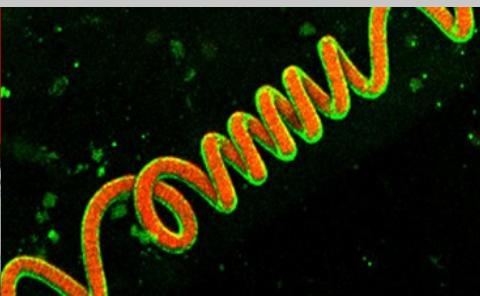
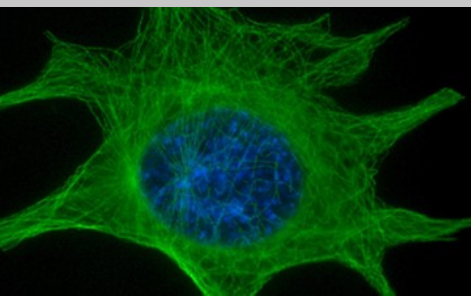


# ImageBank



**A shared bioscience  
image resource for  
educational use**





# About ImageBank...



# ImageBank

- **An online collection of bioscience images.**
- **Available free and copyright cleared for educational use by staff and students.**



# ImageBank

- **Already contains 5000 images.**
- **New images are being added on a regular basis.**

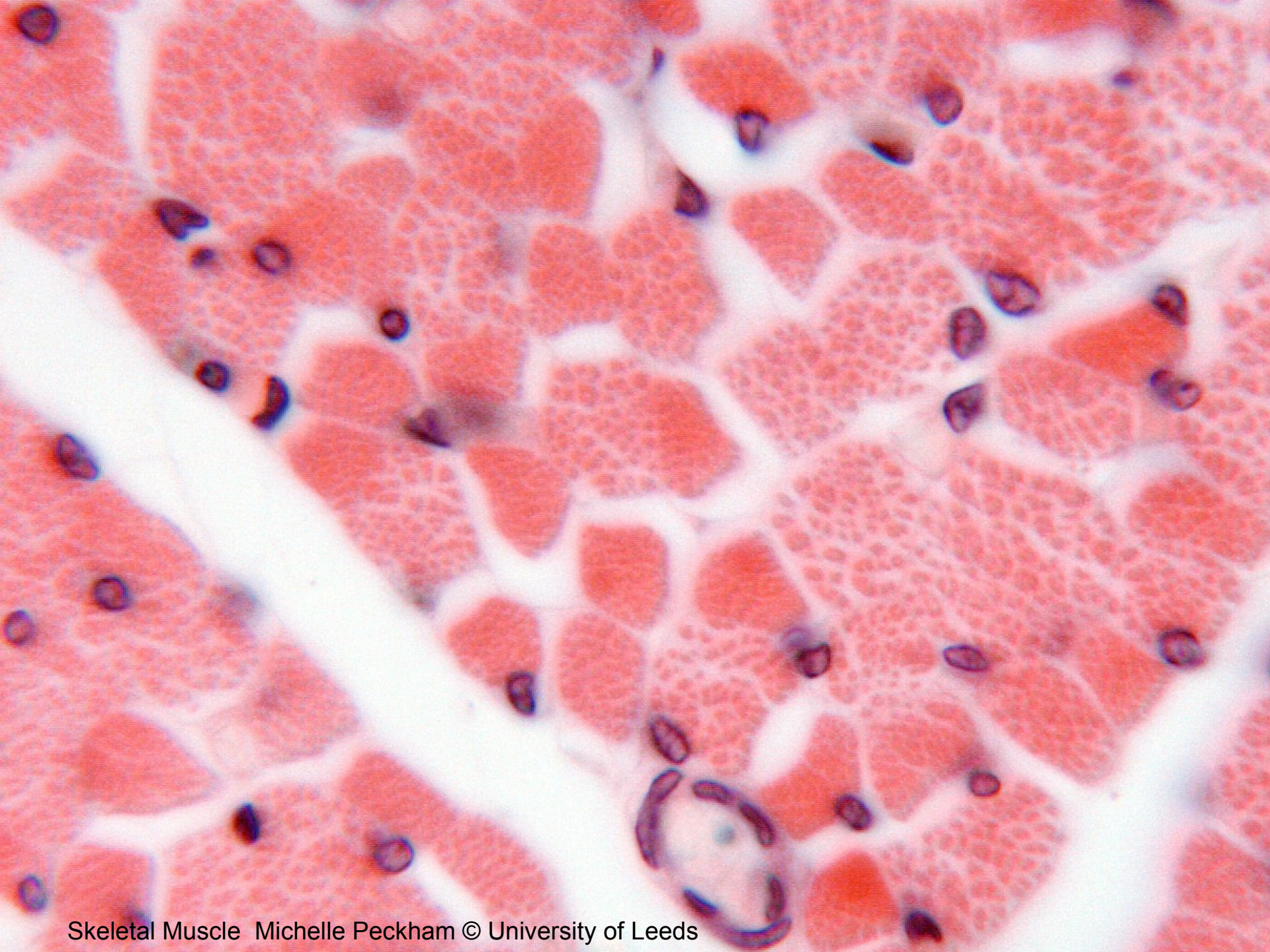




Daphnia

Gordon Beakes, © University of Newcastle upon Tyne





Skeletal Muscle Michelle Peckham © University of Leeds





*Arion rufus*

Tony Cook, © University of Ulster

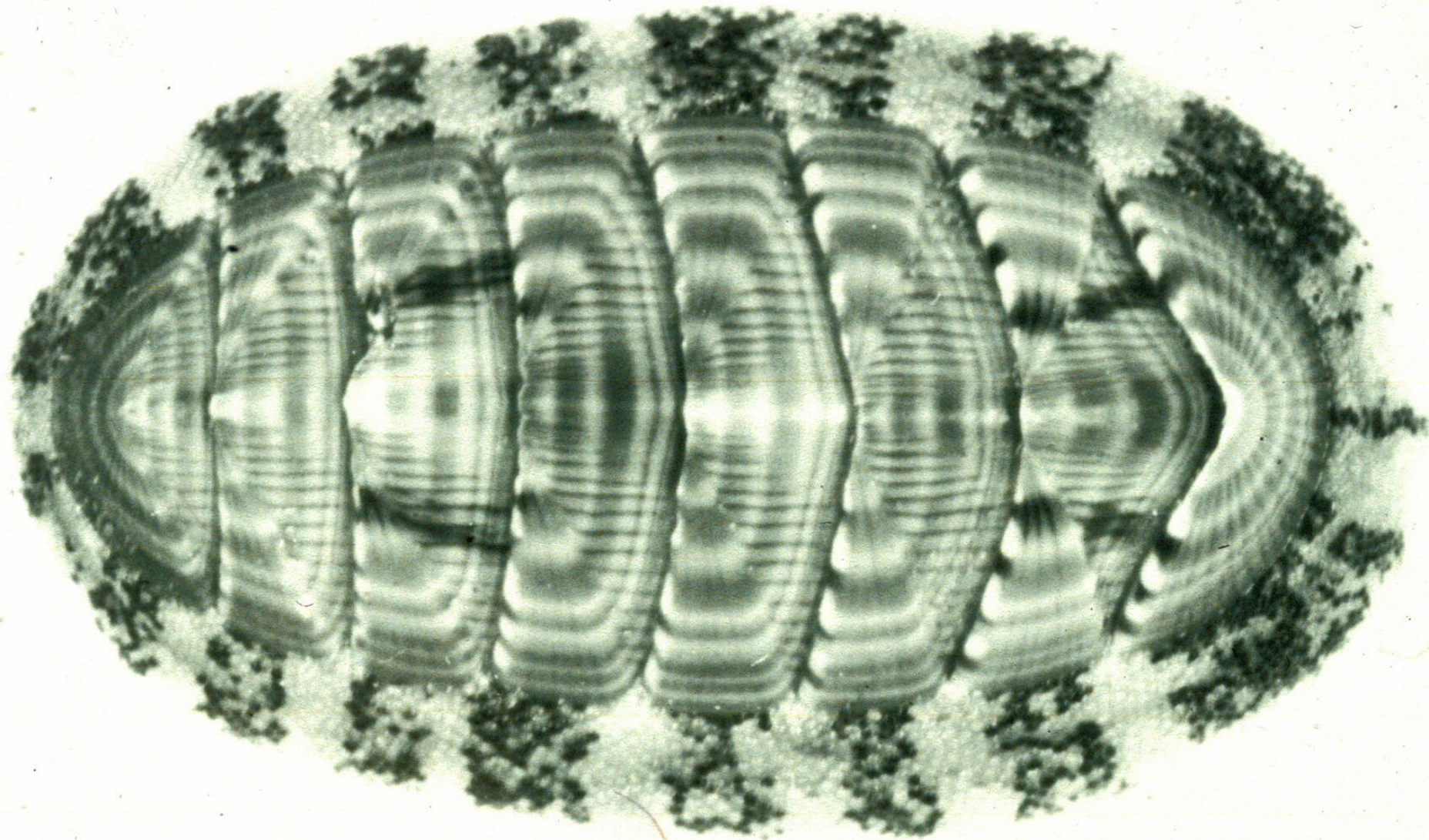




Robin, *Erithacus rubecula*

© Brian Wilson





Australian chiton

© Allan Jones





*Anabaena* sp.

