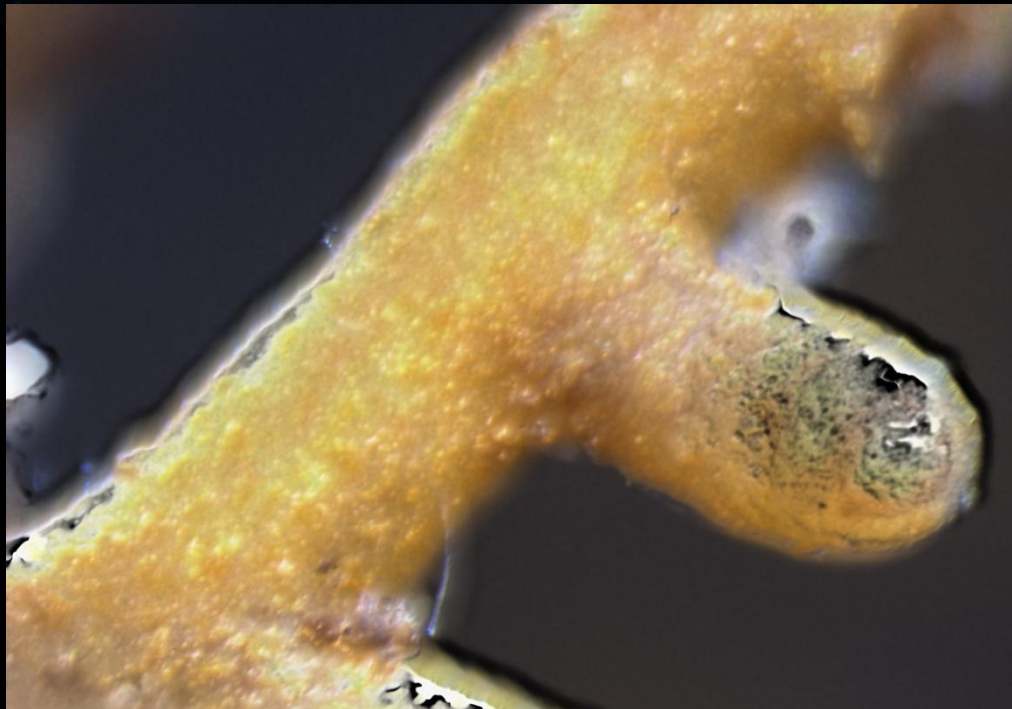
Uncultured ectomycorrhiza (Pezizaceae)c1





**MTH14**

*Russula ochroleuca*  
Group 9





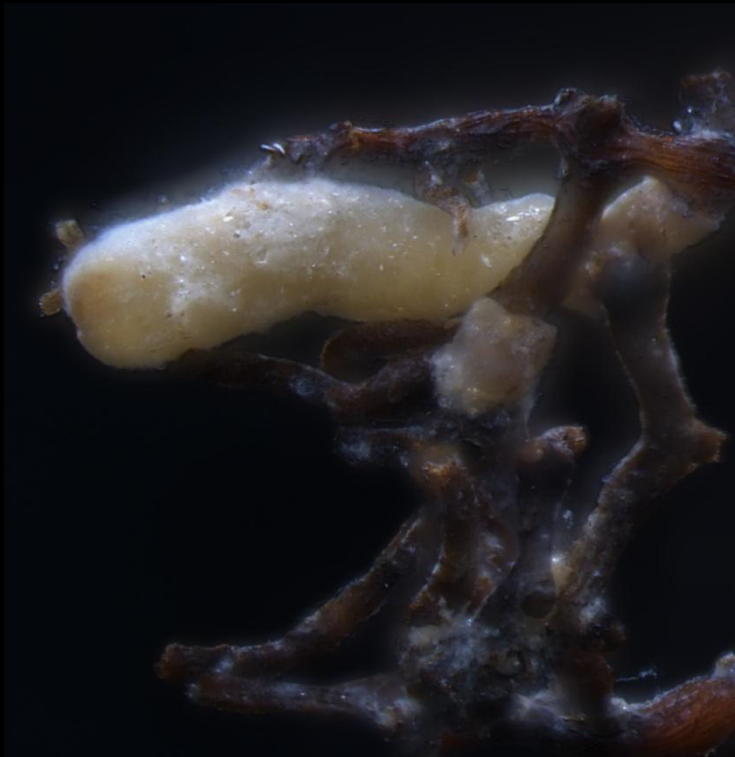
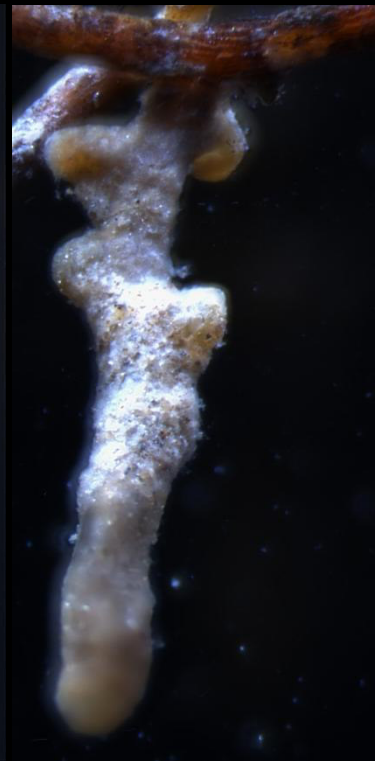
**MTH15**

*Tricholoma sciodes*



**MTH16**

*Amanita* sp.  
Group 5



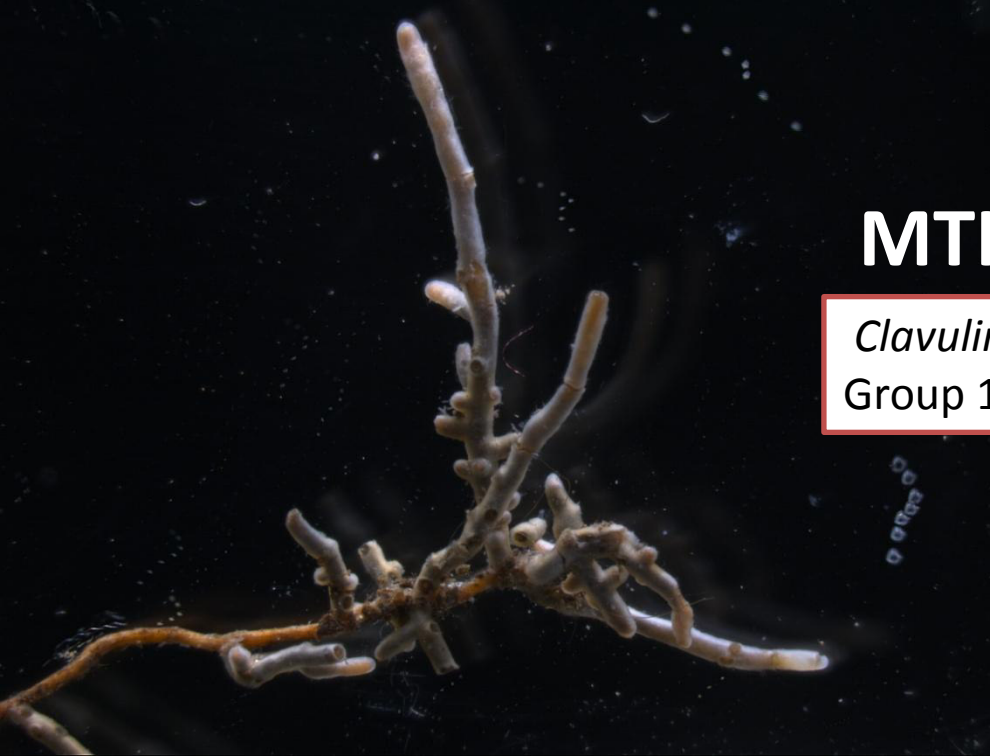


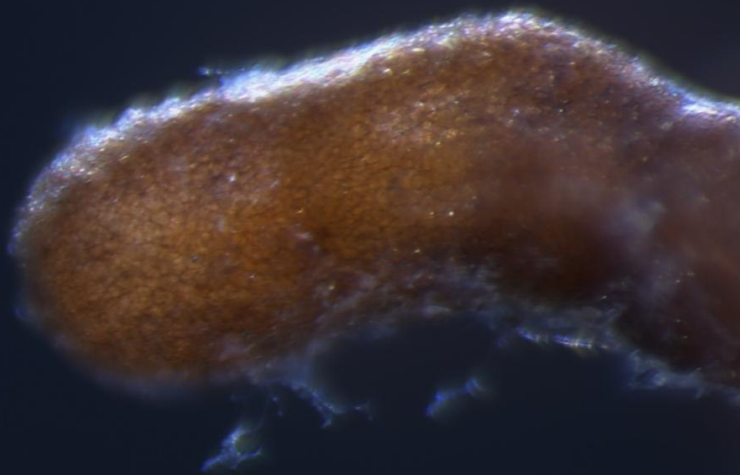
**MTH17**

*Xerocomus pruinatus*  
Group 10

**MTH18**

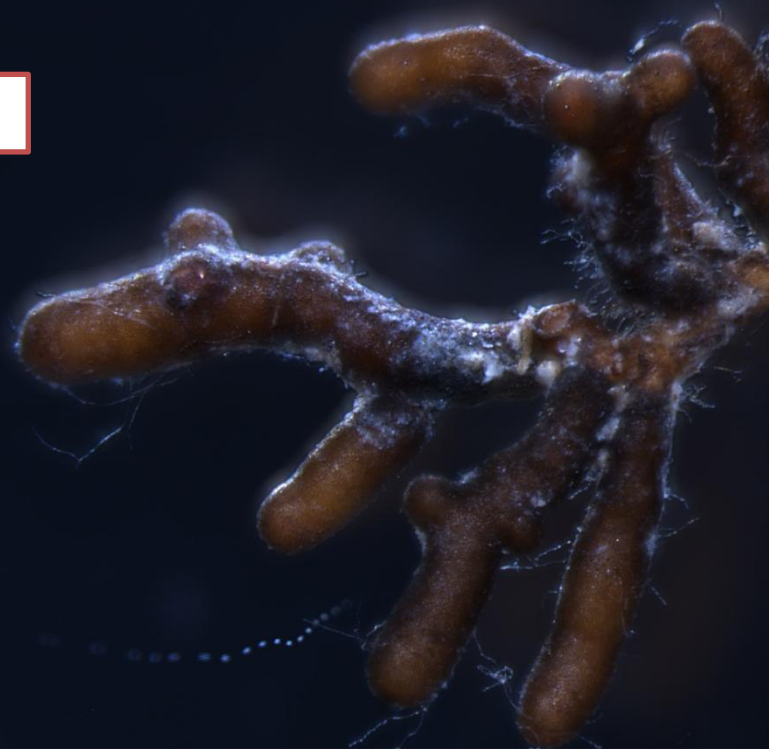
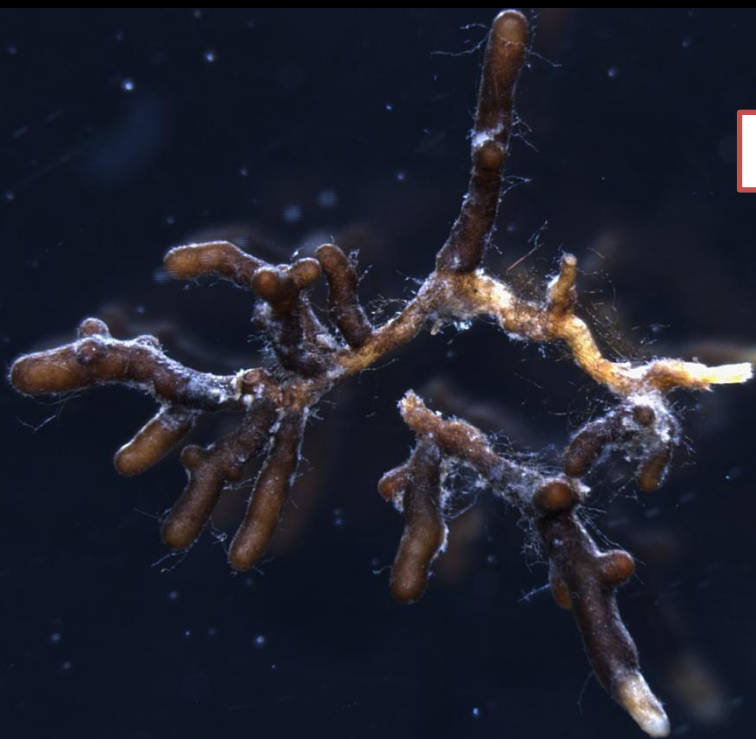
*Clavulina* sp. 1  
Group 13





