
Microscope / camera recommendations for otoliths

Posted by JDM - 2011/06/07 10:04

Are there any recommendations for an affordable microscope/camera setup for capturing images of whole otoliths in distilled water (for counting annual bands)?

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Re:Microscope / camera recommendations for otoliths

Posted by jon - 2011/06/07 10:51

JDM,

Welcome to the CARE fish ageing forum!

What's your budget? Do you already have a microscope?

The cheapest option would be to get a consumer grade digital SLR camera (we used to use a Nikon Coolpix 990) and get an eyepiece adapter. If you have the money you can get a trinocular head for your microscope and a C-mount for your microscope. The downside to the digital SLR is that you aren't seeing exactly what you get when you take the picture and you have to manually transfer the files from your camera to the computer.

We spent the money and bought microscopy cameras (Leica DFC 420) that connect by firewire to a computer. This option allows you to see on the computer what the image will look like and automatically transfers the image to the computer hard drive.

Surprise surprise the more you spend the easier photography gets and the better the image quality. The first option would cost about \$1000 and the second about \$5000, not including the cost of the microscope.

Jon

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Re:Microscope / camera recommendations for otoliths

Posted by Willy - 2013/06/19 13:22

Jon, what software do you use for image acquisition?

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Re:Microscope / camera recommendations for otoliths

Posted by jon - 2013/06/19 13:39

We use LAS primarily. It came with the Leica DFC 420 camera. We also use ImagePro and the native TWAIN driver that also comes with the camera. There are TWAIN drivers that come with virtually all cameras and with it you can capture images into pretty much anything including Photoshop and MS Word.

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Re:Microscope / camera recommendations for otoliths

Posted by Willy - 2013/06/19 14:47

Thanks Jon,

We are considering use of Photoshop ... is CS6 Extended the way to go?

Willy

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Re:Microscope / camera recommendations for otoliths

Posted by jon - 2013/06/19 14:51

I have Photoshop Extended but I've never used the additional features in extended. Sounds nice, but I can't say how good it is.

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Re:Microscope / camera recommendations for otoliths

Posted by Nikki - 2013/06/19 15:38

I've never used CS6, but i do have a (very old) version of the "full" Photoshop at home. At work we use Adobe Elements to organize/edit our images, and so far i haven't found it lacking. Mostly it's cropping, resizing, adding dots/markers for annuli, adding text, adding a scale bar overlay, and merging images to make one bigger picture. I do a lot of closeups of both halves of a burnt oto to make one picture, or even four individual images of a cross section on older ones. I do all my merging "by hand" with Elements, instead of one of the photo panorama plugins, because i find the ones iv'e used to be lacking.

I think there might be a trial version of Elements you can try, too, to see if it's beefy enough for what you need. From what i understand it'll save you a bit of cash over the "full" Photoshop.

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Re:Microscope / camera recommendations for otoliths

Posted by Willy - 2013/06/19 16:37

Thanks Nikki! We are looking at various options, since we do not have enough in our budget to upgrade our old Image Pro Plus software. I also just learned of "ImageJ" free software from National Institute of Health, looks promising.

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