Gordon Beakes, © University of Newcastle upon Tyne





*Menyanthes trifoliata*

© Paul Rycraft



Crab spider, *Misumena vatia*  
© Paul Rycraft





Bush cricket

© Tom Tregenza





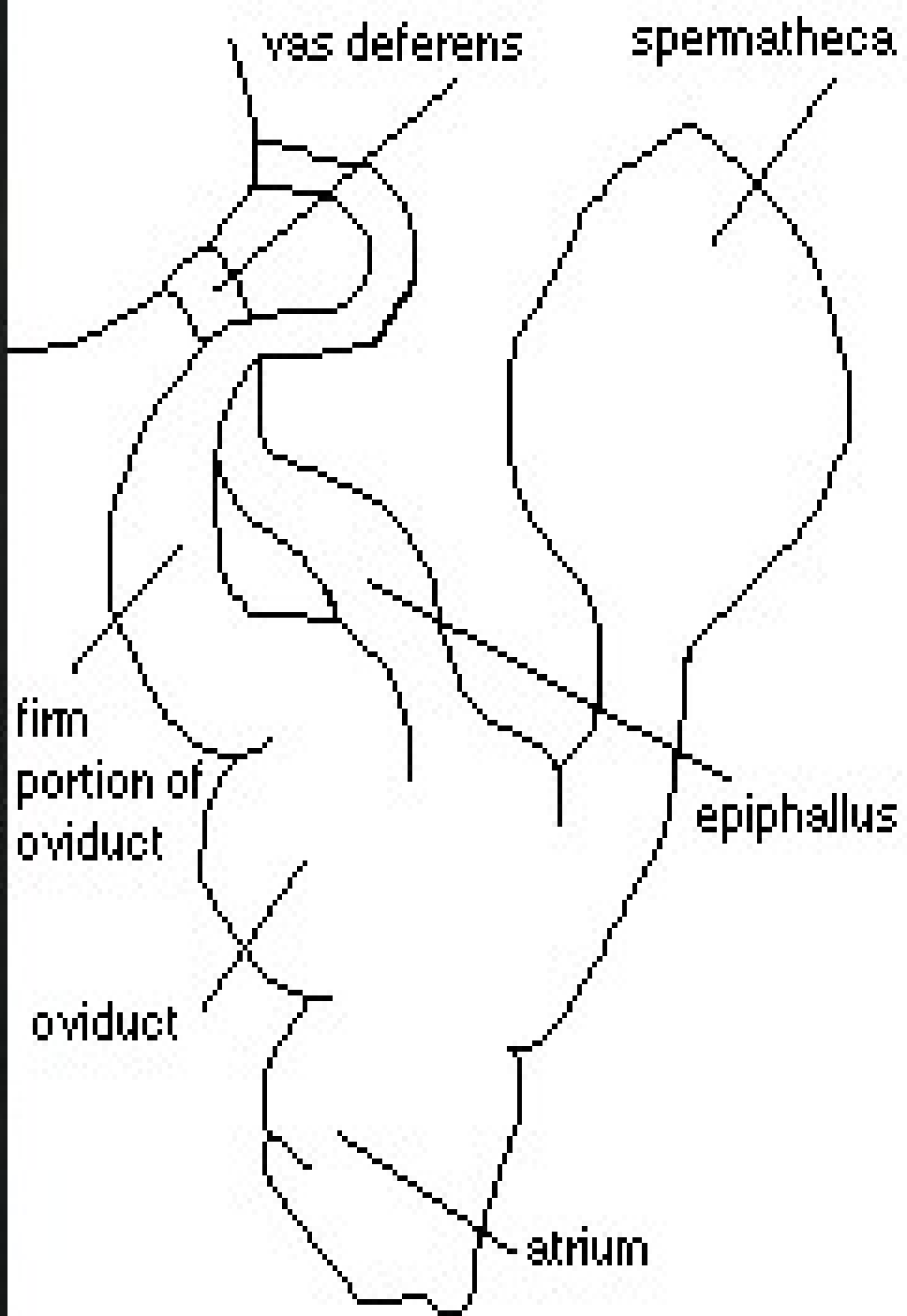
Buzzard, *Buteo buteo*

© Brian Wilson





Open top fumigation chambers  
Gordon Beakes, © University of Newcastle upon Tyne



*Arion owenii*, genitalia



# ImageBank

- **Each image is accompanied by descriptive text.**





***Amanita muscaria*** growing under a mature spruce tree at Holystone, Northumberland. This species is a common mycorrhizal toadstool more typically associated with birch. This species is poisonous, but rarely deadly and contains a potent alkaloid toxin muscarine as well as a number of hallucinogens. It was dried and used as a fly repellent in former times. Taken with an Olympus OM4 with a Tamron 90mm macro lens and recorded on Kodak Ektachrome 100 film.

**Photo by** Gordon Beakes © University of Newcastle, image courtesy HEABioscience ImageBank  
<http://www.bioscience.heacademy.ac.uk/imagebank>

