

Reiswig 2017

part 1

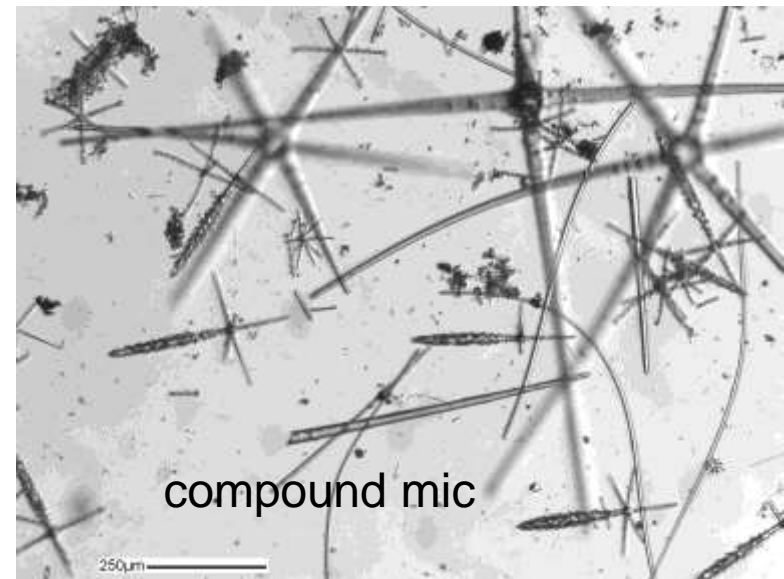
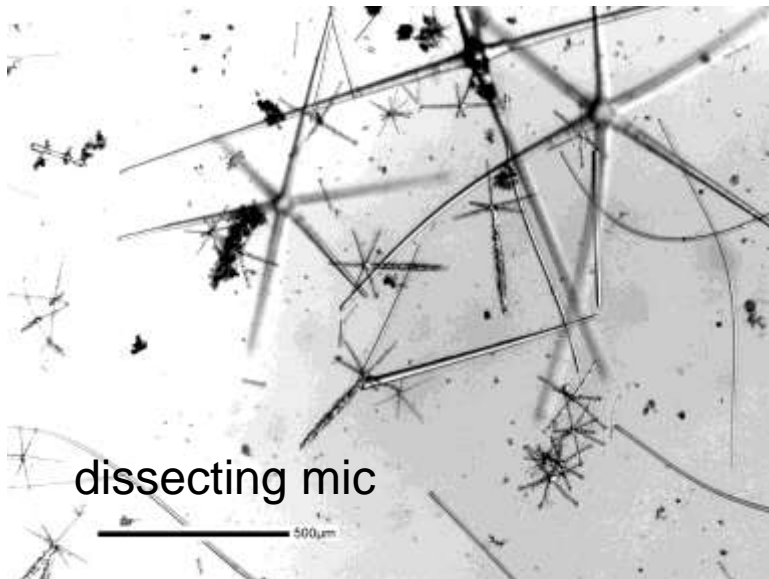
# How to identify hexactinellid sponges

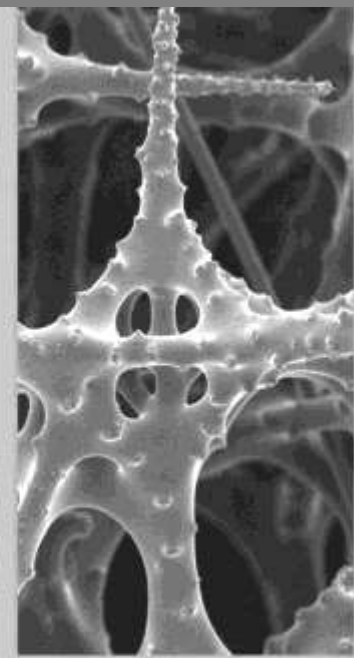
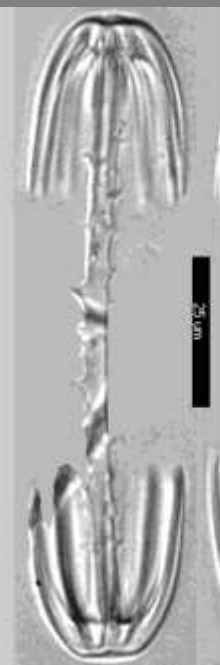
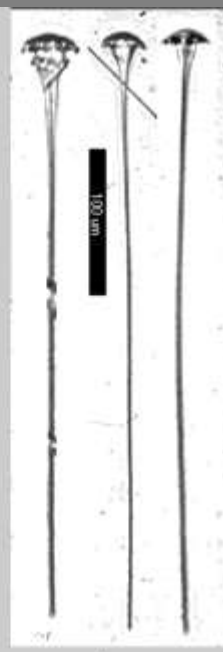
- photograph it first, feel its texture
- thin dictyonines assumed Farreidae
- euplectelloids assumed *Euplectella*
- body form often gives clues to group
- other “softies” assumed Rossellidae, etc.
- ALWAYS, your needs depend on your experience