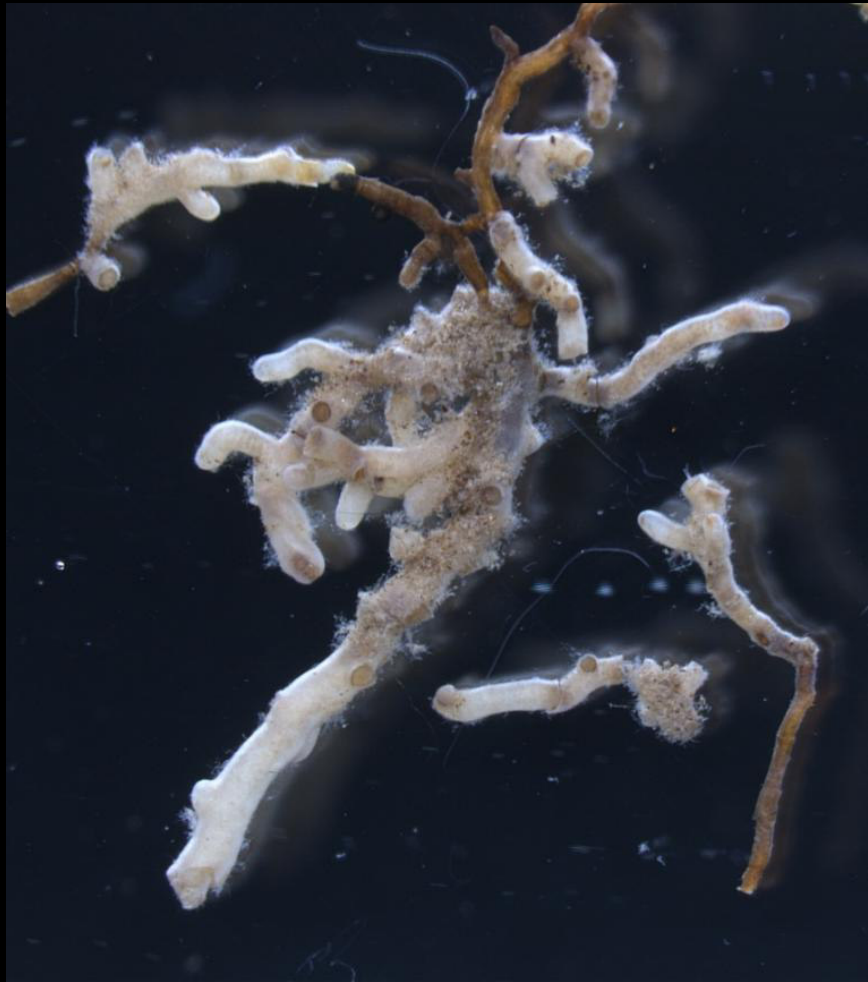
**MTH19**

*Genea hispidula*



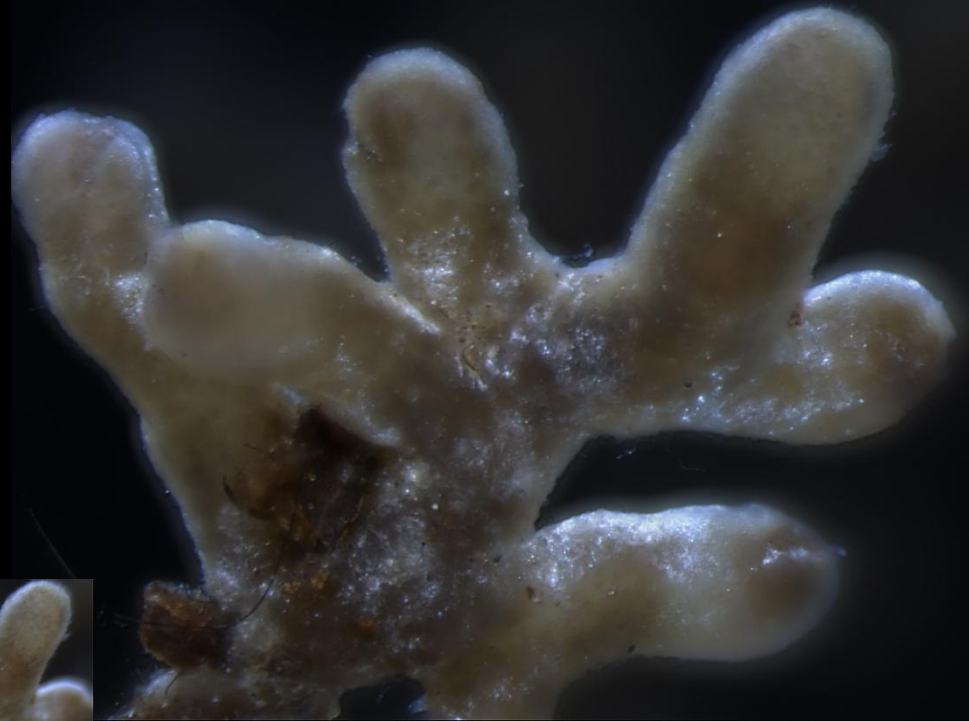
# MTH20

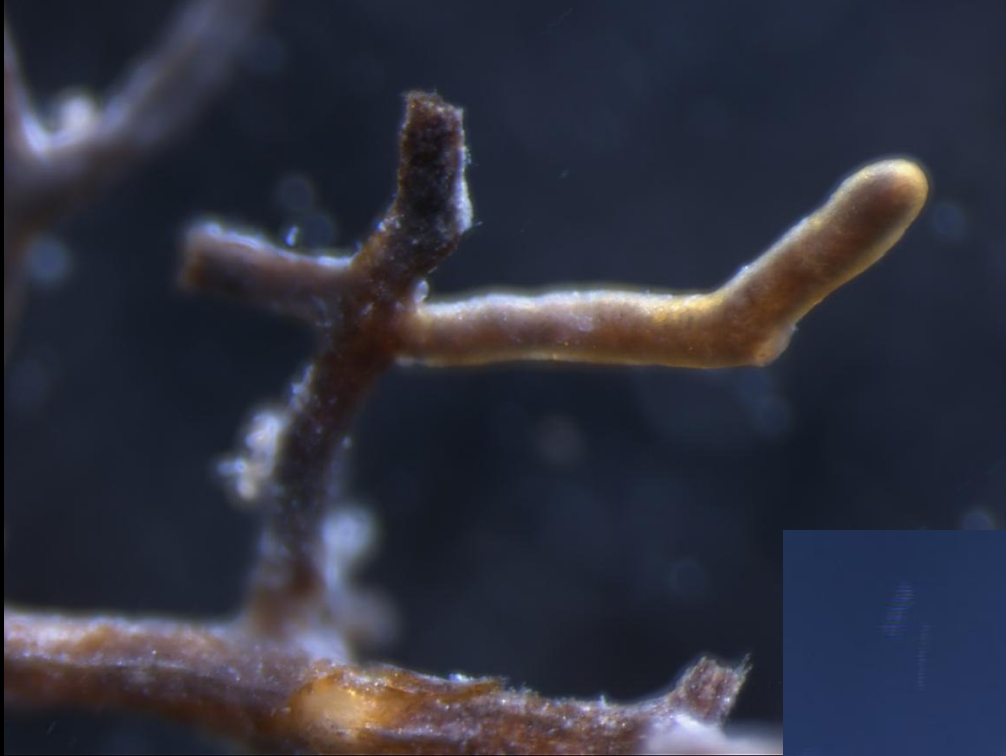
*Clavulina cristata* 2  
Group 4



# MTH21

*Xerocomus pruinatus*  
Group 10





**MTH22**

*Tomentella* sp. (cf. *coerulea*)



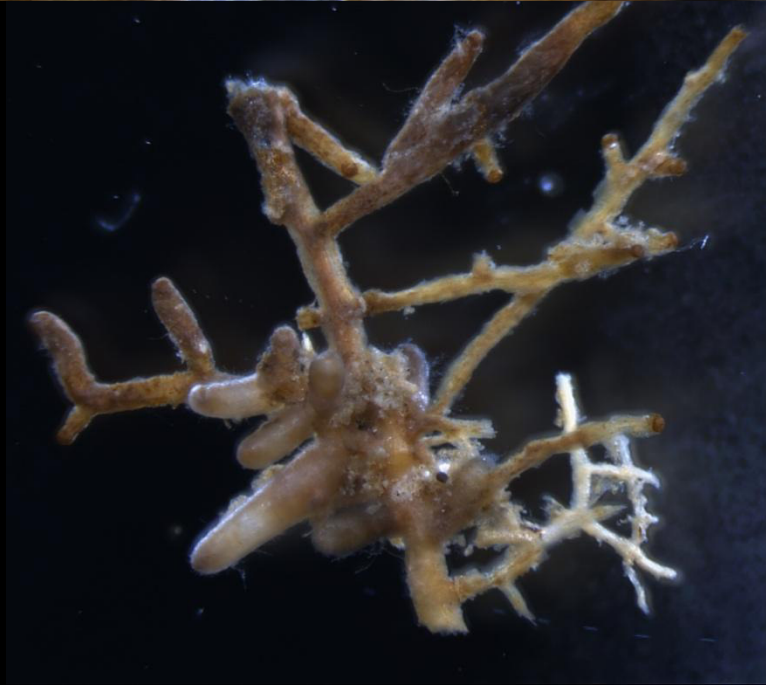
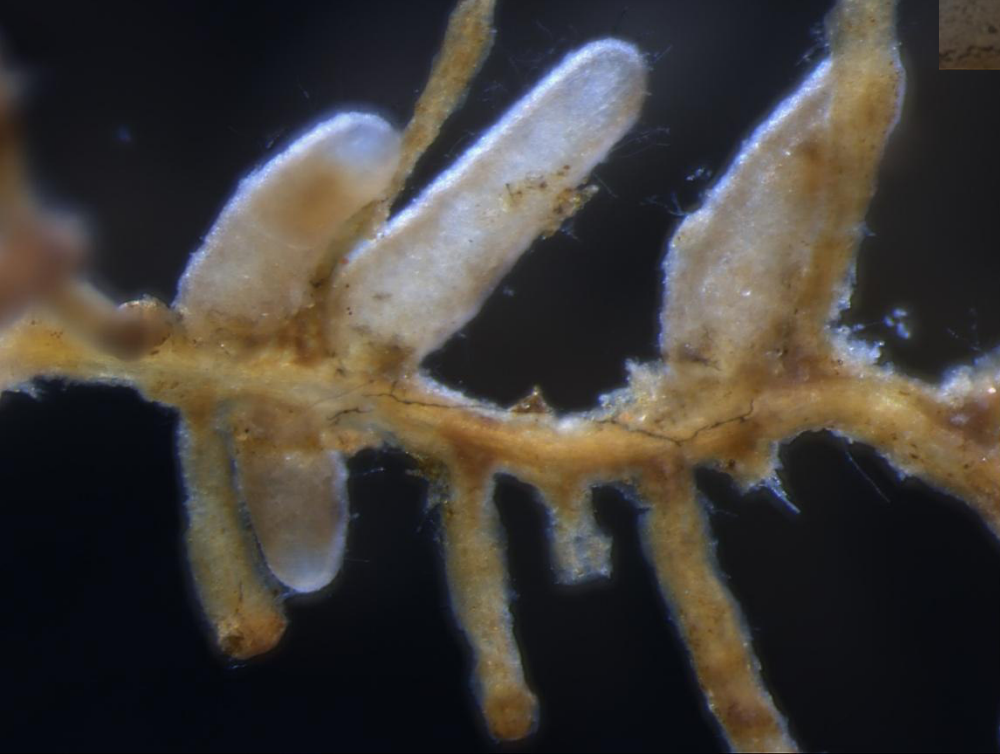
# MTH23

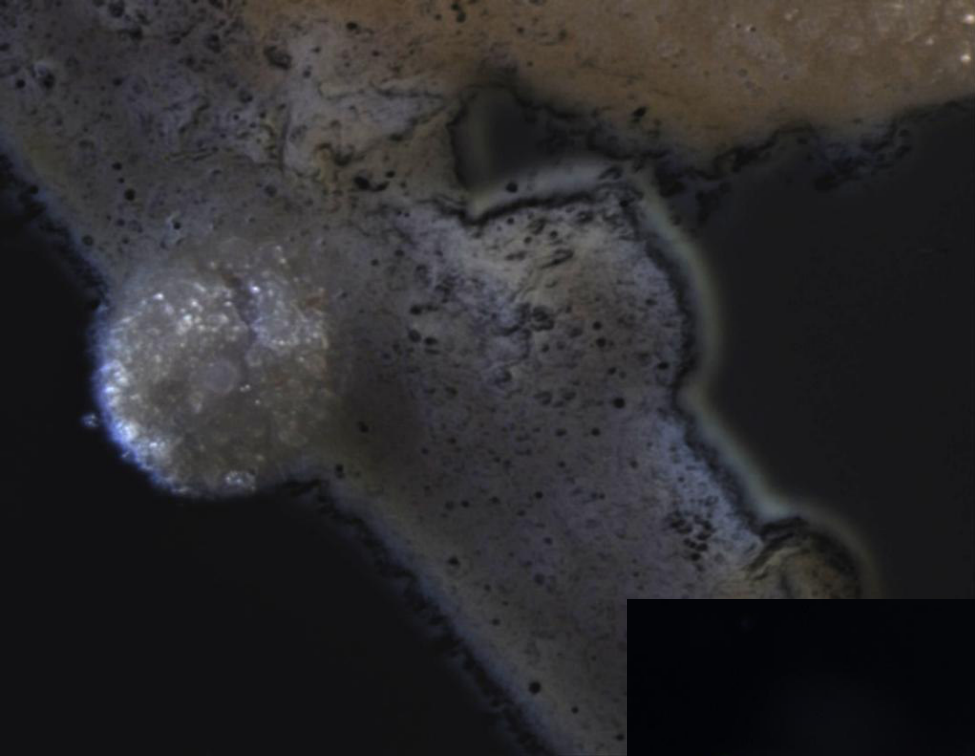
No picture and sequence available – only 24 tips in one sample