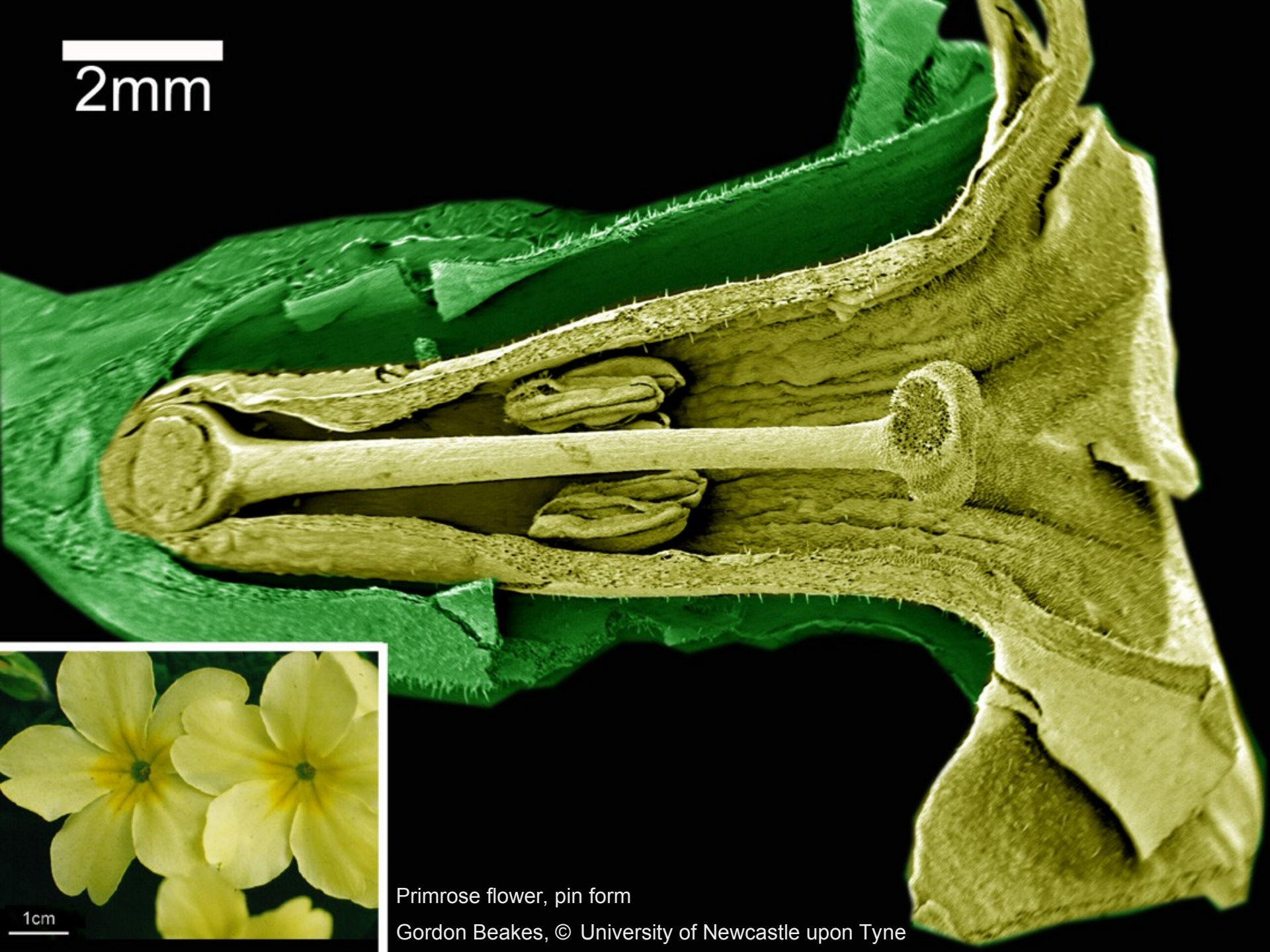


The very low shore to sub-tidal barnacle *Balanus crenatus*. These specimens have settled and grown rapidly on the unusual substrate of the egg case of a dog fish (or related elasmobranch fish); this illustrates the tendency of almost any solid object in the sea to become fouled by organisms such as barnacles.

**Photo by:** John Grahame © University of Leeds, image courtesy HEA Bioscience ImageBank  
<http://www.bioscience.heacademy.ac.uk/imagebank>