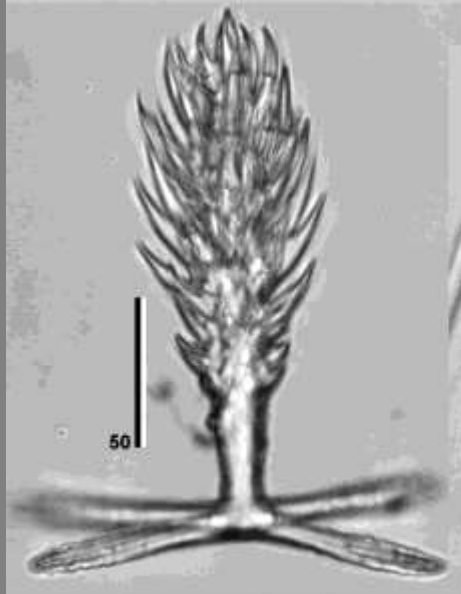
# 1. small piece to bleach on slide

- hexactine spicules confirm it as a hexactinellid
- confirm lyssacine versus dictyonine type
- look for key spicule or frame type to narrow taxon

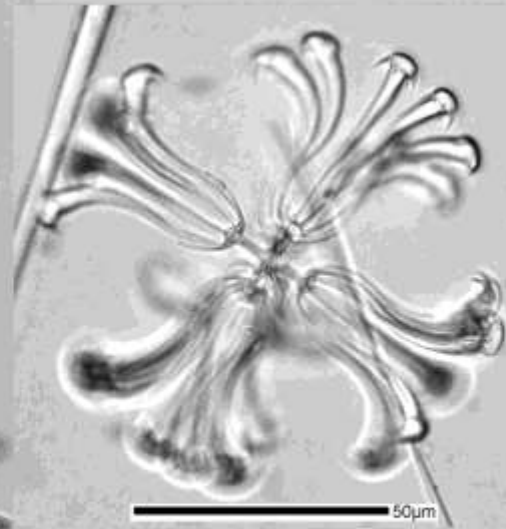




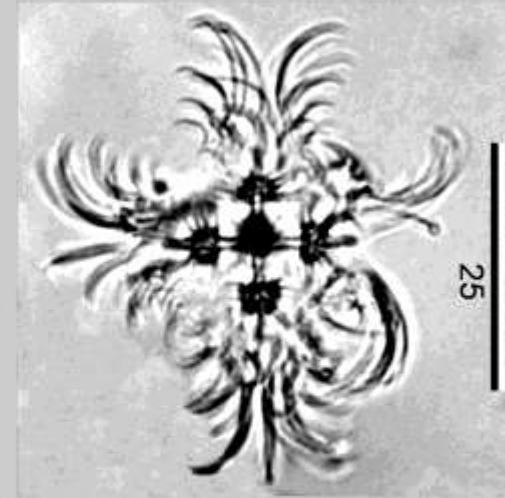
sword 6 clavules scopule amphidisc lychnisc



pinular 5



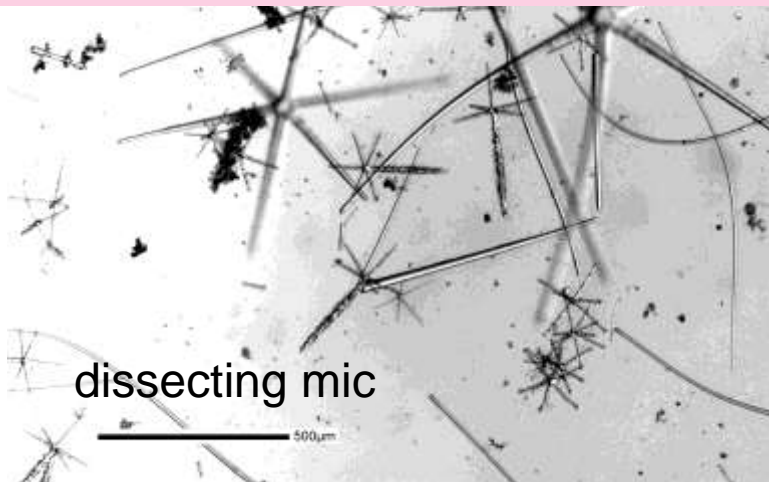
floricome



strobiloplumicome

# 1. small piece to bleach on slide

- hexactine spicules confirm it as a hexactinellid
- confirm lyssacine versus dictyonine type
- look for key spicule or frame type to narrow taxon
- may not be able to go further than family & genus without making permanent spicule preparations
- photo or draw cartoons of spicules for records