MTH24

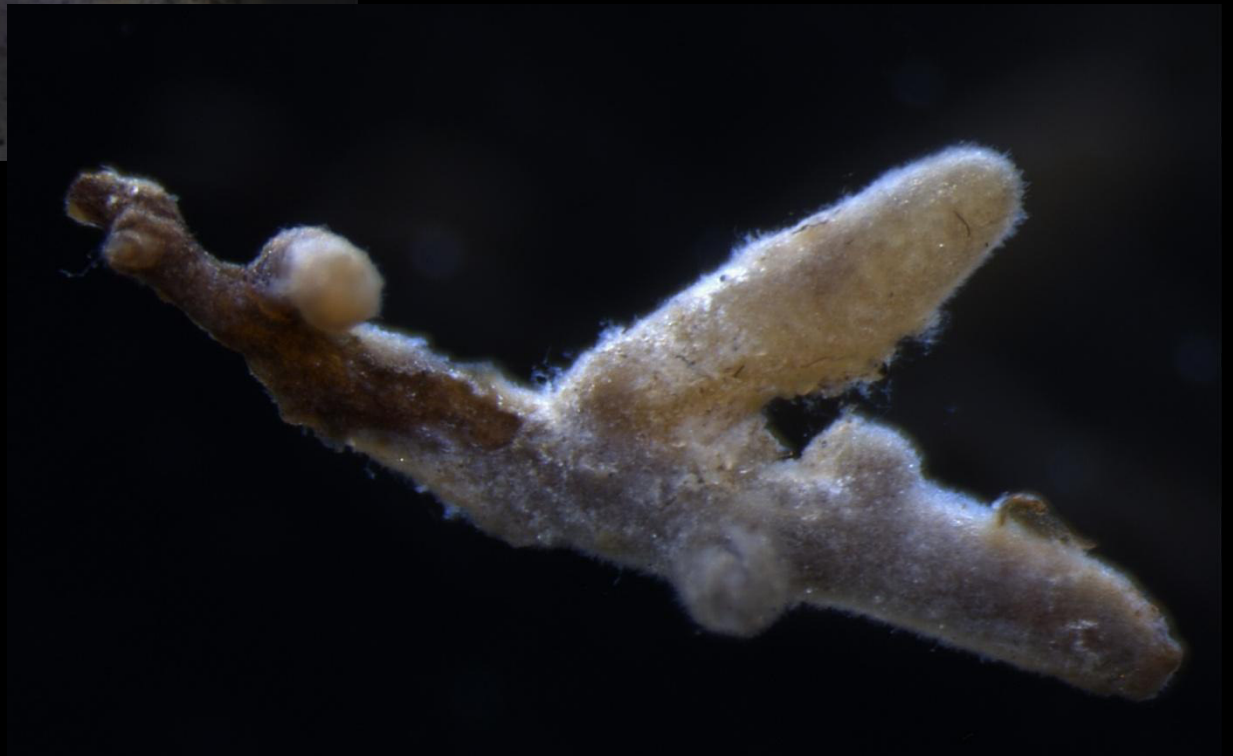
Thelephoraceae





**MTH25**

*Russula acrifolia*





**MTH26**





**MTH27**

Thelephoraceae

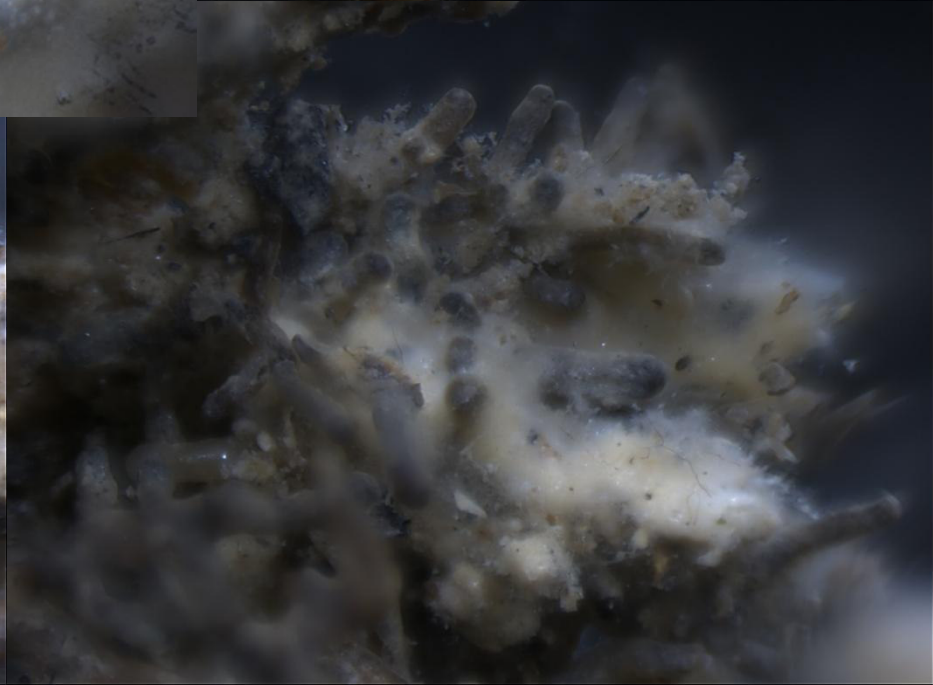
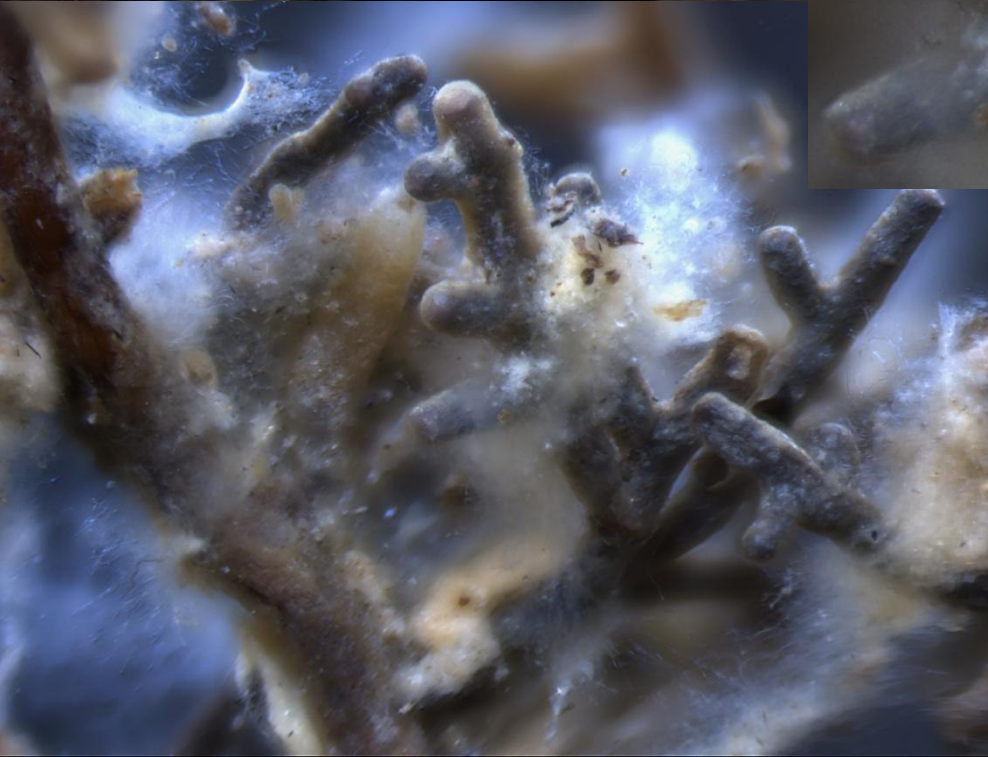
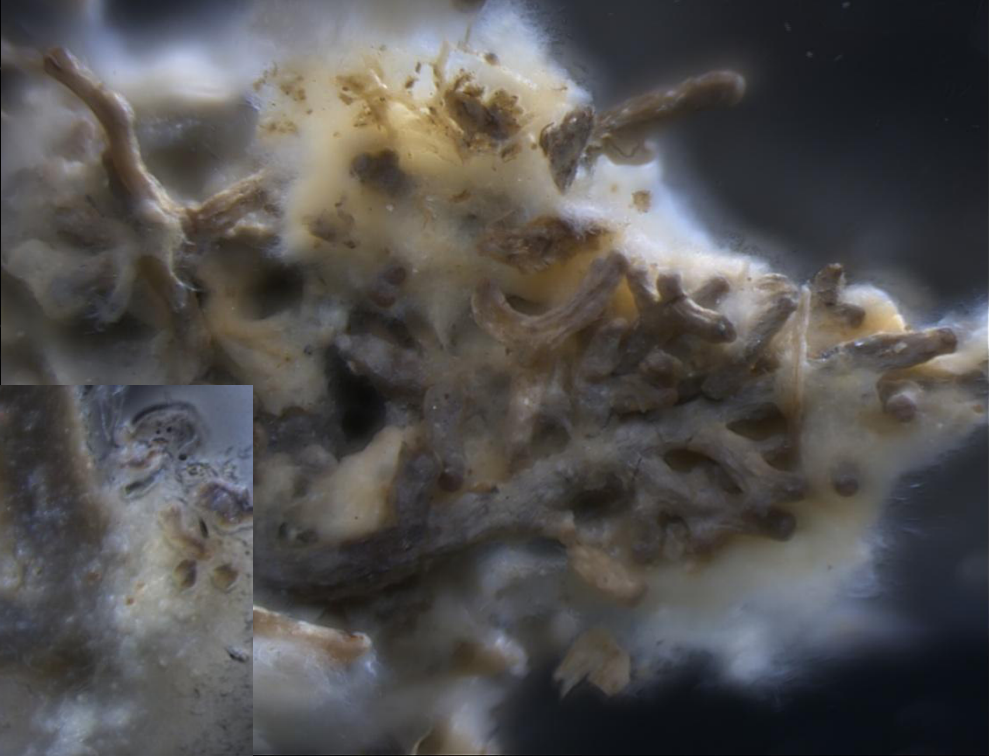


MTH28

*Tarzetta* sp.  
Group 6



**MTH29**





**MTH30**

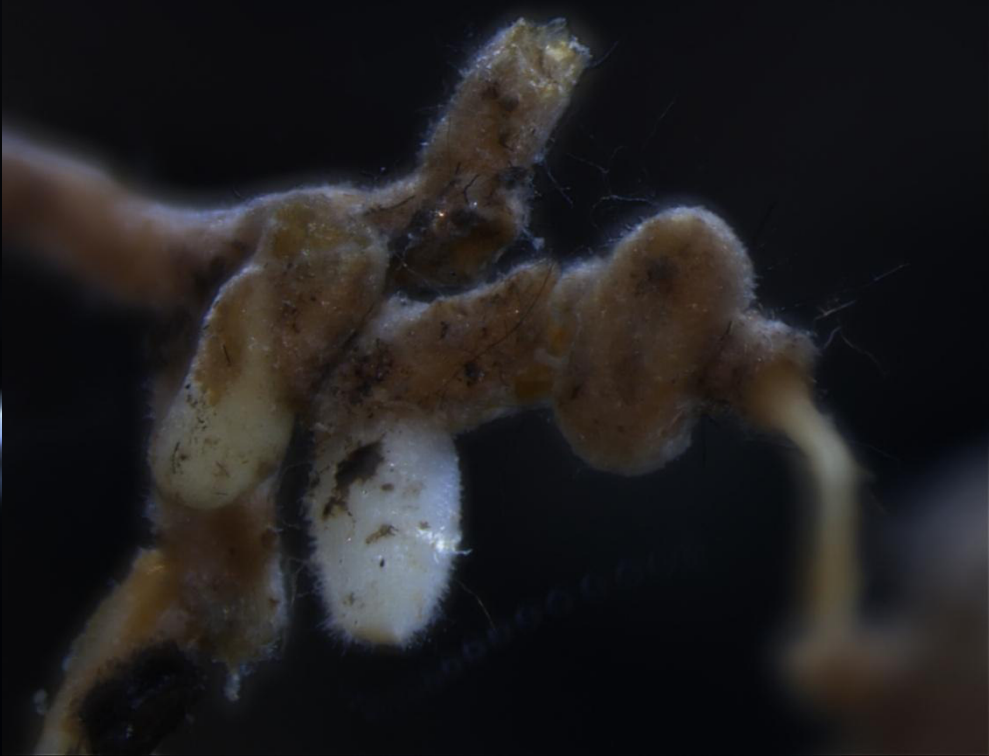
Uncultured ectomycorrhiza 2

A composite image showing five different views of a biological specimen, likely a larva or small insect. The specimen is light-colored, possibly yellowish or cream, and has a segmented, somewhat branched appearance. The views include: a top-left view showing a branched structure; a top-right view showing a single, curved, segmented part; a central view showing a close-up of a segment with fine hairs; a bottom-left view showing a more complex, branched structure; and a bottom-right view showing another branched structure with a small circular feature. The background is dark, making the specimen stand out.