2mm

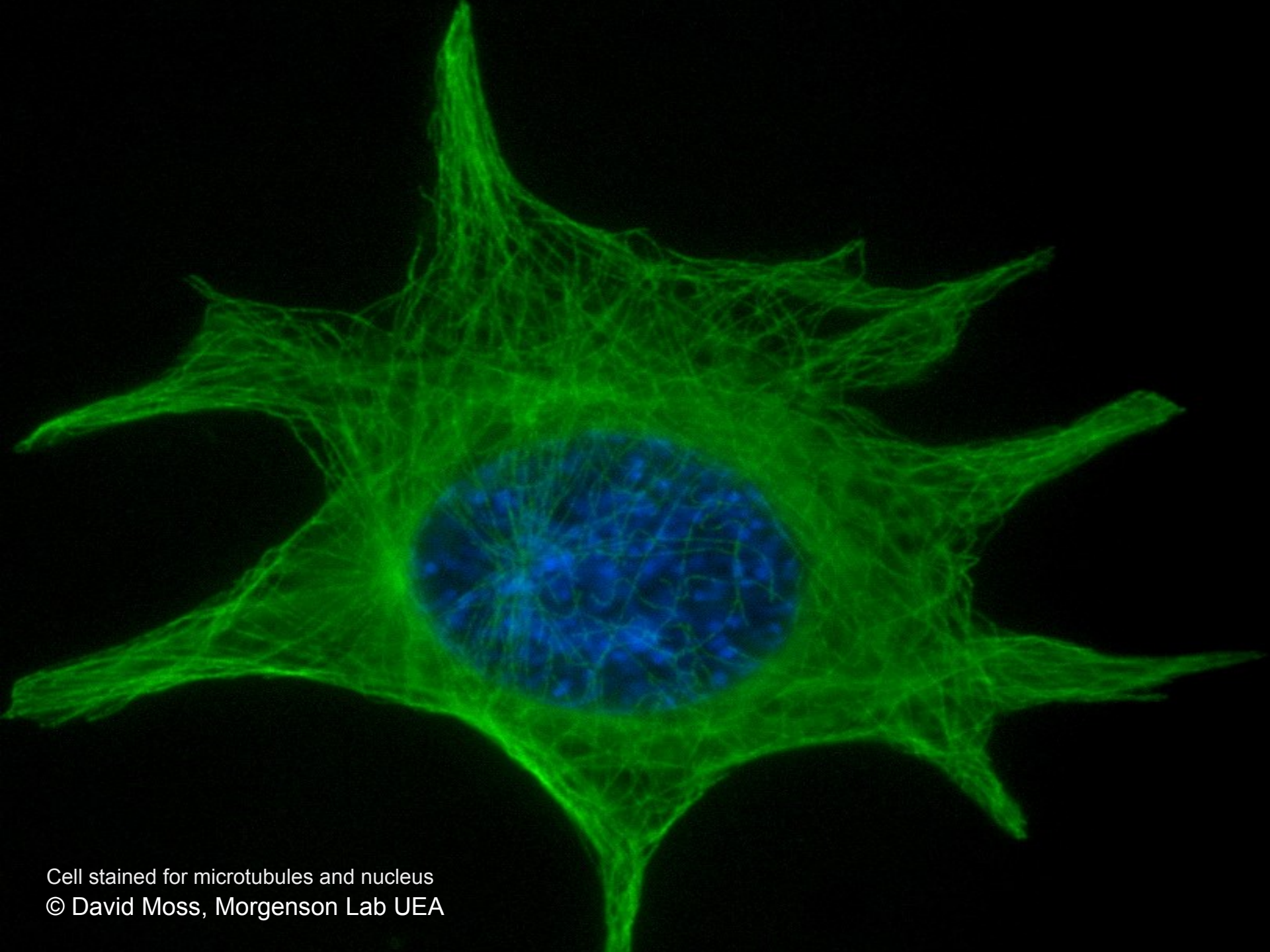


Primrose flower, pin form  
Gordon Beakes, © University of Newcastle upon Tyne





Clownfish, *Amphiprion ocellaris*  
© Aurora Levesley



Cell stained for microtubules and nucleus  
© David Moss, Morgenson Lab UEA





Bryozoa - sea mats

John Grahame, © University of Leeds





*Lynx canadensis*

© Brian Wilson





Chrootrichia beetle

Gordon Beakes, © University of Newcastle upon Tyne

1mm



Garden Wolf Spider with egg cocoon

© Paul Rycraft

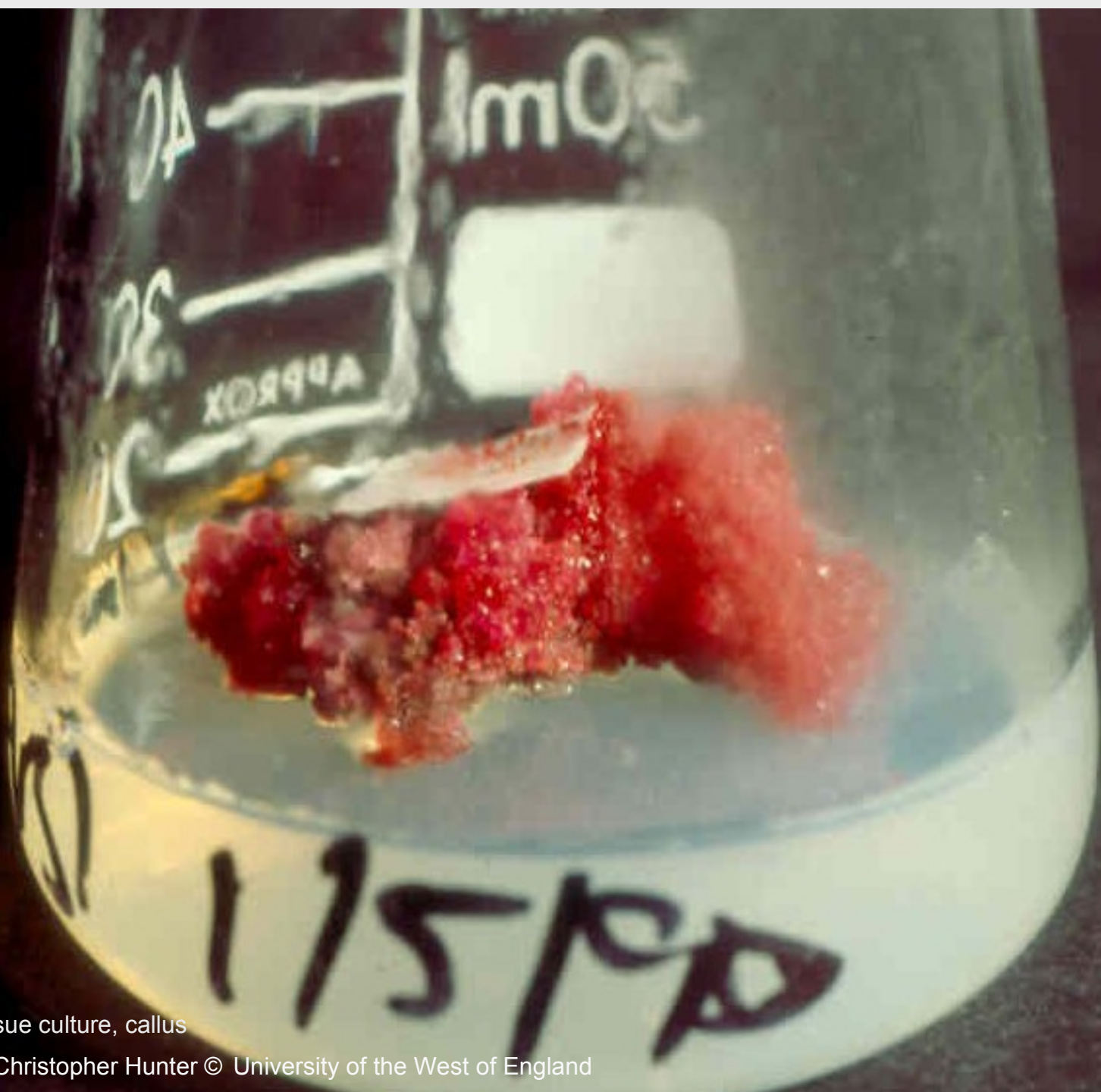




*Amanita pantherina*

Gordon Beakes, © University of Newcastle upon





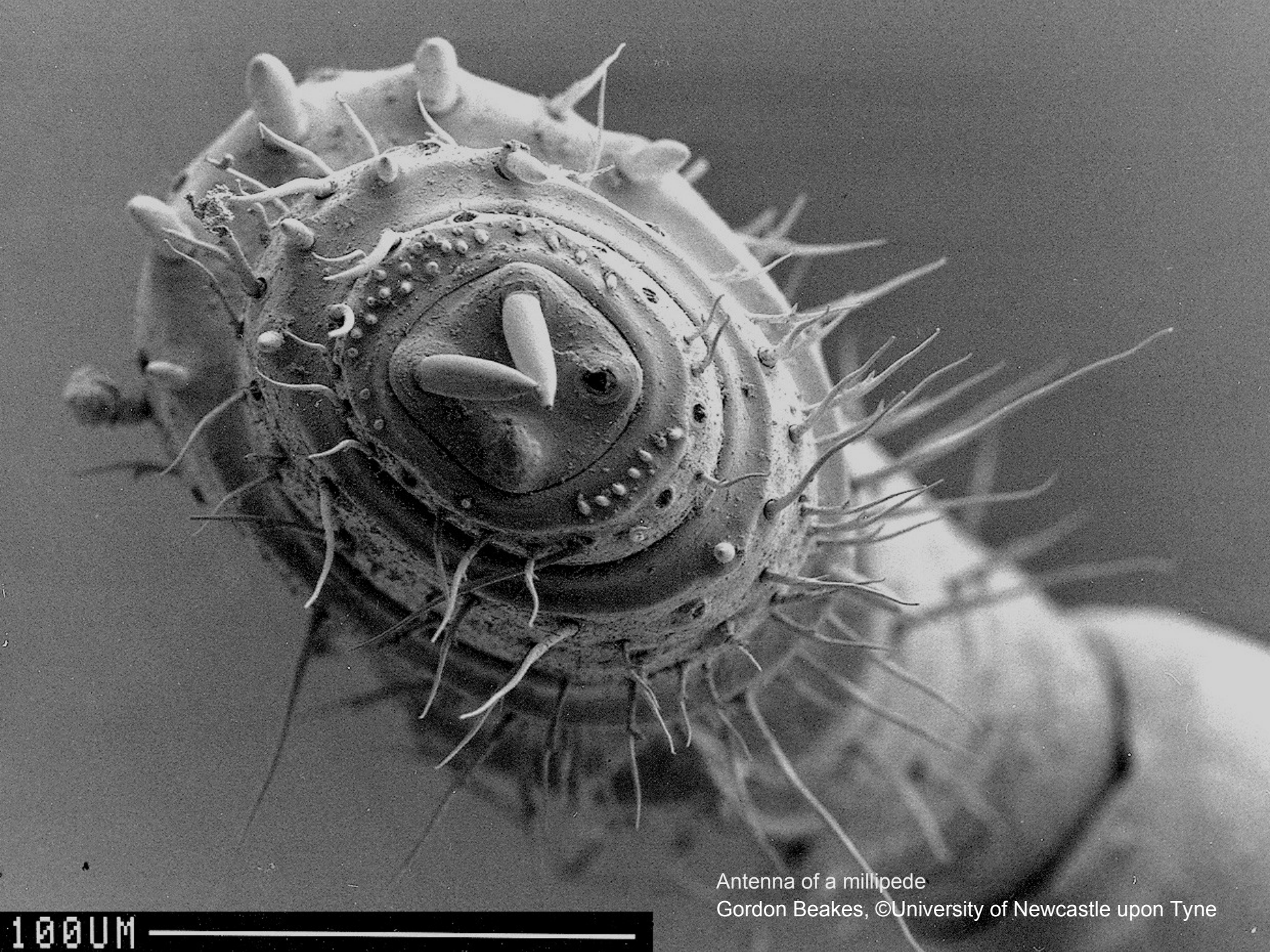
Tissue culture, callus





Bacillus anthracis growing on fresh blood agar  
Microbiology at Leeds © University of Leeds





Antenna of a millipede  
Gordon Beakes, ©University of Newcastle upon Tyne

100UM



# How can you access ImageBank?

**It is freely available on-line**

<http://www.bioscience.heacademy.ac.uk/imagebank>



About



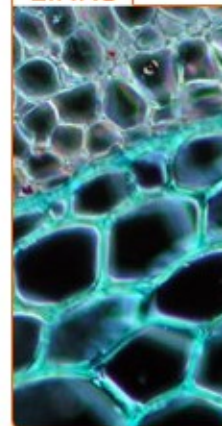
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## NEWS

- **FREE DIGITIZATION** for your slides and photos contributed to ImageBank. Contact us for further details: [imagebank@ltsnbio.leeds.ac.uk](mailto:imagebank@ltsnbio.leeds.ac.uk)

**Submit** your images to ImageBank and help make this resource grow. It's quick and easy to [submit online](#) via the ImageBank website, or by [post](#).

**JISC**

The Centre for Bioscience ImageBank is co-funded by the [Centre for Bioscience](#), the [Higher Education Academy](#) and the [Joint Information Systems Committee JISC](#) / [DNER](#)

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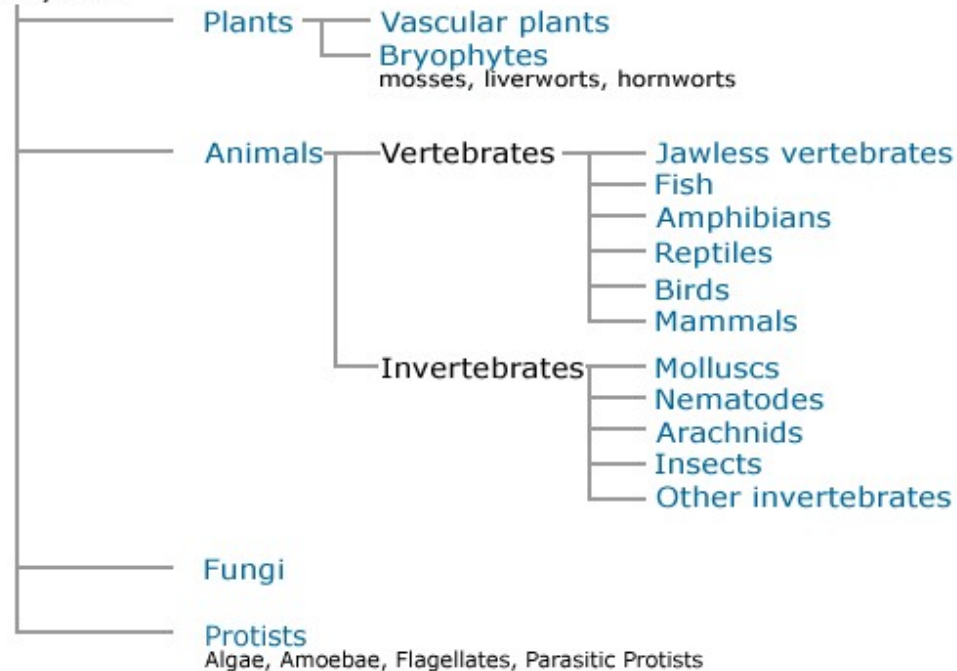
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Eukaryotes