## 2. make permanent spicule preps with nitric acid, mount in balsam

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- do digests of dermal, atrial and wall subsamples

block heater



## 2. make permanent spicule preps with nitric acid, mount in balsam

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- do digests of dermal, atrial and wall subsamples
- view each in dish; pick out frameworks & large spicules with forceps and mount them on slides separately.
- may need to ultrasonicate smaller spicules if dirty





ultrasonicator

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- I use millipore filters for smaller spicules; no loss

filter apparatus



## 2. make permanent spicule preps with nitric acid, mount in balsam

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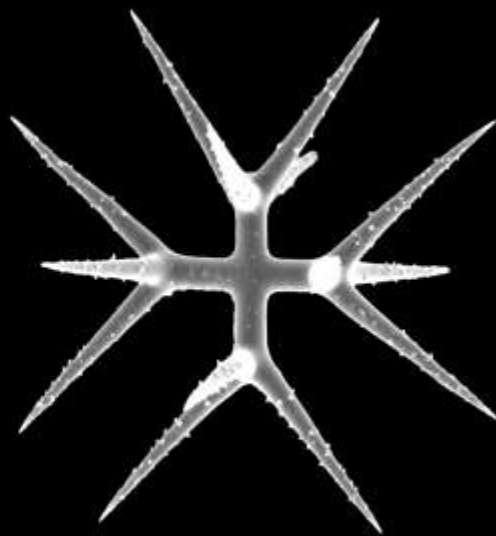
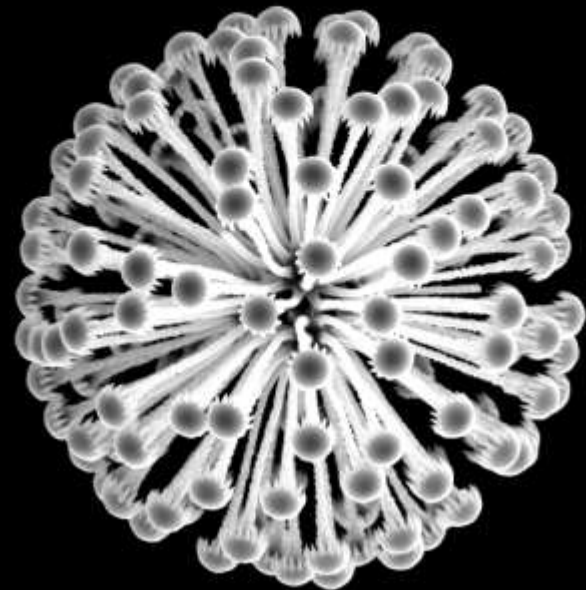
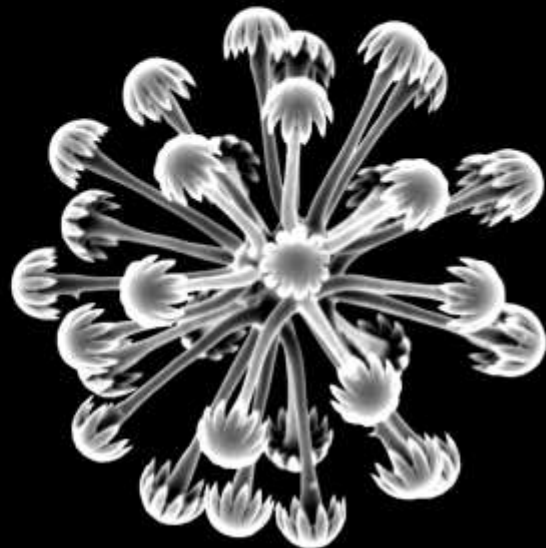
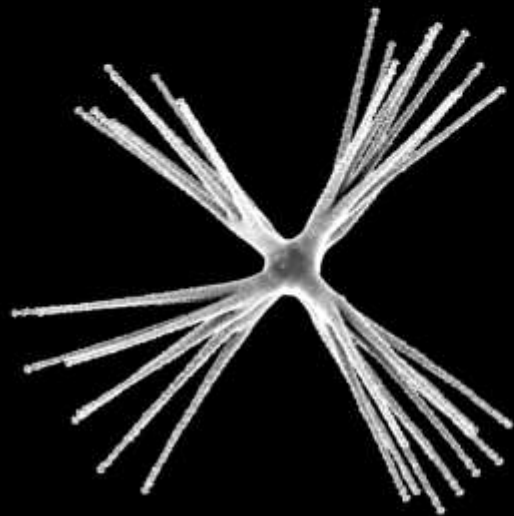
- do digests of dermal, atrial and wall subsamples
- view each in dish; pick out large spicules with forceps and mount them on slides separately.
- may need to ultrasonicate smaller spicules if dirty
- I use millipore filters for smaller spicules; no loss
- dry & clear filter & add balsam and coverglass, put on slide warmer
- take better photos and draw spicule details
- make detailed measurements of spicules; record them

# 3. Go to “Systema” keys

- “Systema” only describes type species of genera but remarks include more about ranges.
- there have been additions since 2002
- the keys have errors or omissions (made by humans)
- there is good likelihood you have a new taxon (~ 50%)
- you may have to survey original descriptions
- if these are poor, your final hope is to review the type specimens