**MTH31**

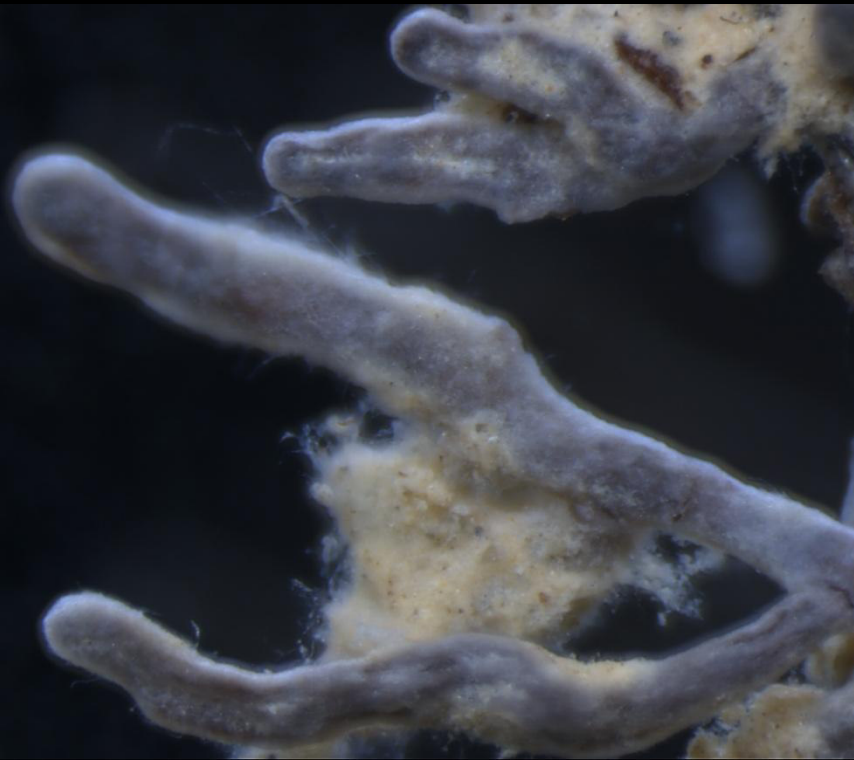
Tarzetta sp.  
Group 6





**MTH33**

*Sebacina* sp. 3



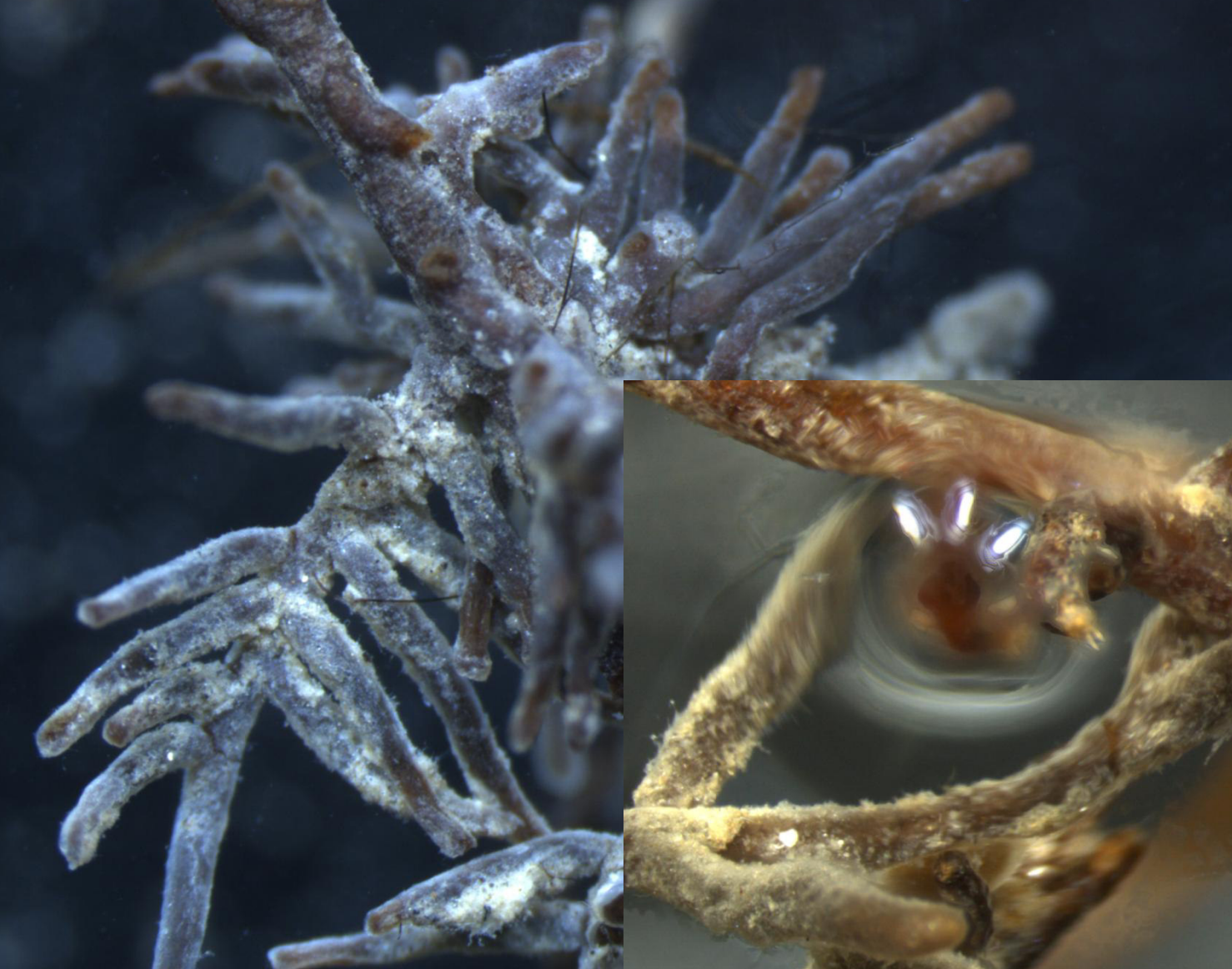
**MTH34**

*Tomentella* sp. 2



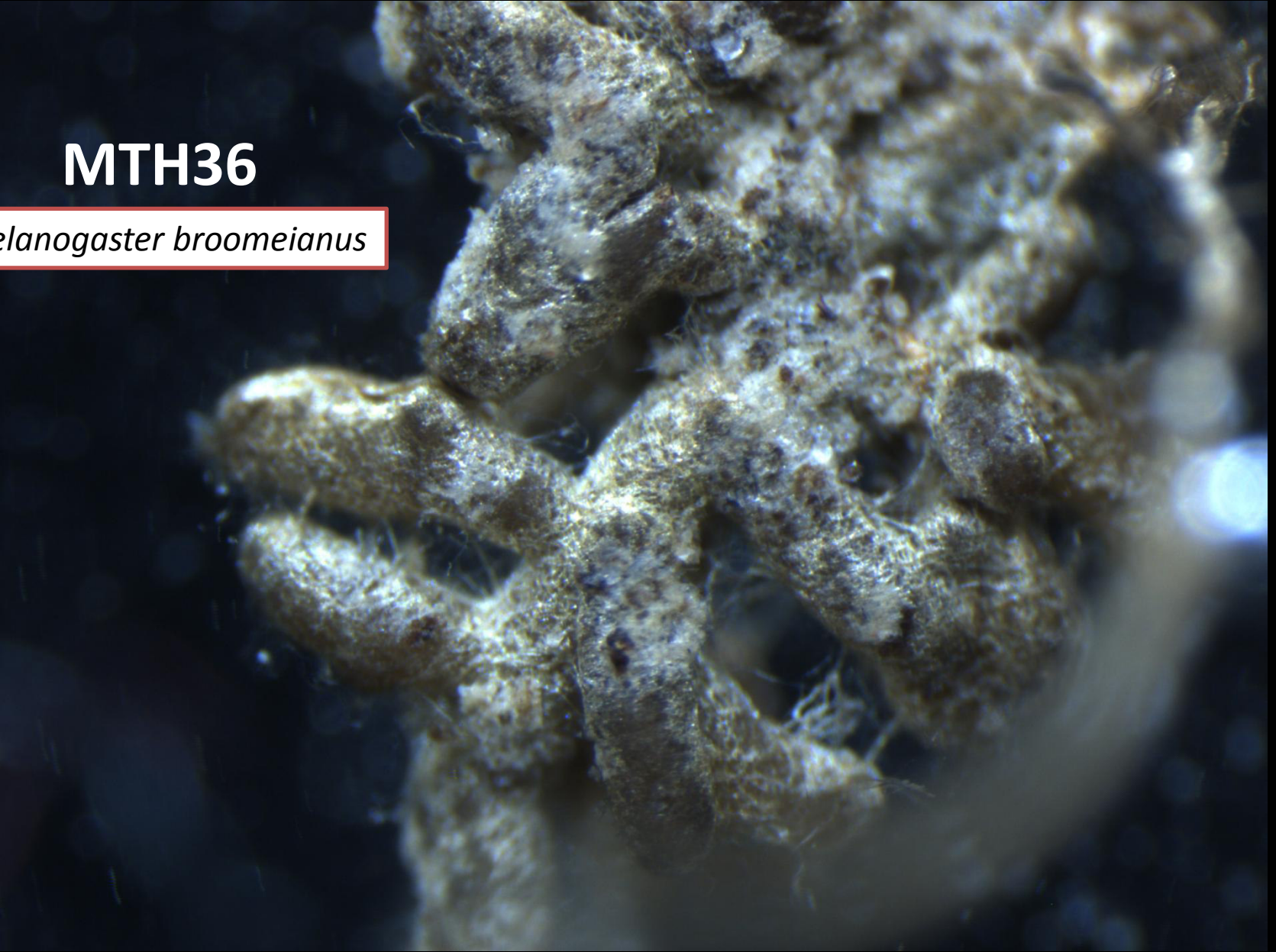
**MTH35**

*Inocybe* sp.1

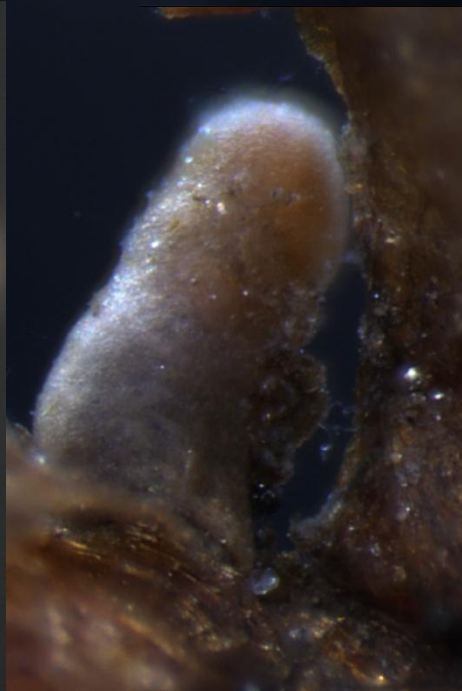


**MTH36**

*Melanogaster broomeianus*



**MTH37**



**MTH38**

*Russula vinosobrunnea*

# MTH39

Uncultured ectomycorrhiza  
(Leotiomycetes)