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# There are links to reviewed bioscience image collections



The screenshot shows the ImageBank website interface. At the top left is the logo for The Higher Education Academy Centre for Bioscience. The main header features the 'ImageBank' logo, which includes a small grid of four biological images. Below the header is a navigation bar with 'LINKS' highlighted. The main content area is divided into two columns. The left column is titled 'Search LINKS to other Bioscience Image Collections' and contains a search box with the text 'Search LINKS by Keyword', a search button, and a link to 'Suggest a Link to a Bioscience Image Collection'. The right column is titled 'Browse LINKS' and lists various biological categories as clickable links. A vertical sidebar on the left side of the page contains a list of navigation links.

**The Higher Education Academy Centre for Bioscience**

**ImageBank**

**LINKS**

**Search LINKS to other Bioscience Image Collections**

Search LINKS by Keyword

[Suggest a Link](#) to a Bioscience Image Collection

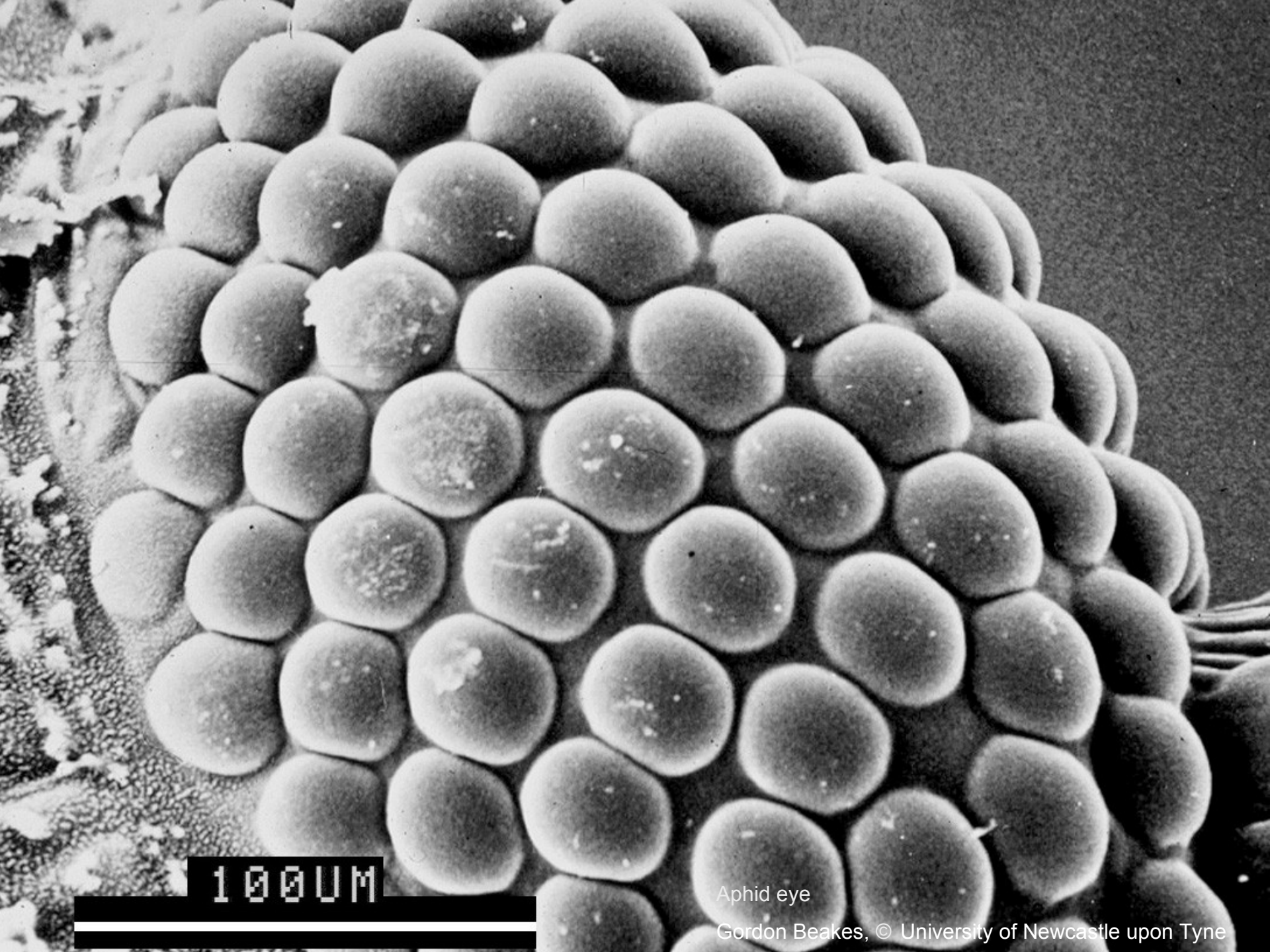
**Browse LINKS**

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- [Bioscience Gateways](#)
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100UM

