

Re: WTB Long Working Distance Micro/macroscope

Source: <http://sci.tech--archive.net/Archive/sci.techniques.microscopy/2005-04/msg00118.html>

- *From:* Aaron <nghy@xxxxxxxxxxx>
 - *Date:* 24 Apr 2005 01:27:02 -0500
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As you know, the typical macro setup is designed for situations where the subject is close to the camera lens.

I suggest you try a telephoto lens with extension rings or an extension bellows. As I mentioned before, I had a Minolta 35mm camera fitted with extension rings and a 135mm telephoto lens, that worked well at three to four feet. I could fill the frame with a small flower. The lens had a diaphragm. In general, this system provided very natural looking images with little sense that the subject was so r removed from the front lens. The same idea can be used with stronger telephoto lenses. The question here is your term "great distance". How far is that?

Ultimately, a 35 mm camera can be fitted to spotting scopes, a short tube refracting telescope or a catadioptric telescope. The Celestron C5 or C8 fitted on an altazimuth mount might be good candidates. There are all sorts of adapters and fittings to go between the telecope and the camera back. For subjects as samll as those that you want to photograph, I don't think depth of field will be an issue. I found that the out of focus fore and distant ground helped define the subject.

As you increase the distance and magnification, you will need greater light gathering power to maintain resolution and detail. You will need to use very short exposures to get sharp images. This fact of life also mediates towards larger objective lenses. The C8 has a relatively large objective and is just portable. Smaller scopes loose resolution and brightness.

Aaron

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On Sat, 23 Apr 2005 20:59:41 +0200, "Klaus D Schmitt"
<kds315@xxxxxxxxxxx> wrote:

>I should have been more precise:

>

>The lens I am looking for is a macroscopic lens for SLR and 16mm Film

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>applications, not a microscope lens. It will be used to capture rare and
>very
>sensitive animals up to 1/8" and smaller from great distance.
>
>The intended magnification range is between 0.1x and max. 3x, the lens
>has to have a built in aperture (iris) to control Depth of Field (DOF).
>
>All the types I mentioned have this ability
>
>Thanks to Kevin & Aaron!
>
>Klaus
>
>
>"Klaus D Schmitt" <kds315@xxxxxxxxxx> schrieb im Newsbeitrag
>[news:d4b3ju\\$92\\$03\\$1@xxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:d4b3ju$92$03$1@xxxxxxxxxxxxxxxxxxxxxxxx)
>> Need a macro/microscope lens with widest possible working distance.
>> There has been the Katoptaron LDM-1 and the MRM-1 by Infinity Optical
>> and the Questar M1.
>>
>> Any ideas, offers, sources, documents most welcome!!
>>
>> Thanks
>>
>> Klaus D Schmitt
>>
>> kds315 AT yahoo DOT com
>>
>>
>

• ***Follow-Ups:***

- ◆ ***Re: WTB Long Working Distance Micro/microscope***
◇ From: Klaus D Schmitt

• ***References:***

- ◆ ***WTB Long Working Distance Micro/microscope***
◇ From: Klaus D Schmitt
- ◆ ***Re: WTB Long Working Distance Micro/microscope***
◇ From: Klaus D Schmitt

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