**MTH40**

Helotiales sp.1

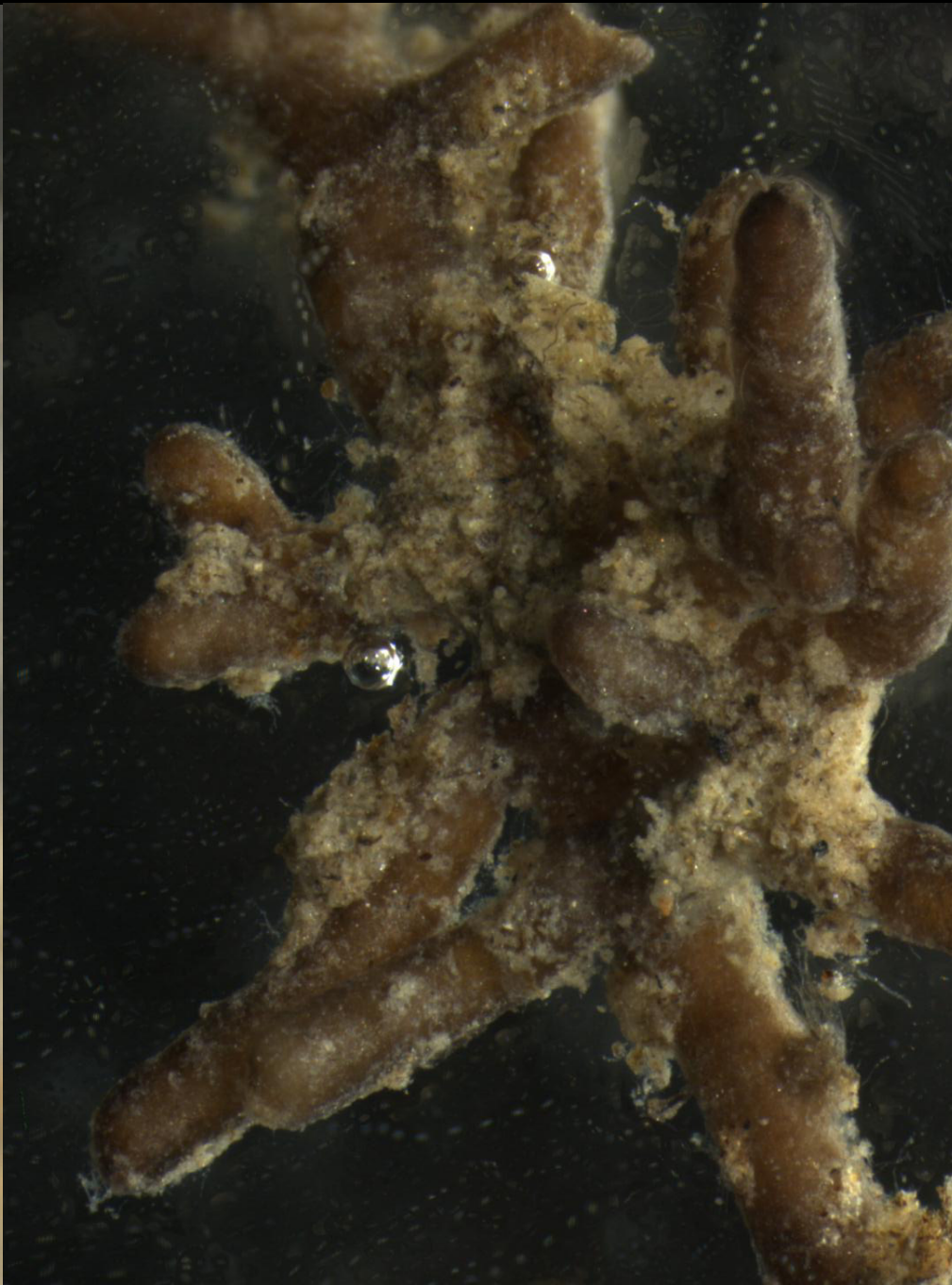


**MTH41**



MTH42

*Tomentella castanea*





**MTH43**

*Tarzetta* sp. Group 6



**MTH44**



**MTH45**

*Tomentella coerulea*



# MTH46

*Sebacina* sp. 1



# MTH47

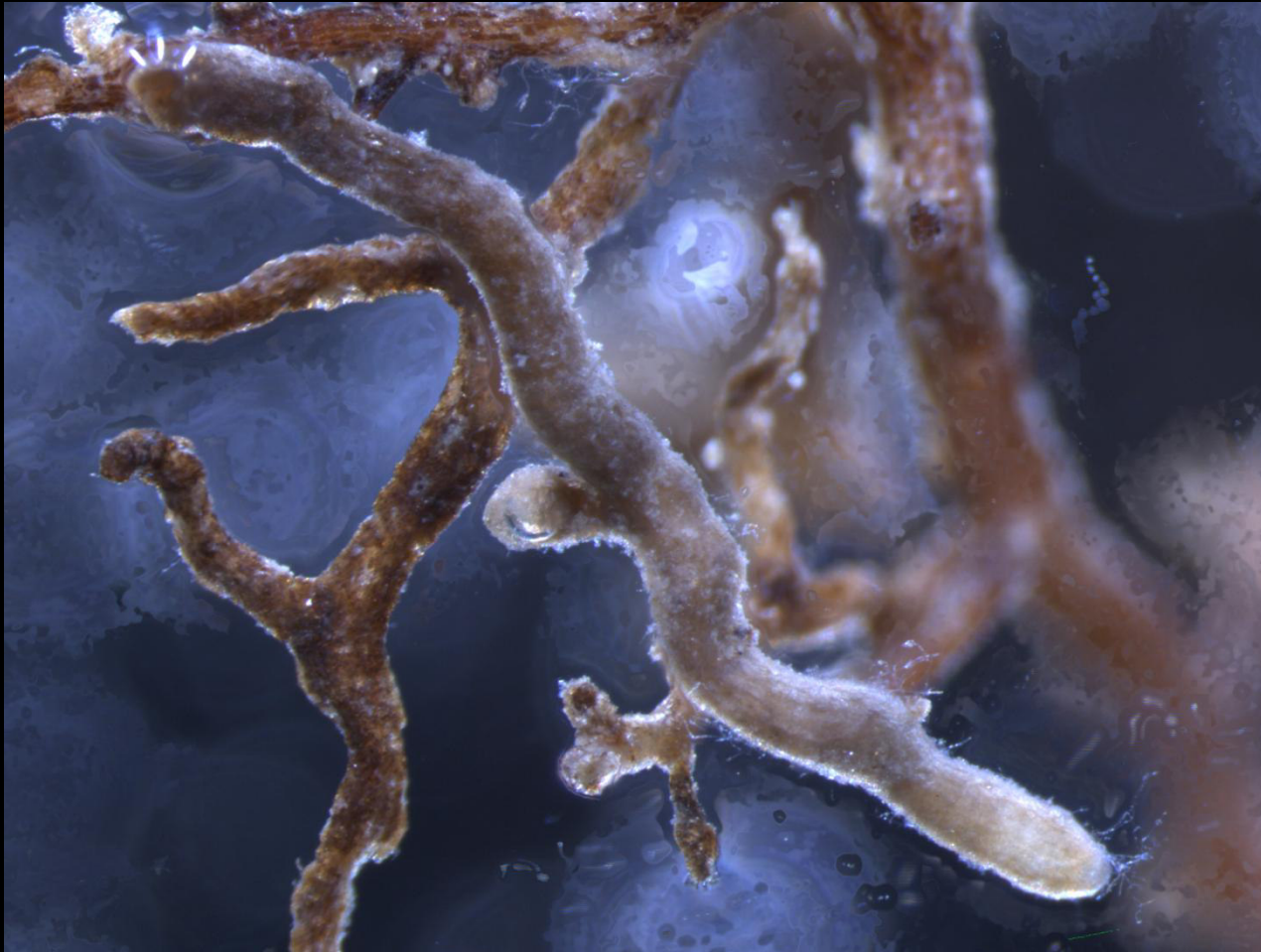
*Laccaria amethystina* 1





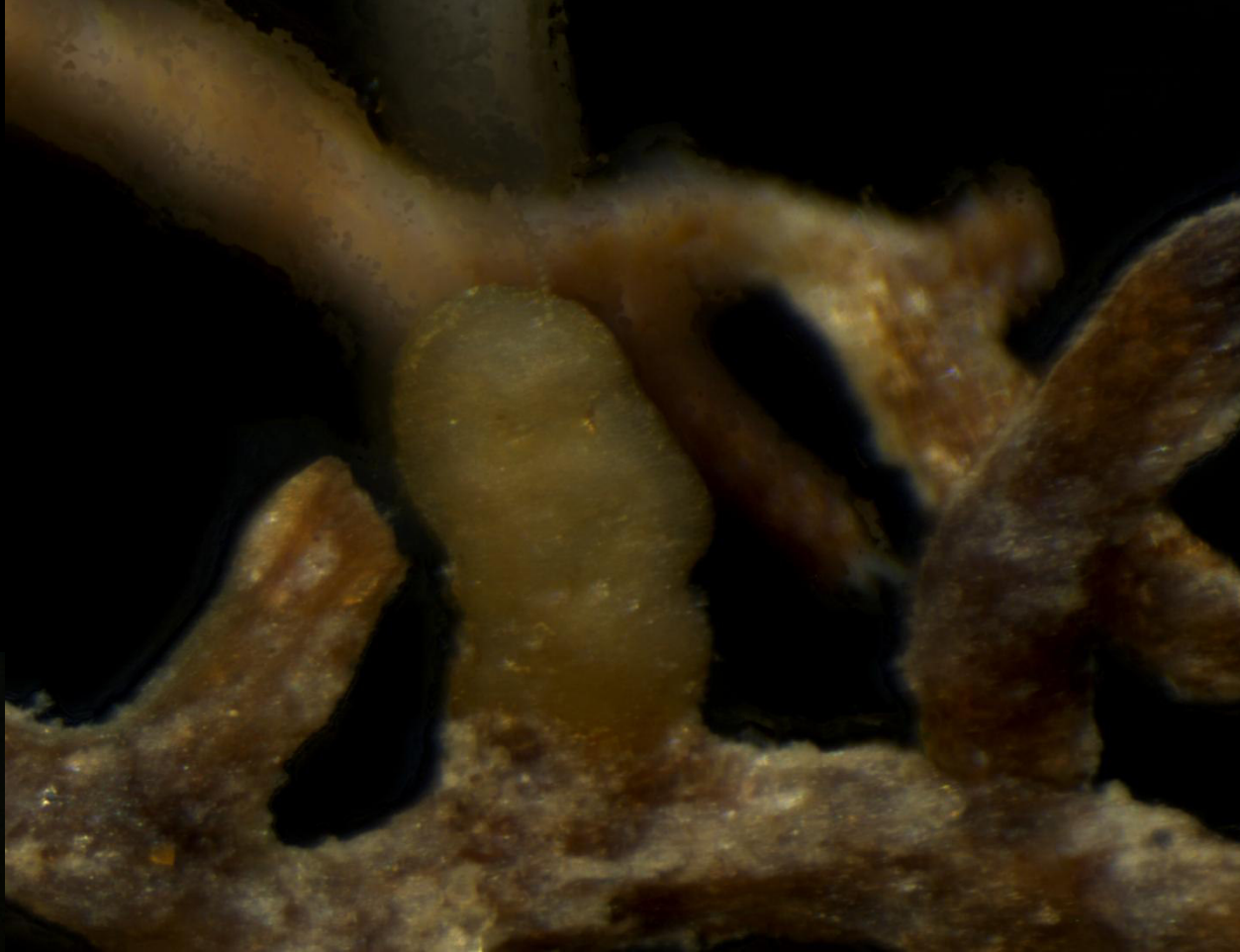
**MTH48**

*Tomentella* sp. 3



**MTH49**

*Russula ochroleuca*  
Group 9



**MTH50**

*Inocybe* sp. 3