Aphid eye

Gordon Beakes, © University of Newcastle upon Tyne



Bee orchid, *Ophrys apifera*

© David Bender





Bluebell Wood  
© Brian Wilson





*Coprinus comatus*

Gordon Beakes, © University of Newcastle upon Tyne

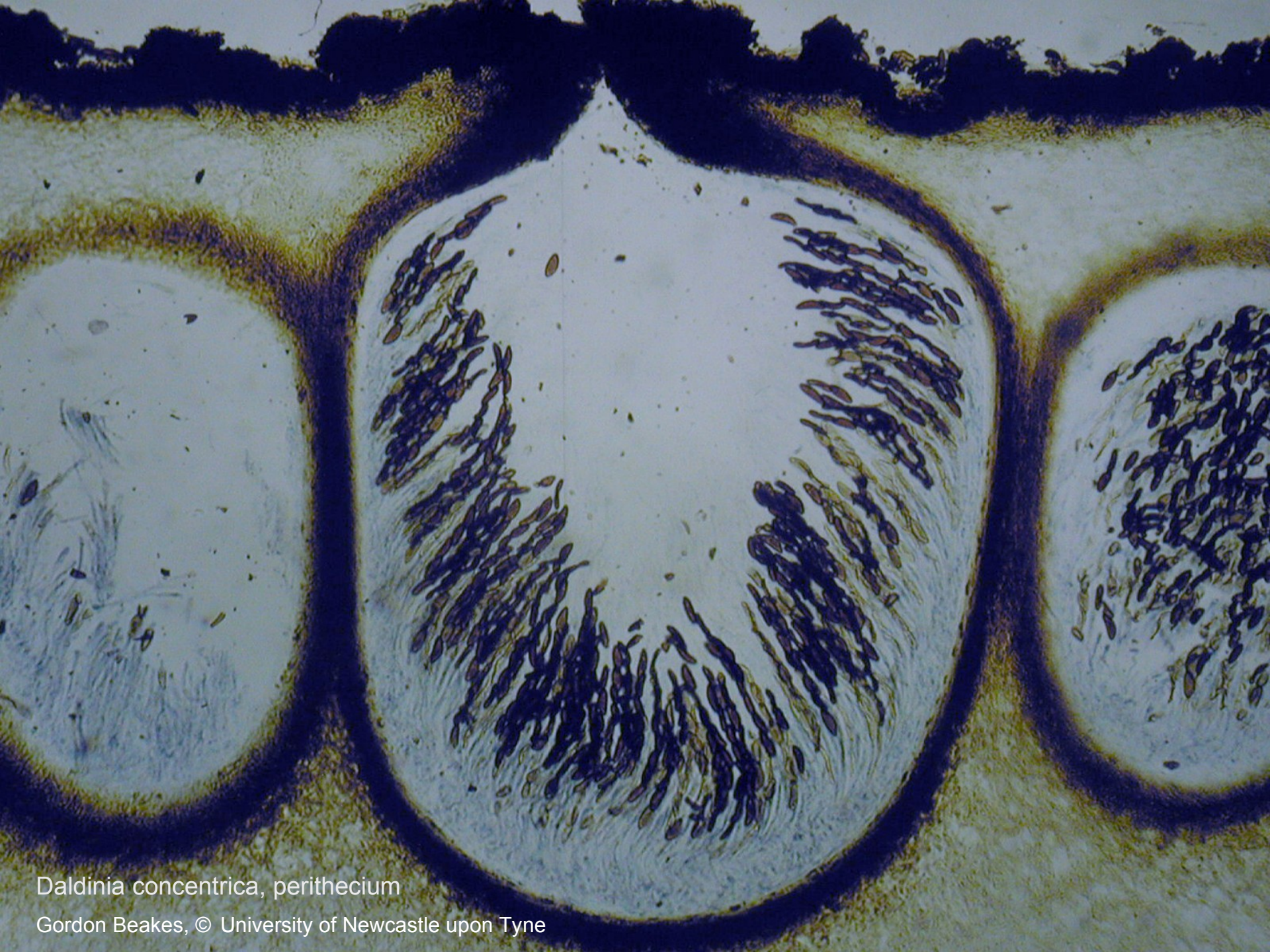




Durvillia sp., vascular bundle

Gordon Beakes, © University of Newcastle upon Tyne





*Daldinia concentrica*, perithecium

Gordon Beakes, © University of Newcastle upon Tyne





Fruit fly foot

Gordon Beakes. © University of Newcastle upon Tyne





Painted Lady, *Vanessa cardui*

© Paul Tatner





Eucalypt forest

Gordon Beakes, © University of Newcastle upon Tyne









Fritillary butterfly

2002/ 8/ 4

Paul F. Brain, © University of Wales, Swansea





Centrifuge





*Darlingtonia californica*

Gordon Beakes, © University of Newcastle upon Tyne



## ImageBank

- **Images sought!**
- **Submit your images to ImageBank, and help this resource to Grow**





## ImageBank

- For a limited time we are offering free digitization for slides and photos contributed to ImageBank.
- Please contact us if you have images you would like to share with the wider educational community.



# ImageBank

- **You can submit your images as:**
- **slides**
- **photos**
- **Or online via the ImageBank website**

<http://www.bioscience.heacademy.ac.uk/imagebank>





## **ImageBank**

- **You can contact us at:**

**Centre for Bioscience  
The Higher Education Academy  
Rm 9.15 Worsley Building  
University of Leeds  
Leeds LS2 9JT**

**Tel: 0113 343 3001**

**E-mail: [heabioscience@leeds.ac.uk](mailto:heabioscience@leeds.ac.uk)**





*Fucus spiralis* mature conceptacles

Gordon Beakes, © University of Newcastle upon





100um

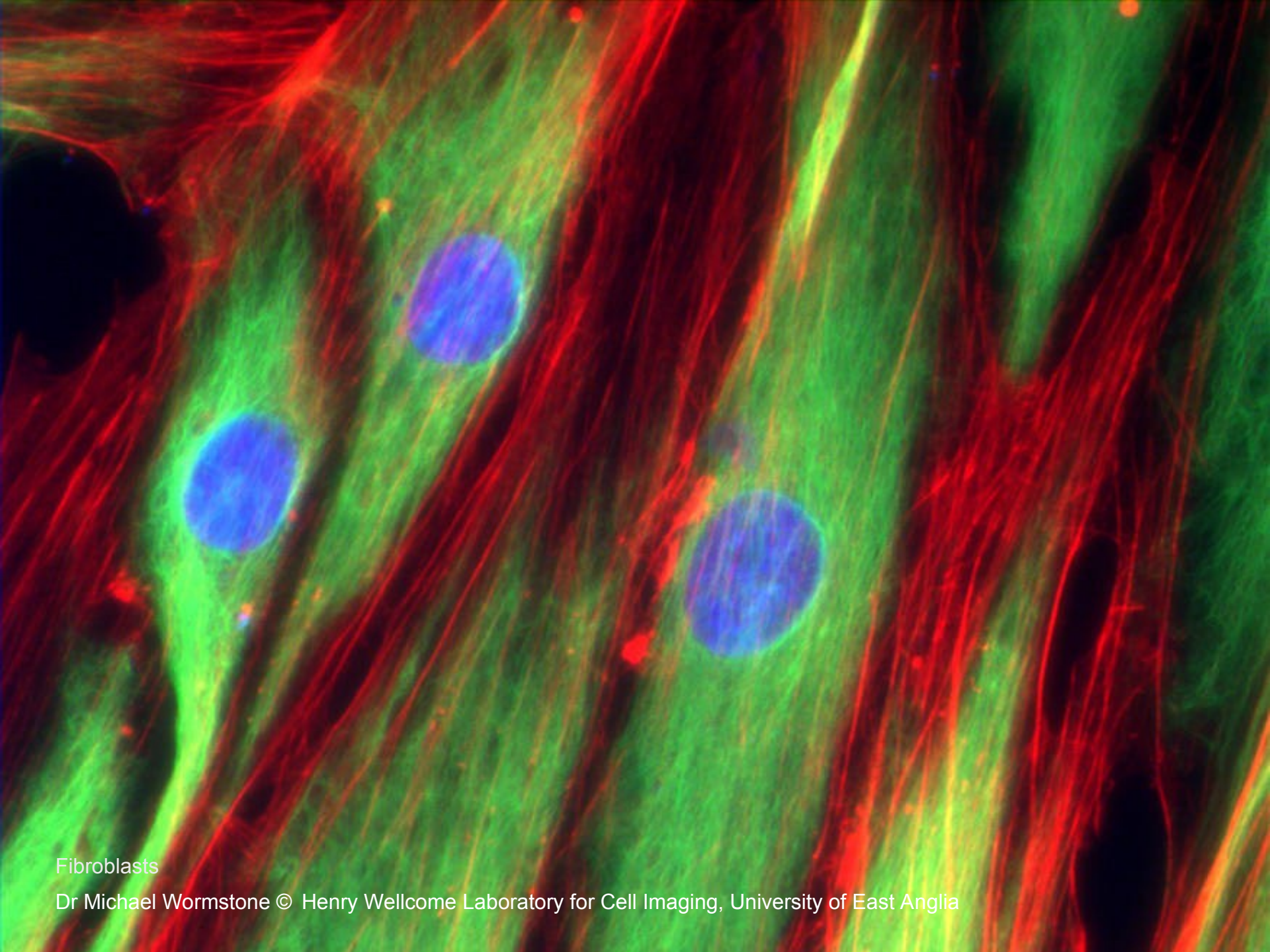
Fly tongue

Gordon Beakes, © University of Newcastle upon Tyne



*Arion ater*  
Dr Tony Cook, © University of Ulster





Fibroblasts

Dr Michael Wormstone © Henry Wellcome Laboratory for Cell Imaging, University of East Anglia