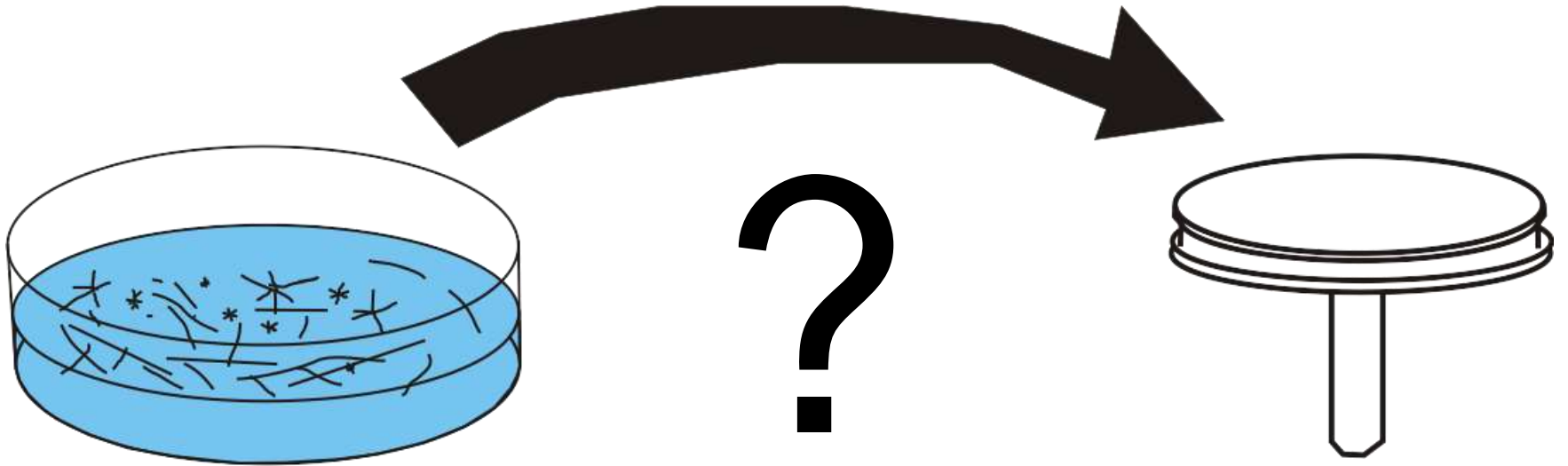
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of part 1**