# MTH51

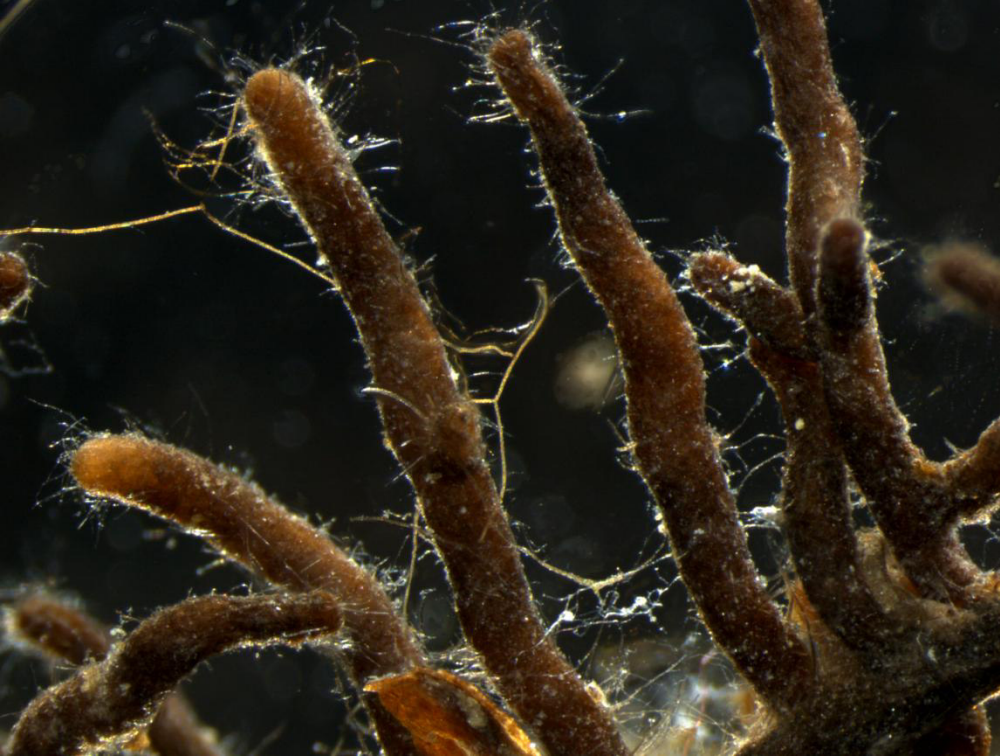
*Xerocomus chrysenteron*  
Group 11



**MTH52**

Helotiales sp. 2





**MTH53**

*Tomentella ramosissima*



**MTH54**

*Inocybe hirtella*



# MTH55

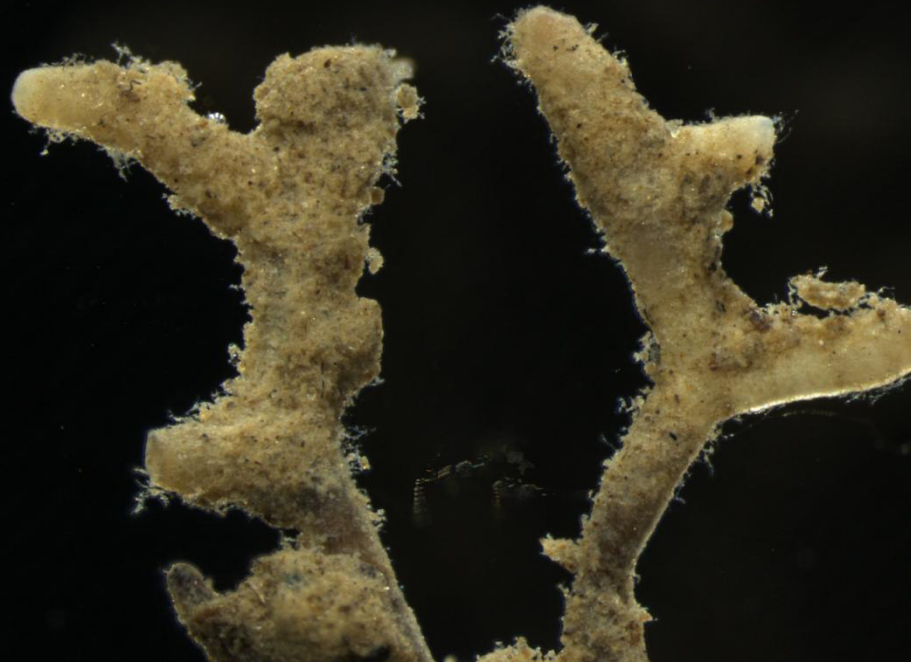
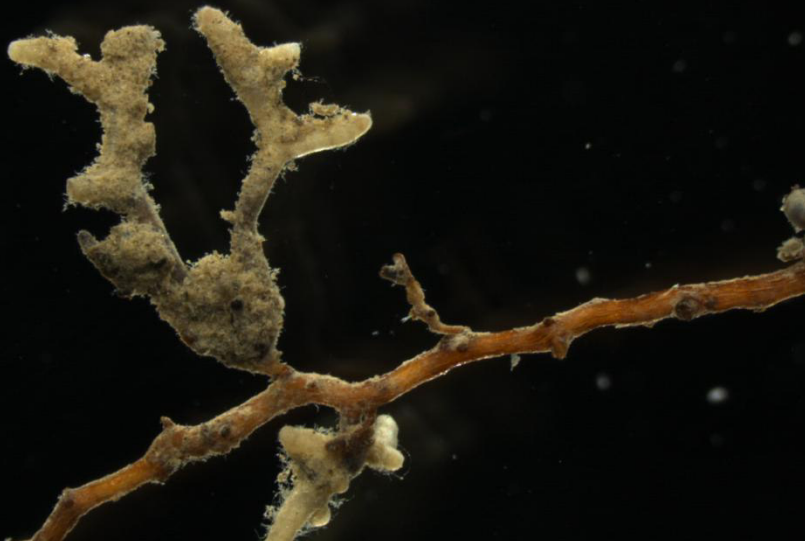
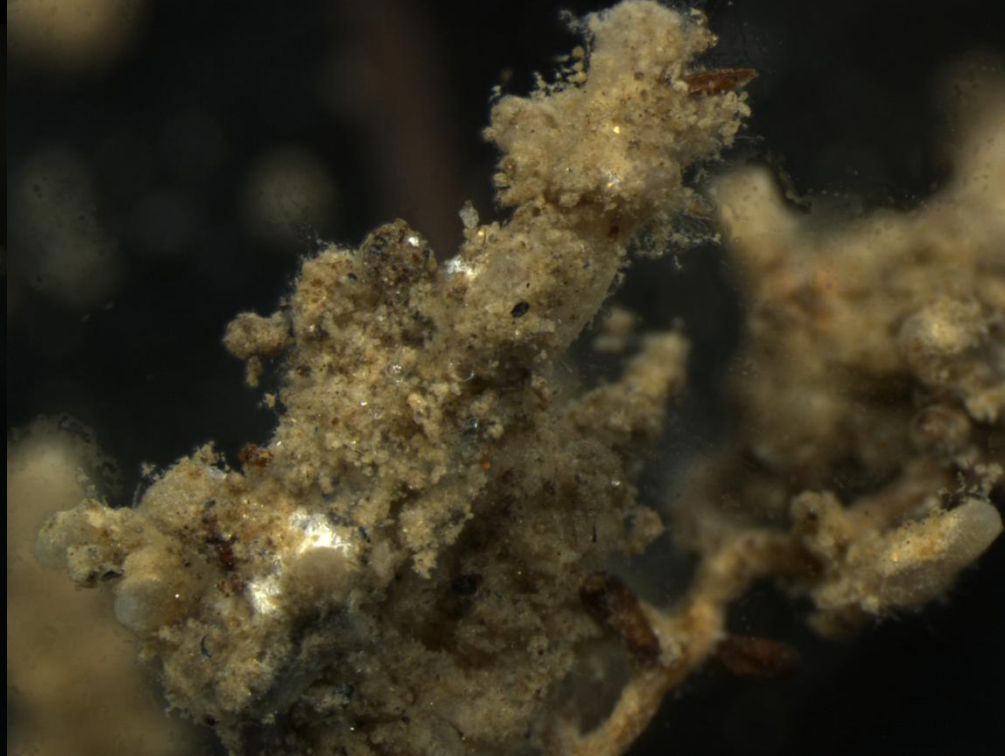
*Clavulina cristata* 1  
Group 14





MTH56

*Clavulina cristata*  
Group 15

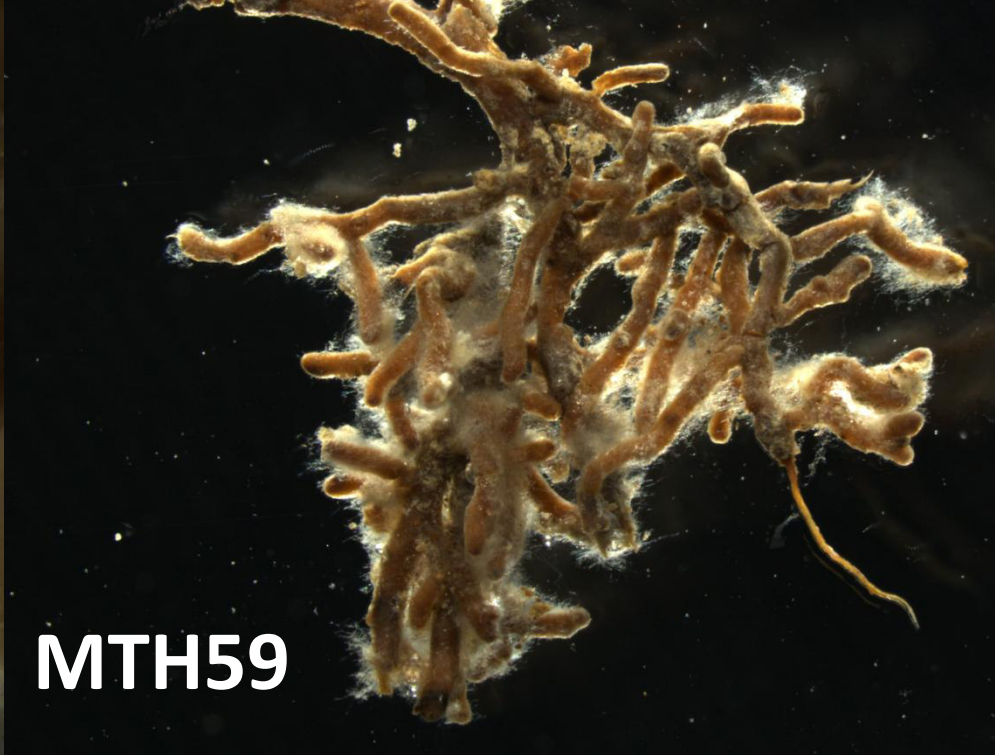
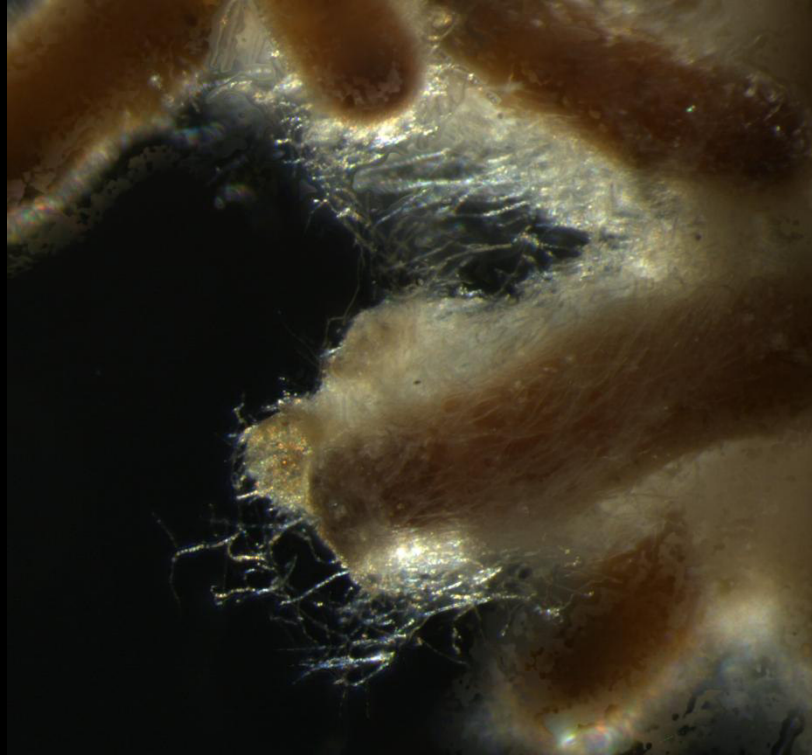