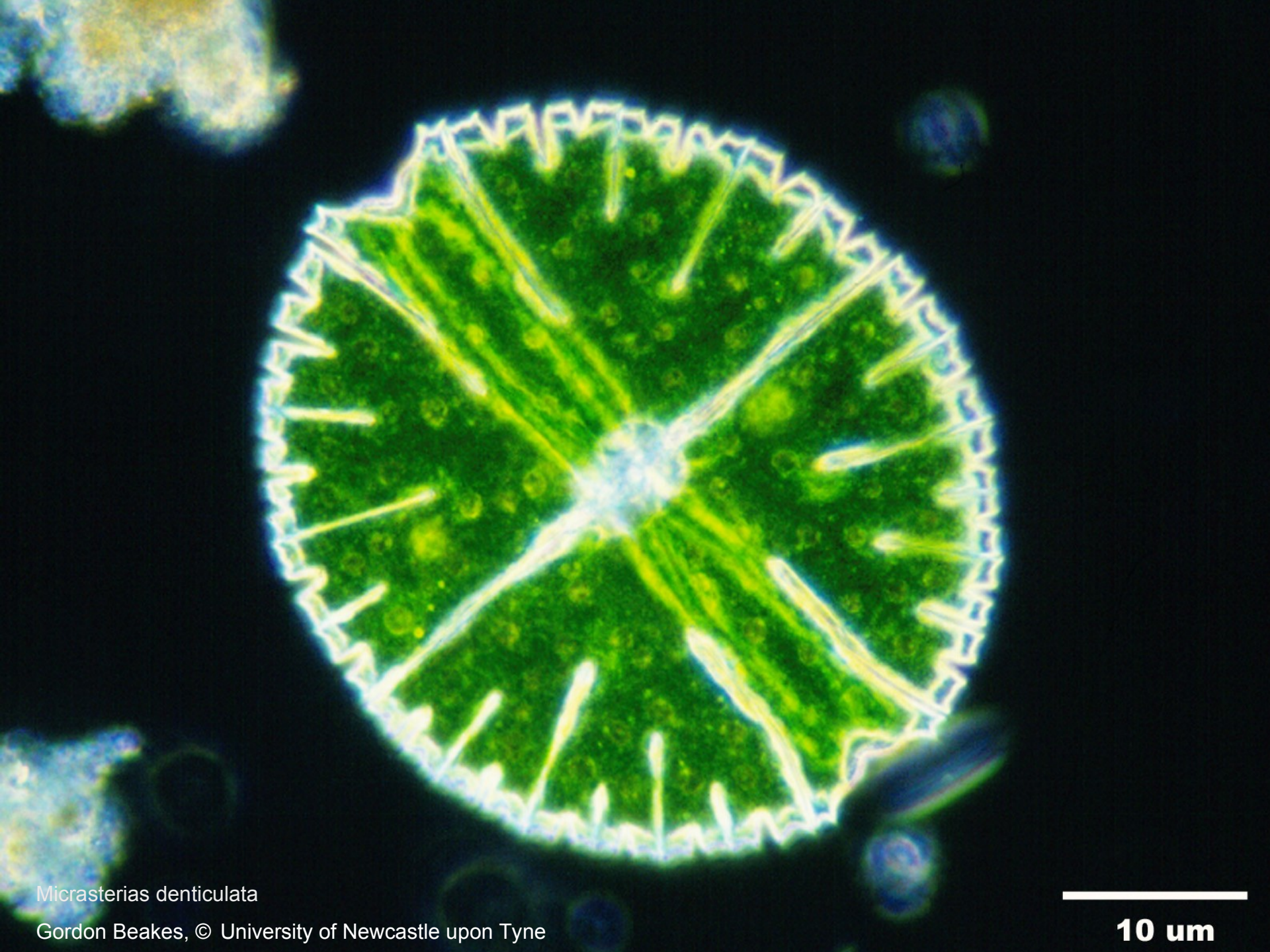




*Laccaria amethystea*

Gordon Beakes, © University of Newcastle upon Tyne

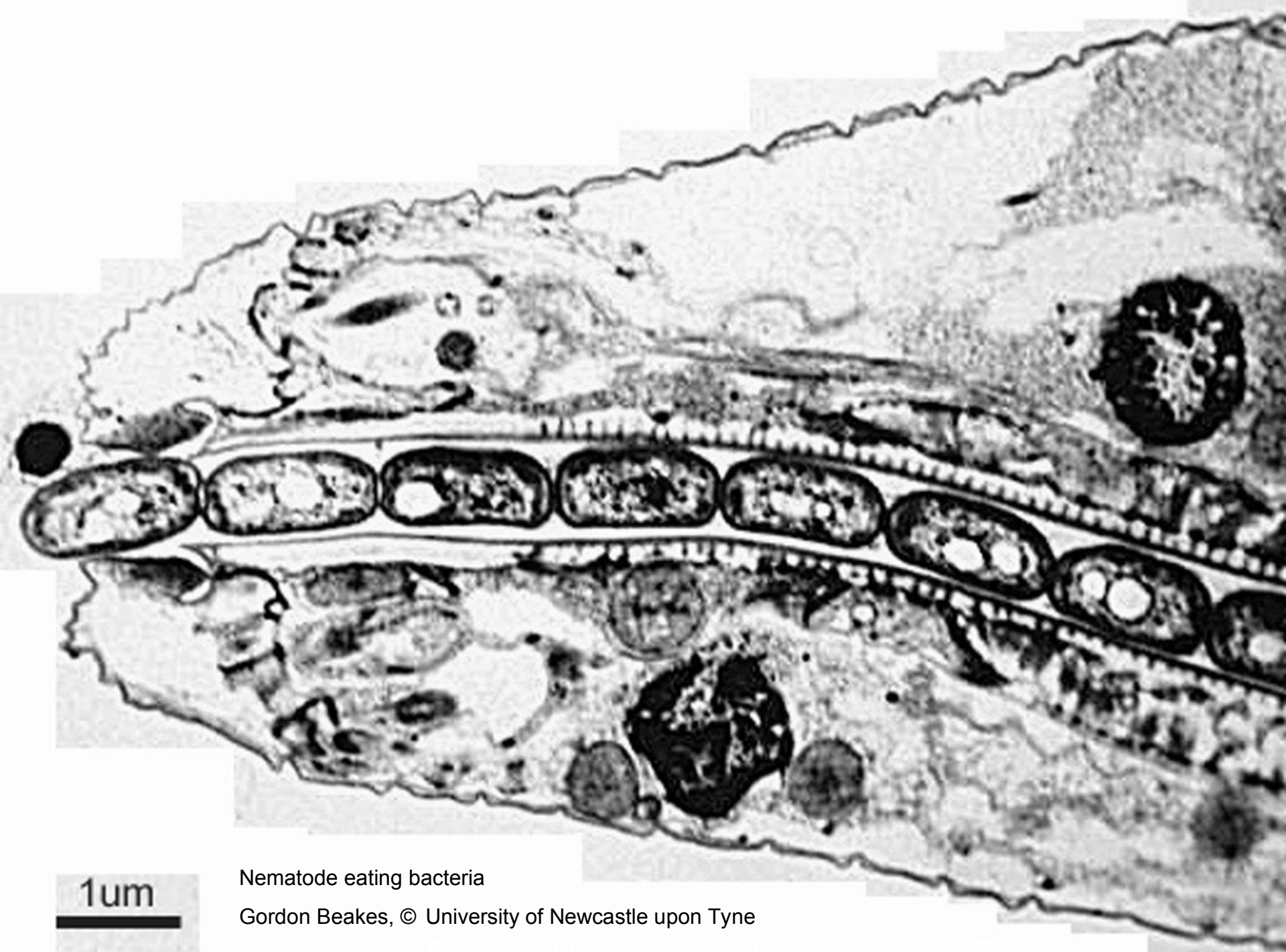




*Micrasterias denticulata*

Gordon Beakes, © University of Newcastle upon Tyne

10  $\mu\text{m}$



Nematode eating bacteria

Gordon Beakes, © University of Newcastle upon Tyne





Field of wild poppies

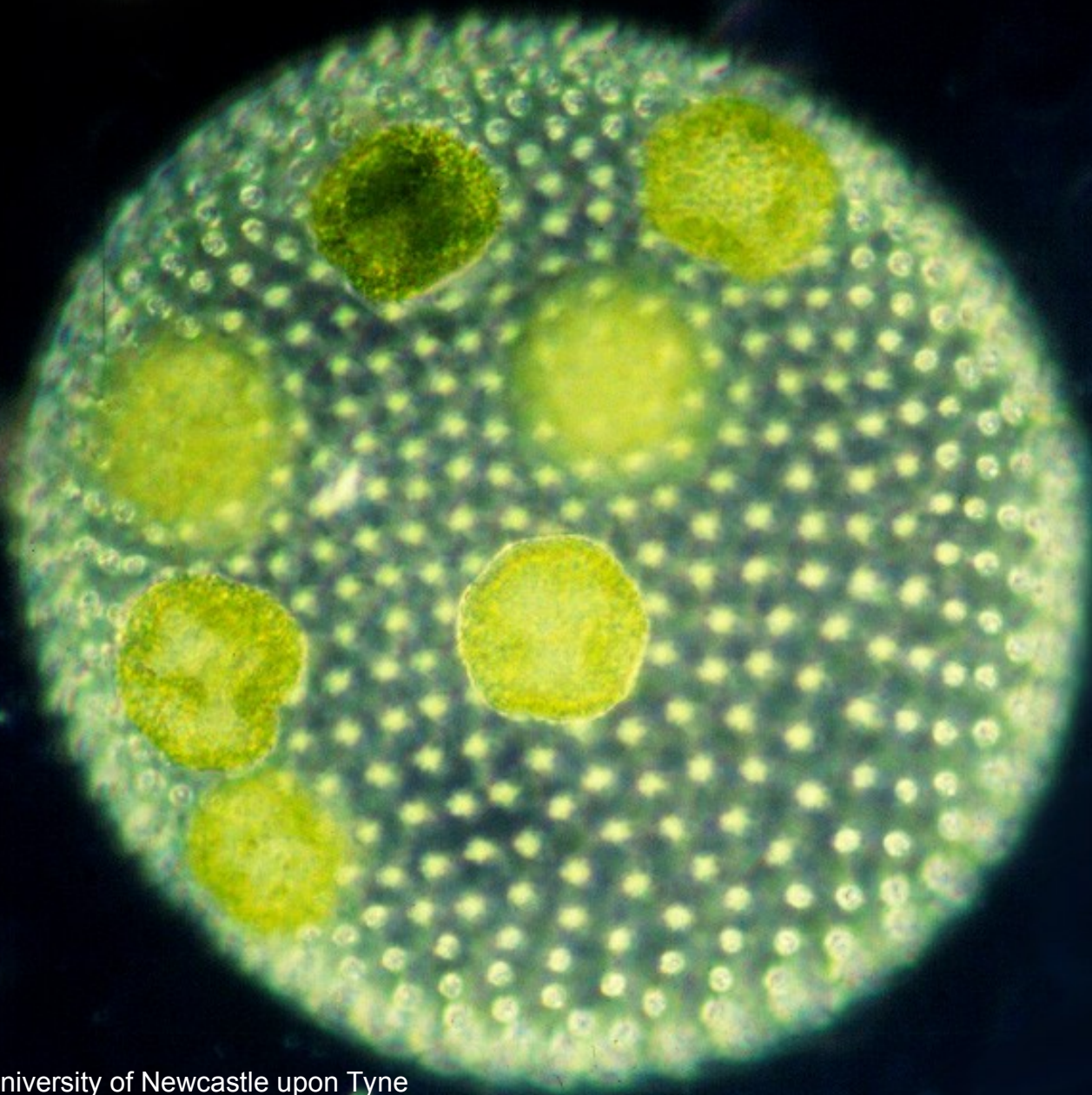
© Brian Wilson





2002/ 8/24

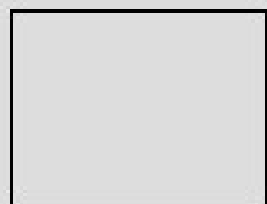




Volvox

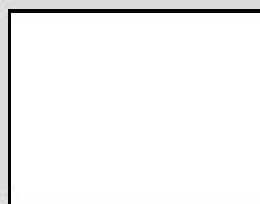
Gordon Beakes, © University of Newcastle upon Tyne

# TLC (Thin Layer Chromatography)



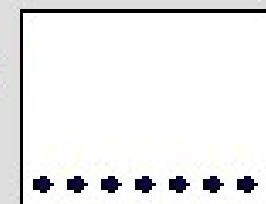
Thin glass sheet (plate)

Apply thin layer of silica, cellulose or alumina to glass plate