2



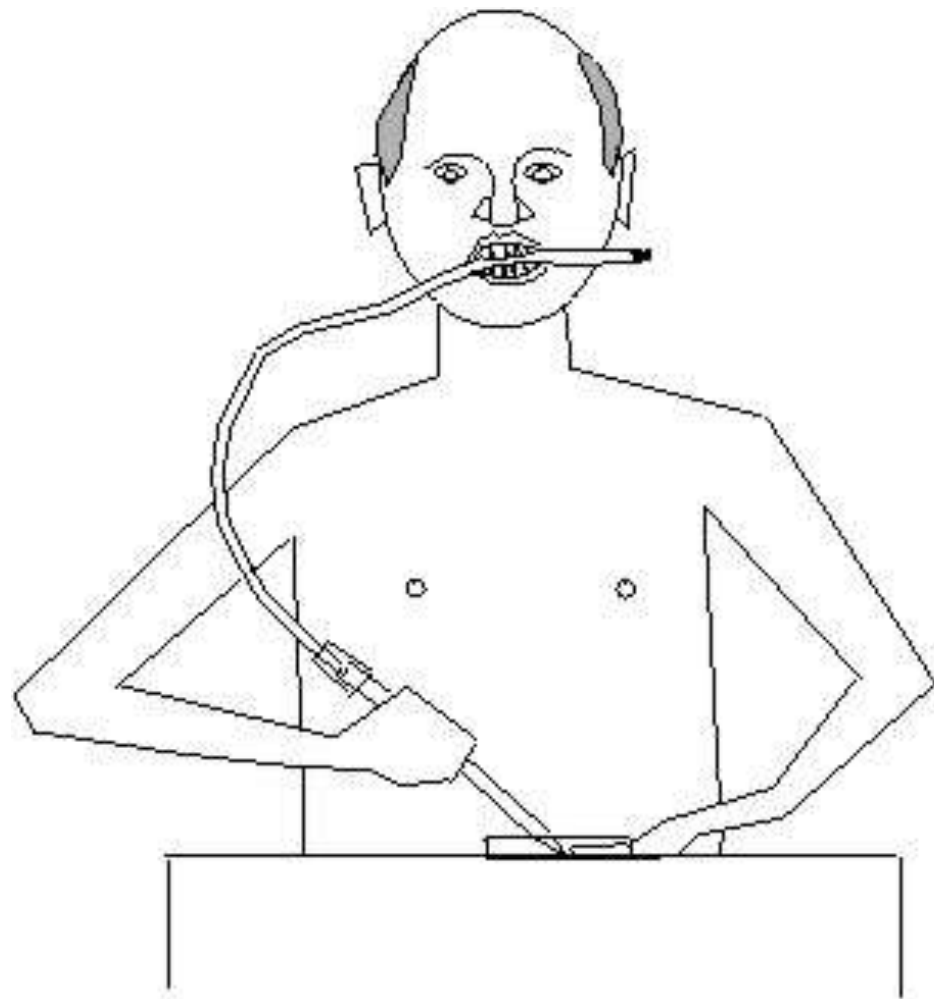


# How to move spicules

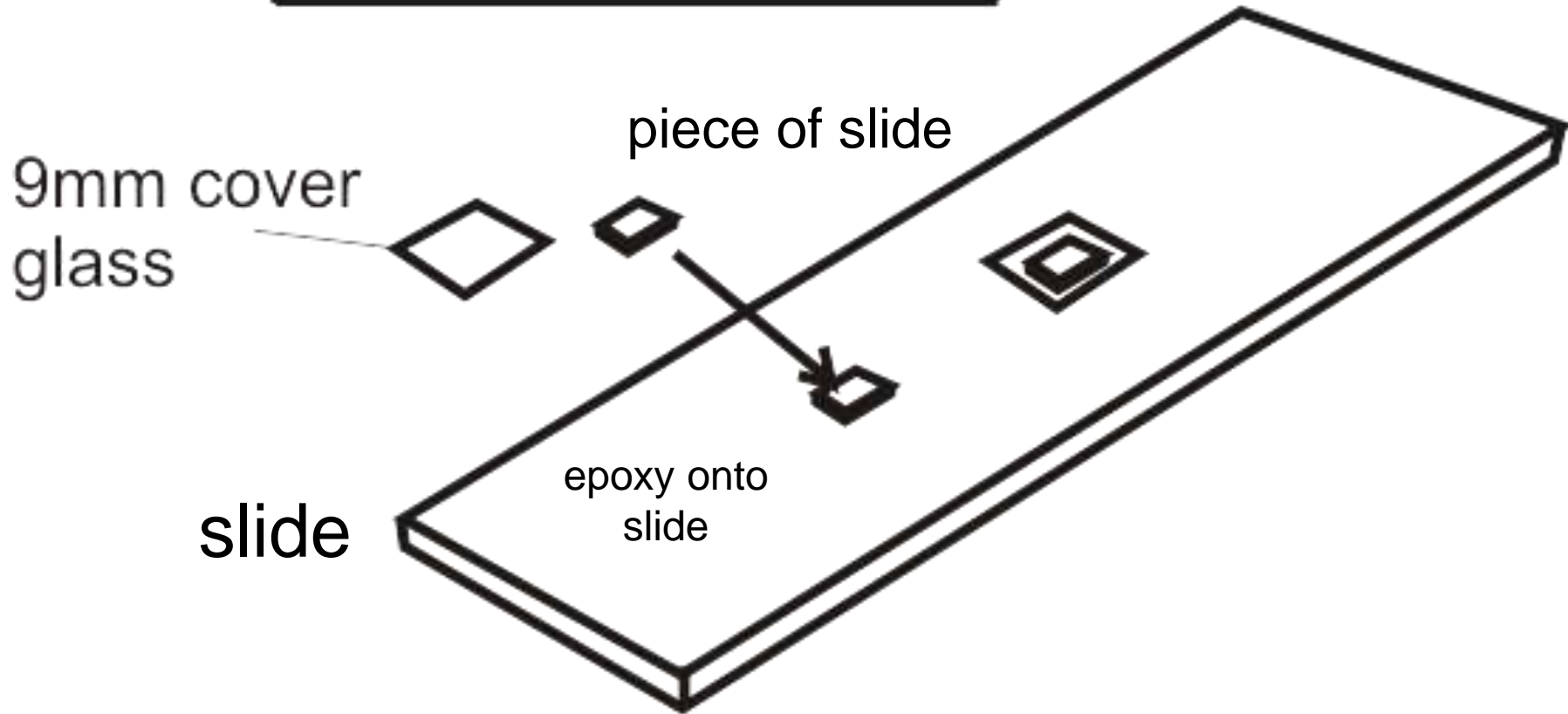
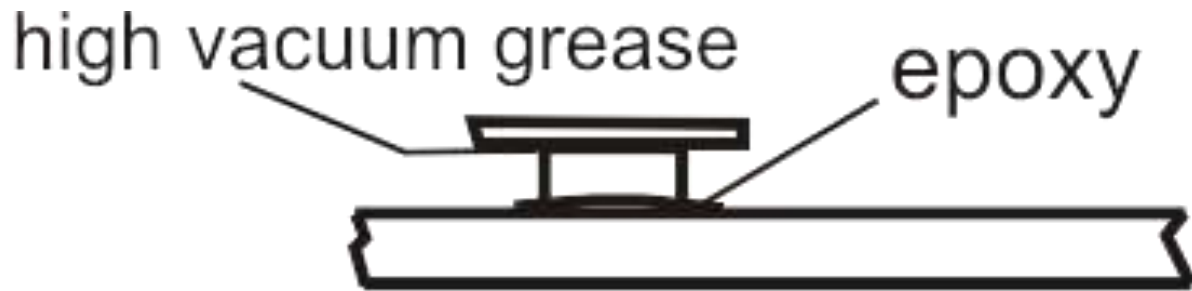