**MTH57**

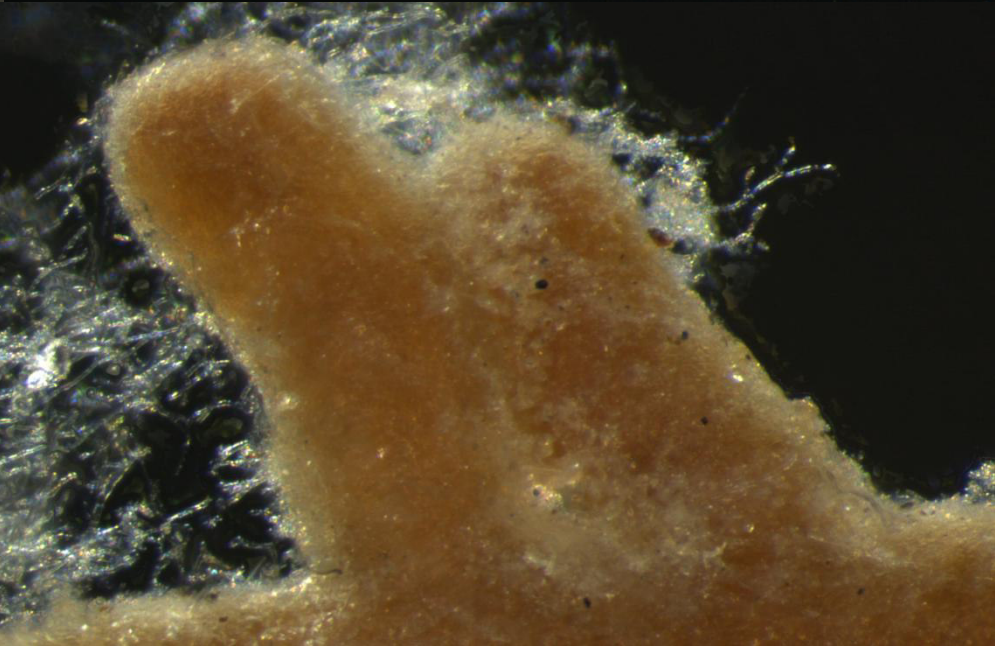




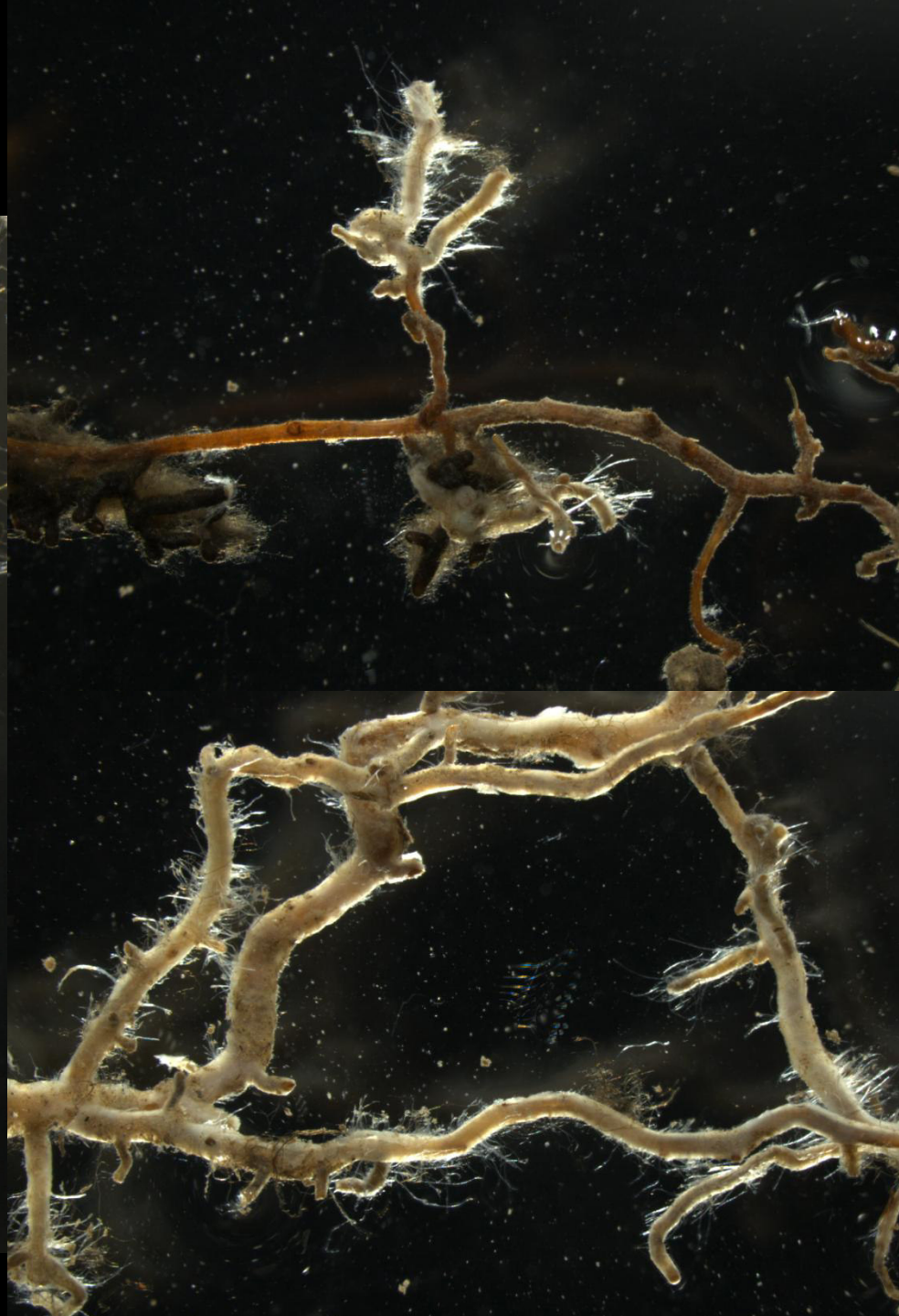
**MTH58**



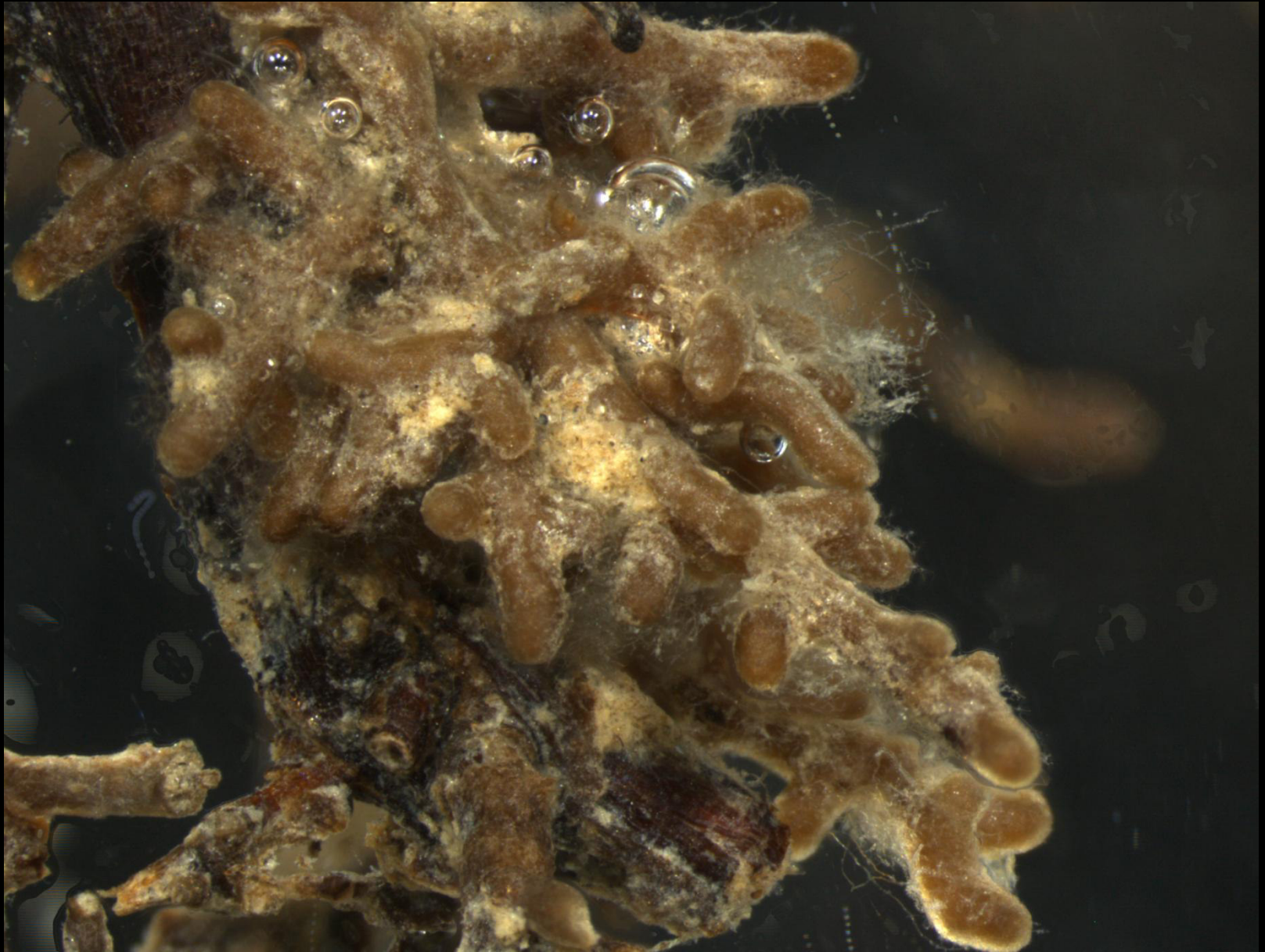
**MTH59**



MTH60



**MTH61**



**MTH62**

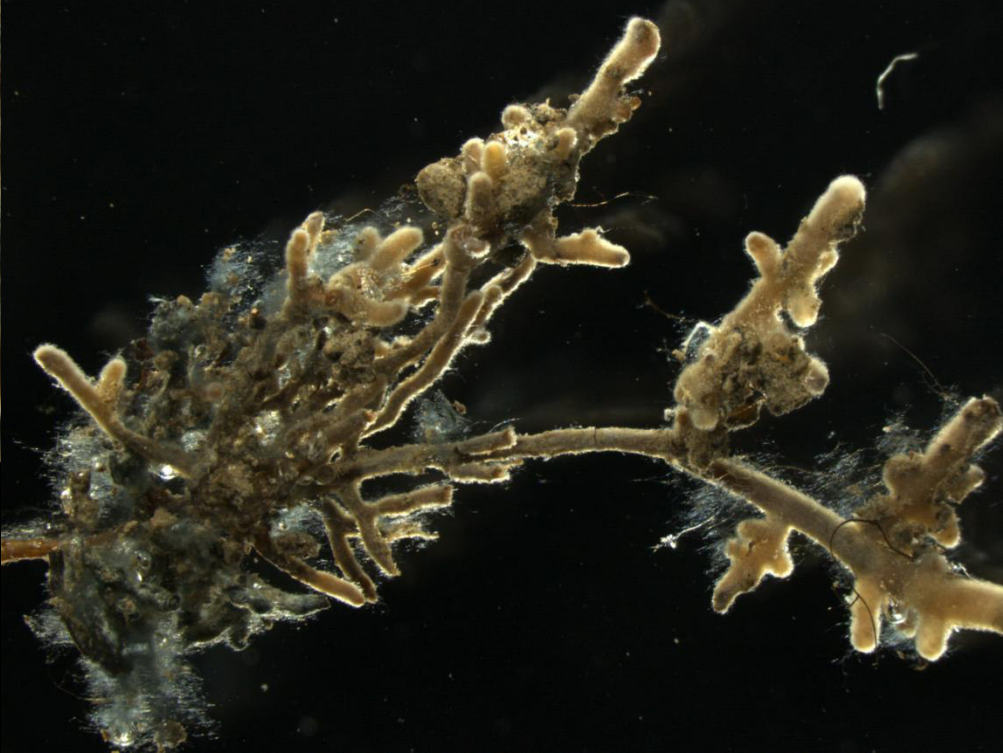
*Laccaria amethystina* 2



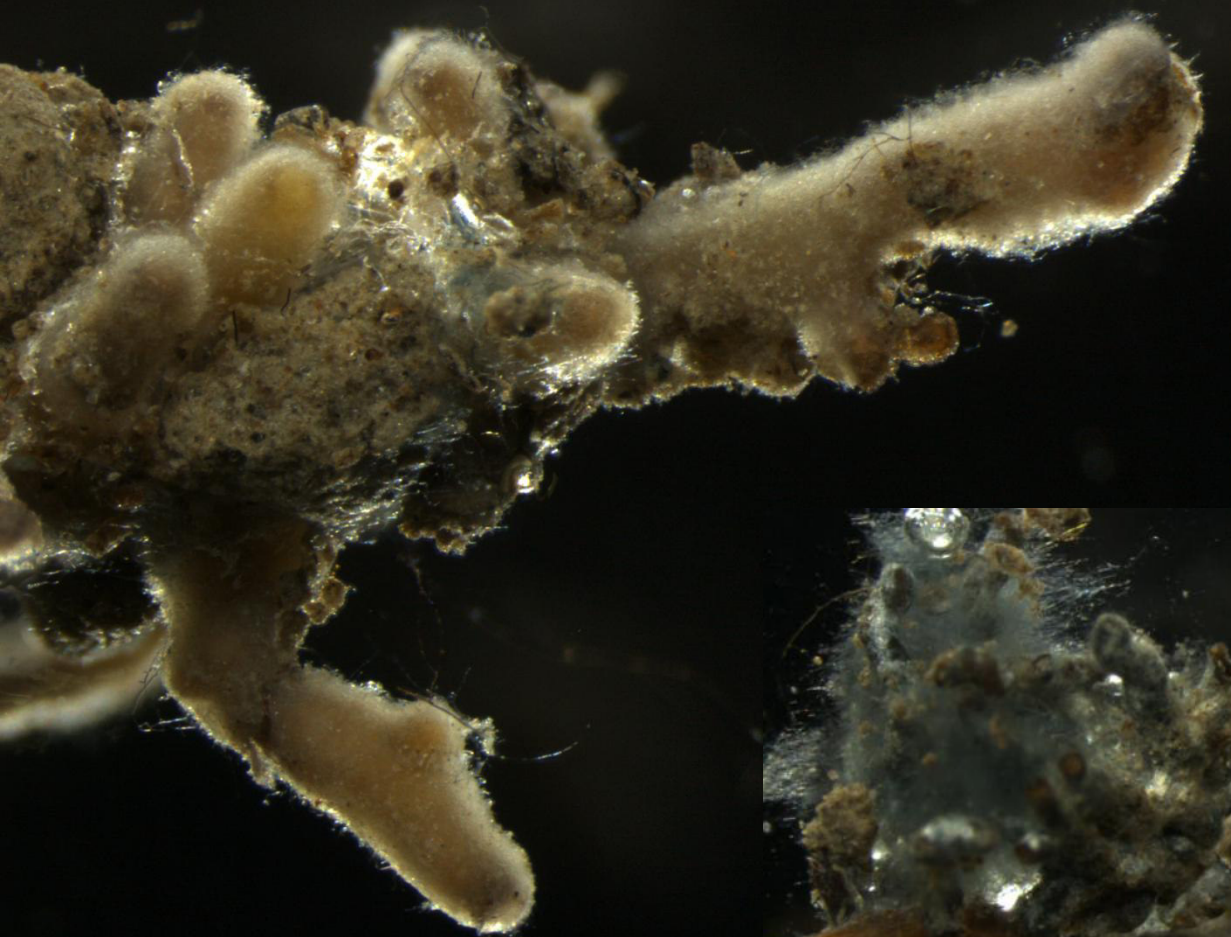


**MTH63**

*Byssocorticium atrovirens*

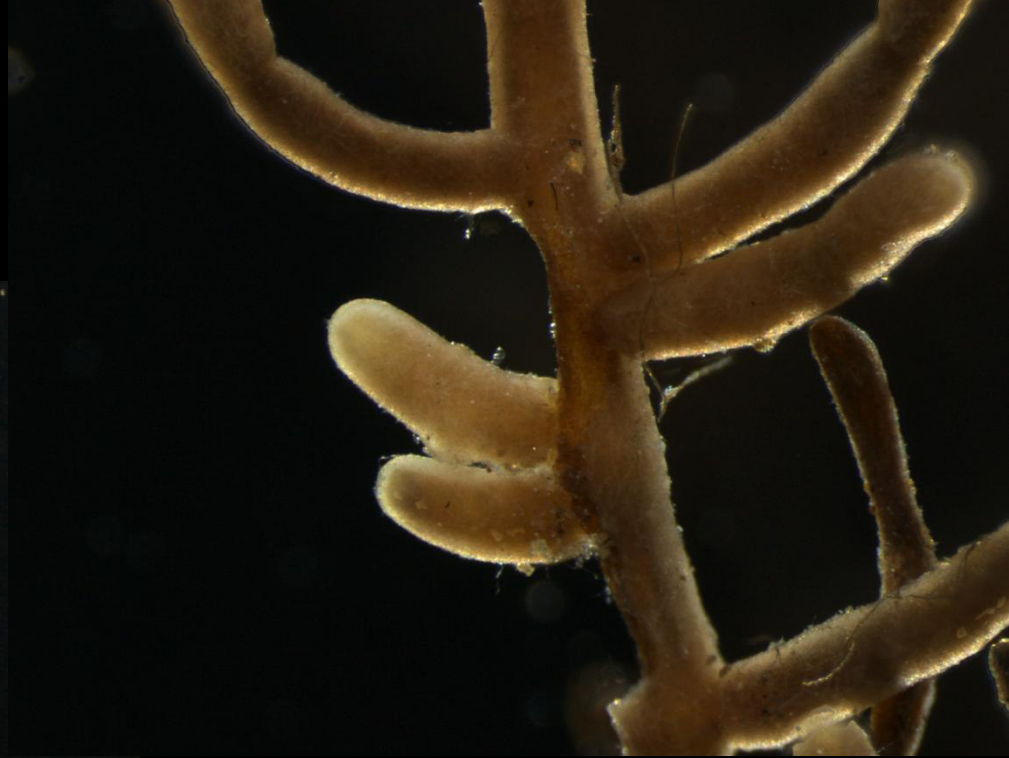






**MTH64**





**MTH65**

uncultured ectomycorrhiza  
(Helotiales sp.)