Coated plate

Samples (mixtures of materials) for analysis are applied



Coated plate plus samples to be separated

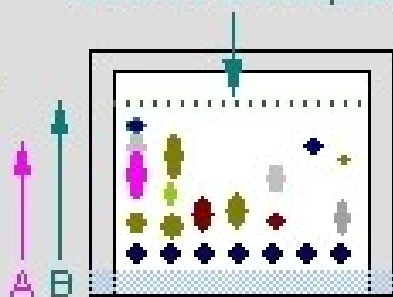
A = position reached by one component

B = Solvent front (position solvent has reached on the plate)

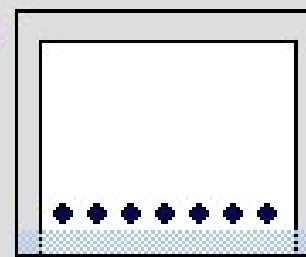
Capillary action draws solvent up the plate, carrying sample components at different rates

Plate is placed inside a chamber containing a suitable solvent

The R<sub>f</sub> value (which = ratio A/B) can characterise a component.

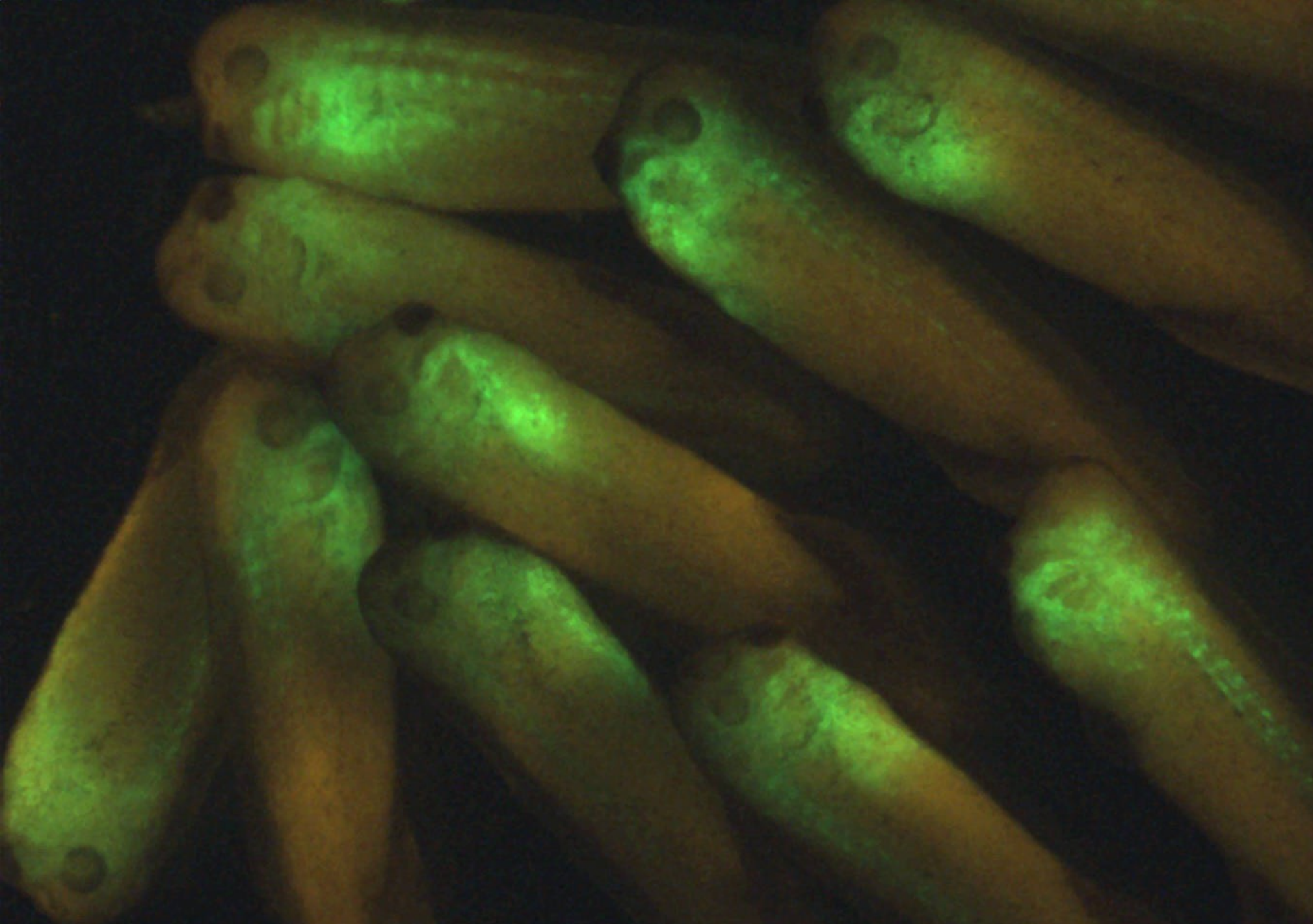


Coloured 'blobs' illustrate separated components



Coated plate inside solvent chamber - with solvent (and solvent vapour)





*Xenopus laevis* embryos