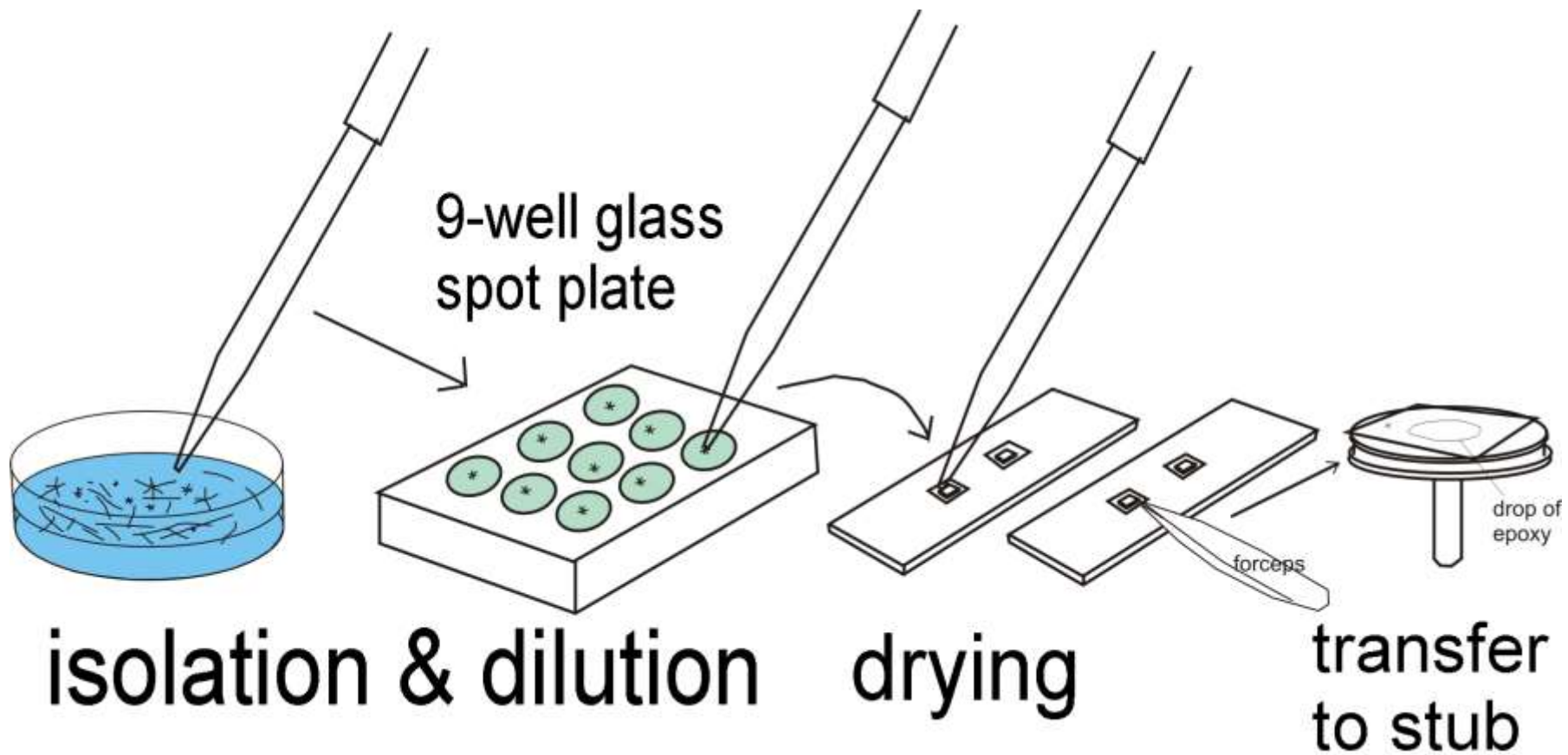
Wet acid  
soup

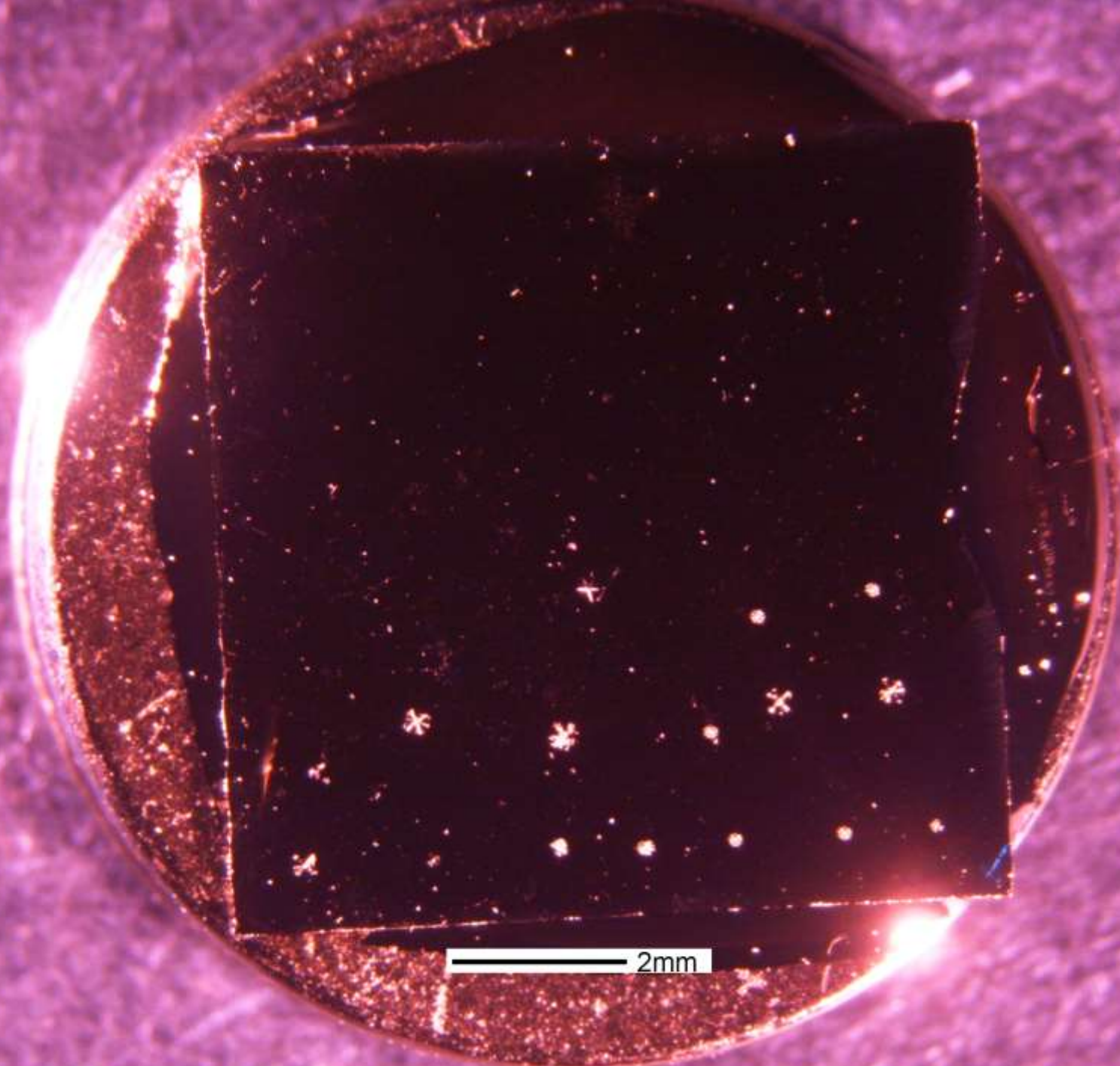
dry



