



Mike Gibson of Northampton U3A looks at the fascinating world of microscopes

As a former science teacher, I was always interested in microscopes and fascinated by the fact that these instruments provided an easy way of seeing the invisible world.

You don't have to look very far to see truly amazing things. For example, ordinary moss growing on your garden wall may almost certainly reveal the presence of some organisms called tardigrades, commonly known as water bears. These creatures are amazing survivors able to withstand desiccation, and even ionizing radiation.

Our group is for beginners so no previous knowledge is necessary. The idea is to share a common interest, join in practical activities, learn, and have fun.

We meet at Northamptonshire Natural History Society, which allows us to use their microscopes and other equipment.

So far, members have been introduced to

It's a small world

a number of fascinating topics including forensic investigations of fur and fabrics, common objects in and around the home, pills and potions under the microscope, making your own slides, pond life, rocks, minerals and sands from around the world..

Members requested a session on the amoeba which still remains a classic example of a simple pond animal consisting of only one cell.

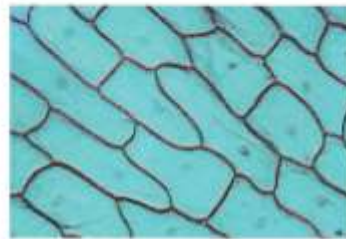
For a relatively common pond and soil



animal the amoeba is both elusive to find and difficult to see, so I bought in a stock sample of one of the largest, known as amoeba proteus.

We then examined samples of pond water and identified hydra viridissima, which is basically a sack with mouth and tentacles.

Amazingly however, these animals are one of the few species capable of regeneration of lost parts. They also possess a remarkably complex array of weaponry known as nematocysts used for both defence and food capture.



A piece of onion skin

Last year we were involved with scientists from the United States based at Stanford University in testing their latest development of origami-style folding microscopes for use in third world countries.

Future activities include a peek into the Northamptonshire Natural History Society's extensive archive of Victorian microscope slides and a tour of their unique worldwide collection of sand samples.

Topics suggested by members will feature how to use a camera with a microscope, looking at the structure of blood, insect anatomy, food under the microscope, and a visit to see a scanning electron microscope at Northampton University's School of Leather.

If you would like to know more about what we do, or fancy a visit to one of our meetings please contact me at the email address below.



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