**MTH66**





MTH67

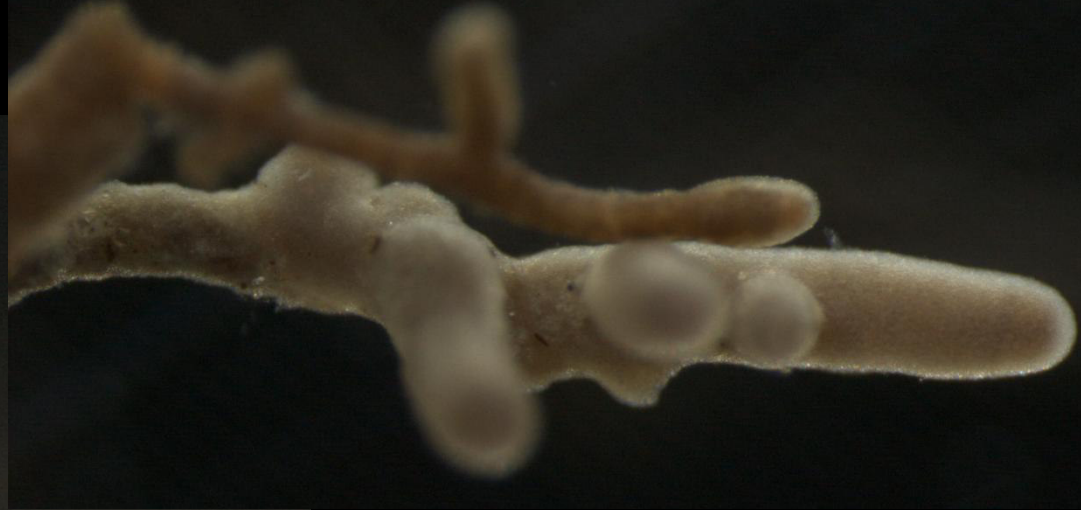
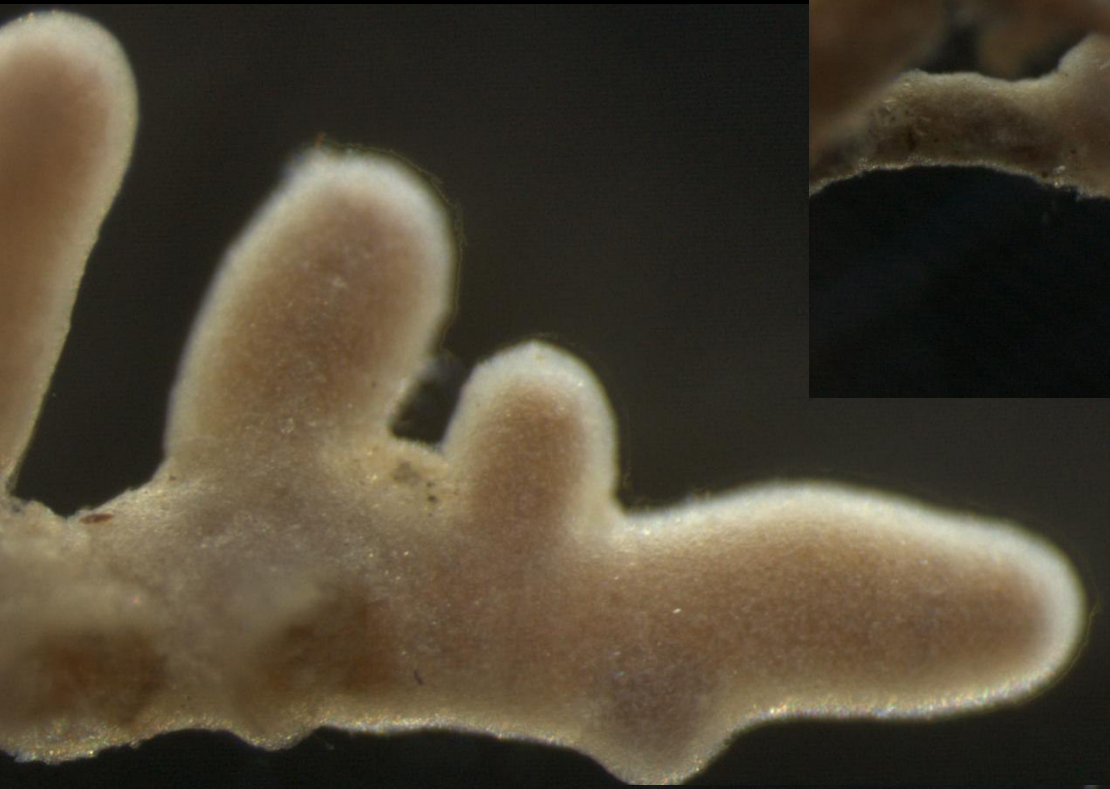
Helotiales sp. 3



# MTH68

*Lactarius pallidus*  
Group 8





**MTH69**

*Lactarius pallidus*  
Group 8



**MTH70**

*Russula romelli*



**MTH71**

*Hygrophorus discoxanthus*





**MTH72**

*Piloderma* sp.



**MTH73**


*Inocybe albomarginata*



# MTH74

Lactarius subdulcis  
Group 1

500  $\mu$ m

A microscopic image of a Lactarius subdulcis Group 1 specimen. The image shows a complex, branched, brownish structure, likely a fruiting body or a portion of the mycelium. The structure is composed of several thick, cylindrical branches that are interconnected. The surface of the branches appears slightly textured and has a warm, brownish-orange hue. In the background, there are out-of-focus, bright, circular spots, possibly representing other parts of the specimen or the environment. A scale bar in the bottom right corner indicates a length of 500 micrometers.

**MTH75**

*Lactarius vellereus*  
Group 12

200  $\mu$ m

A close-up photograph of a woody branch with several small, light-colored, fuzzy fruiting bodies of the mushroom Lactarius vellereus. The branch is brown and textured, and the fruiting bodies are clustered along its length. The background is dark, making the branch and its growths stand out. A scale bar in the bottom right corner indicates 200 micrometers.



**MTH76**

*Lactarius azonites*



**MTH77**



**MTH78**

*Tomentella* sp. 4



# MTH79

*Xerocomus chrysenteron*  
Group 11





**MTH80**

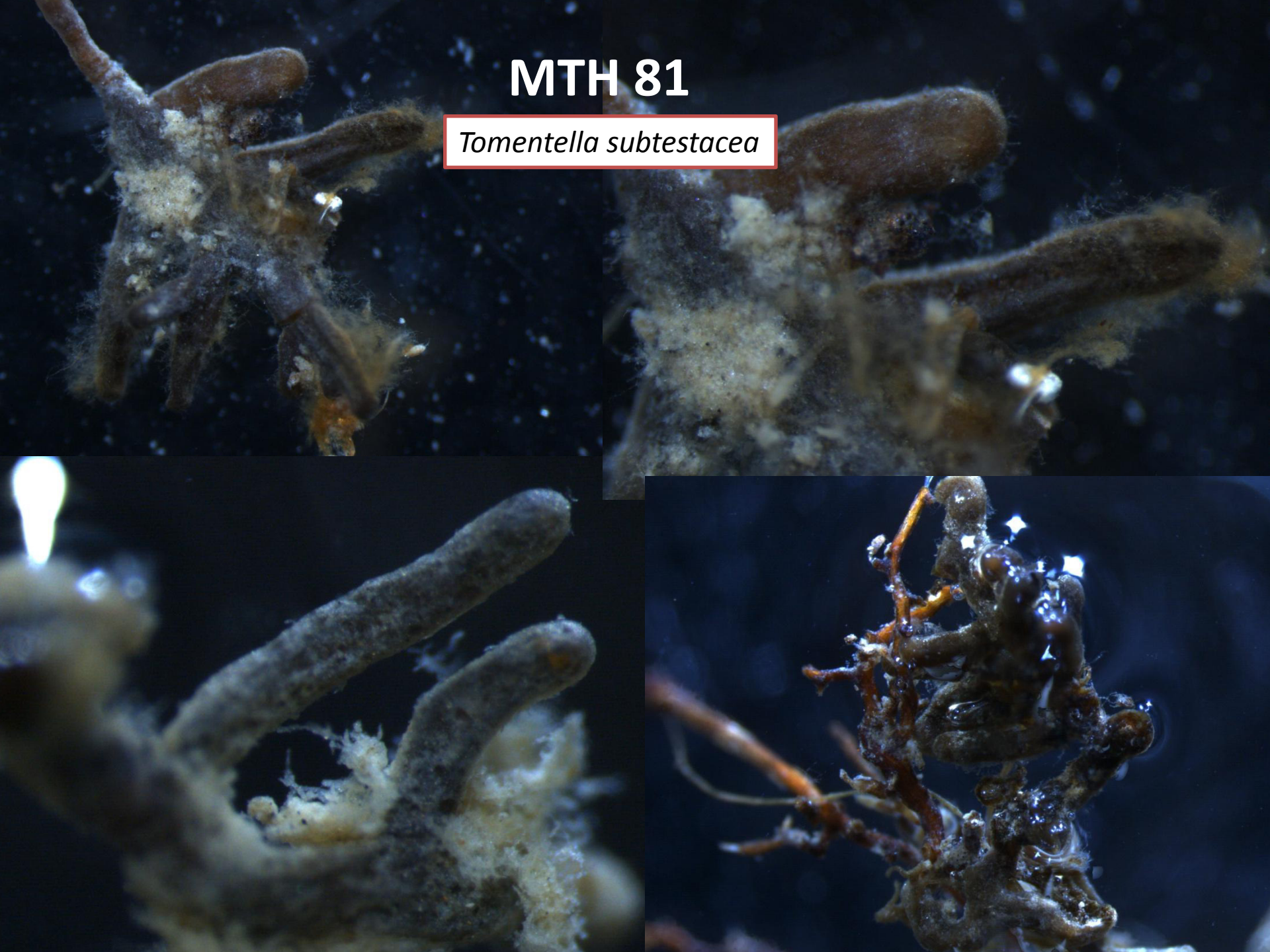
*Xerocomus chrysenteron*

Group 11



MTH 81

*Tomentella subtestacea*





**MTH 82**

*Xerocomus porosporus*

Number:

Date:

Plantspecies:

Fungal Species:

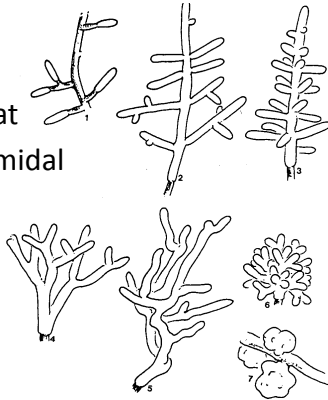
Was found in which sample:

Take a overview and a detailed picture, freeze some tips for ITS sequencing!

## Description:

### Ramification:

- 1 unbranches
- 2 monopodial pinnat
- 3 monopodial pyramidal
- 4 dichotom
- 5 irregular pinnat
- 6 like a coral
- 7 like a tuber



Ratio: a:b \_\_\_:\_\_\_ c:d \_\_\_:\_\_\_

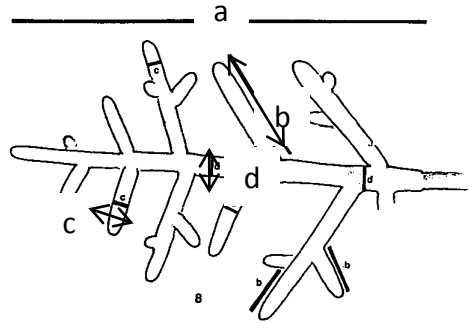


Fig. 8: Dimensions of ectomycorrhizae. – a: Length of mycorrhizal system. – b: Length of unramified ends. – c: Diameter of unramified ends. – d: Diameter of axis.

### Colour:

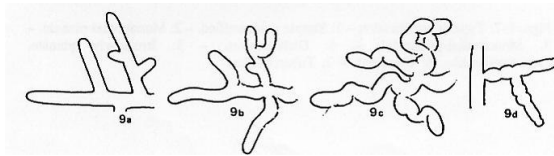
young Myk:

medium aged Myk:

old Myk:

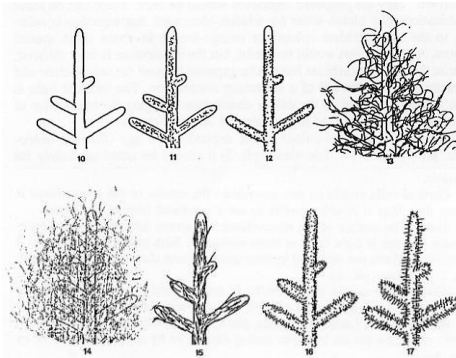
spreading hyphae:

### Kind of unramified ends



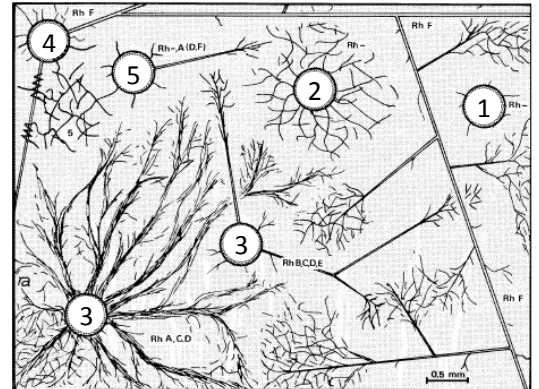
- 9a straight
- 9b bend
- 9c wound
- 9d pearl like

### Surface:



- 10 smooth
- 11 like a net
- 12 warty
- 13 woolly
- 14 fluffy
- 15 stringy
- 16 short bristled
- 17 long bristled

### Explorationtype



- 1 Contact
- 2 short-distance exploration,
- 3 medium-distance
- 4 long-distance
- 5 pick-a-back

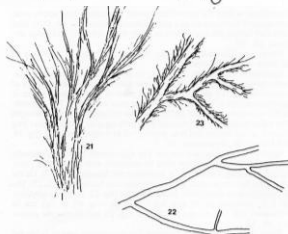
### connection of Rhizomorphs:

- 18 dot-like
- 19 in a flat angle
- 20 lamellate



### form of Rhizomorphs:

- 21 interwining hyphae
- 22 smooth
- 23 hairy



### Comment:

# Drawings at the Microscope

**Typical mantle surface - outside**

**Typical mantle surface- inside**

**Zystids:**

**Clamps/Anastomosis:**