**You cannot play with  
spicules without this  
pipette**



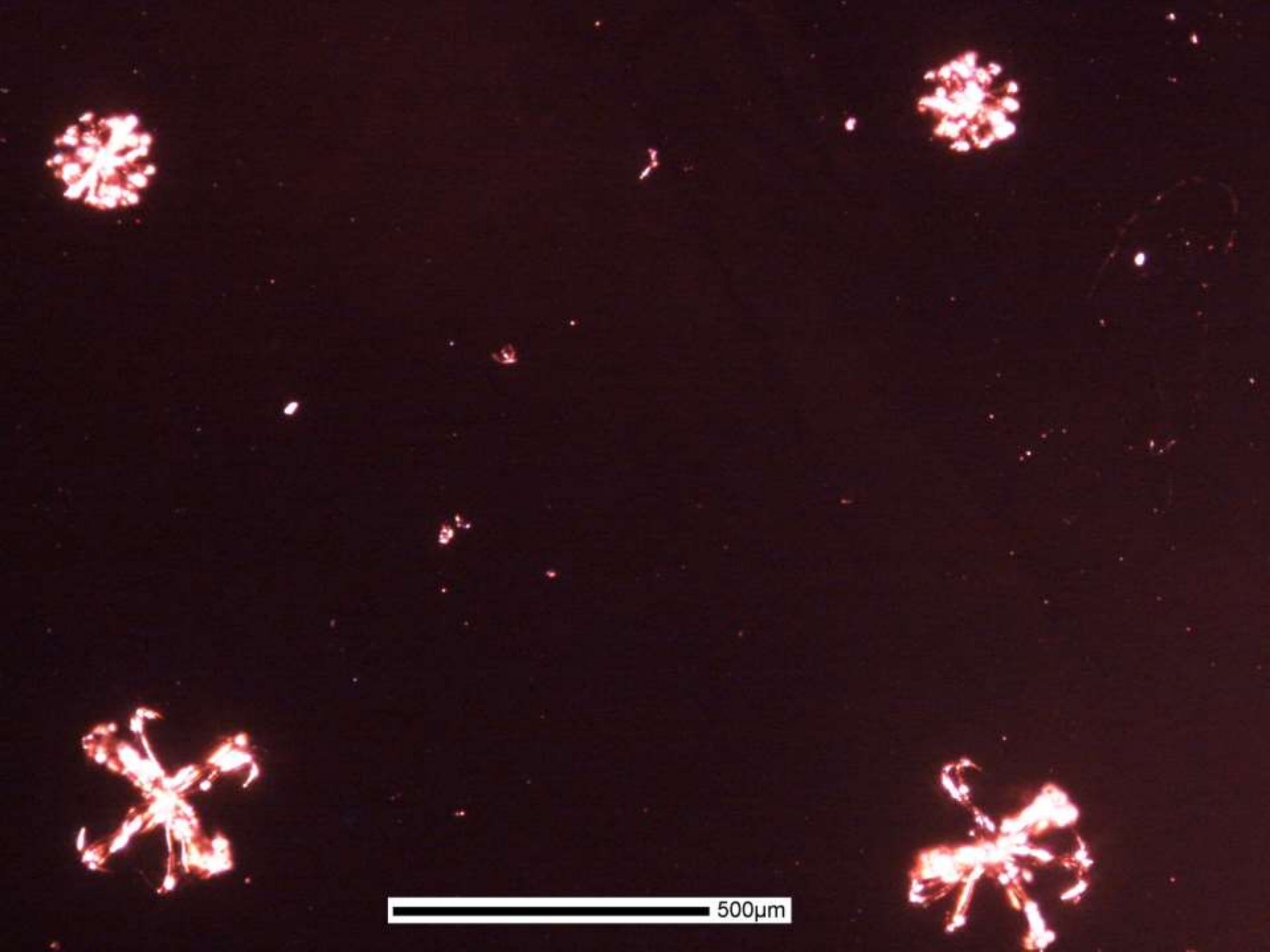


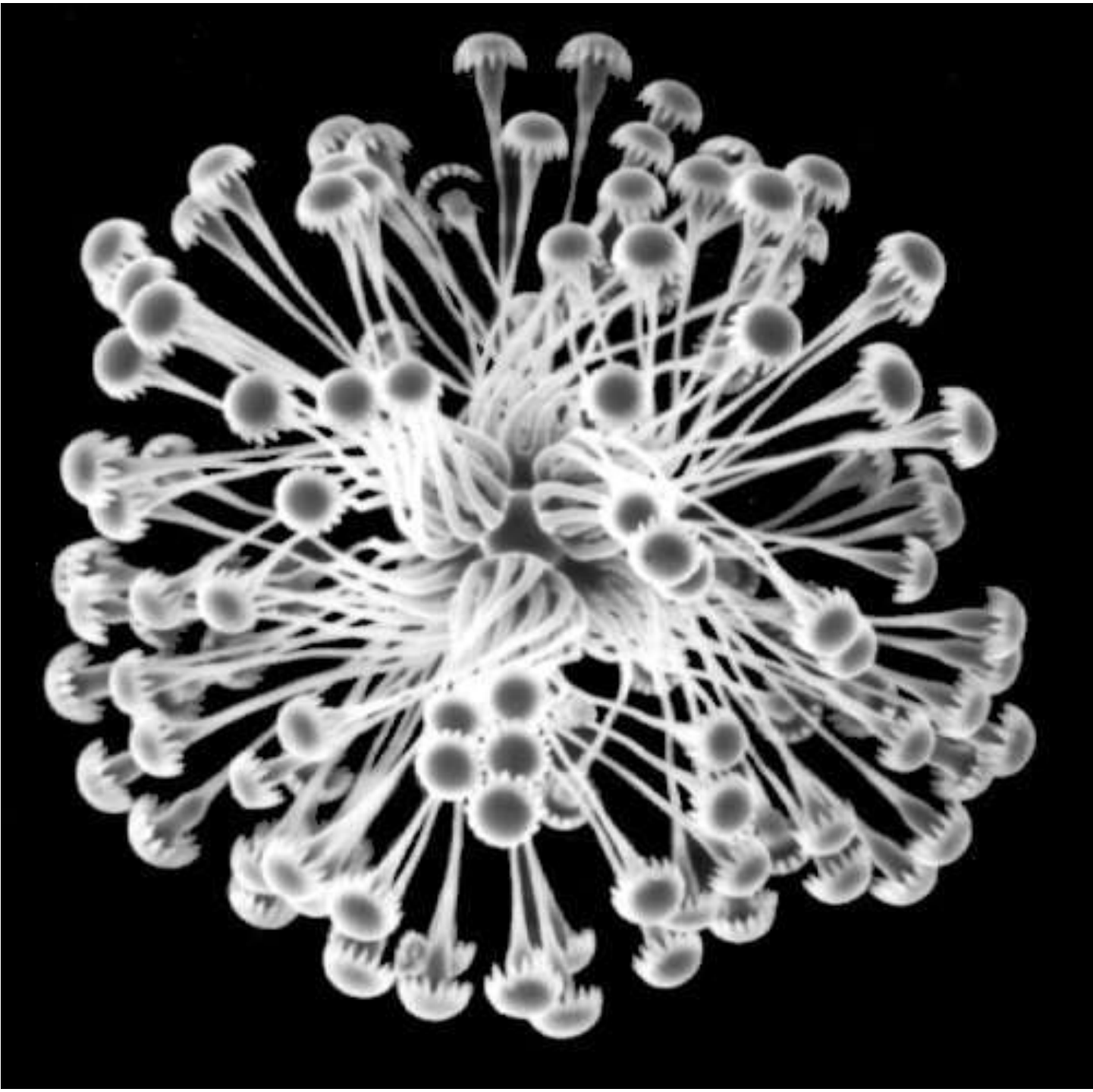


2mm



500µm







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