Strategies For Closeup And Macro Insect Photography Speakers Notes for MAPS

Information on part one – Closeups without being up close.

Equipment discussed:

Zoom telephoto lens- should be at least 300mm at the long end, 400mm is better.

Cropped sensor camera will give you more reach if you have one

36 mm extension tube to correct for focus breathing and increase size of subject in the frame. For DSLR's I have used the Kenko tubes for years with no problem. For some mirrorless cameras Fotodiox makes a 35 mm tube that is very high quality.

Monopod- 3 or 4 sections. I use the ProMedia Gear model TR42M because it has an Arca Swiss clamp on the top for a stronger connection to the PMG tilthead but there are other models. This is a very sturdy but lightweight monopod but may not fit with small hands. Their 34 series models are another option.

Tilthead- I use the ProMedia Gear HM 1 tilthead to keep the center of gravity straight down over the monopod and so you can just tilt the camera and lens down without having to lean the whole camera and monopod forward.

Note: I use the PMG brand because these products are very well designed and built to last forever. This company makes professional grade accessories and provides excellent customer support. I highly recommend them.

Flash- Only needed for a little fill light or when photographing backlit subjects. For normal use, set flash on manual and power at 1/32nd or 1/64th power for an average full size flash. This will prolong your battery life and the flash will recycle much faster. I am currently using the Godox V1 for two reasons. One is that is has a rechargeable lithium ion battery that lasts all day easily and recharges almost instantly in manual mode and secondly, it is a round head flash that provides a more even, softer light as opposed to the harsher common rectangular flashes.

This whole setup is unusual and you certainly don't have to use all of these components but I do feel that each of these accessories are beneficial to capturing the overall resulting images and making my outings more successful and enjoyable.

Information on part two- True macro insect photography – Lifesize or better.

While the equipment used in part one may be a bit unusual, the setup I use for this segment is very common for the people who specialize in macro insect photography. I have done extensive research on the subject and field tested all of the equipment listed below.

As I mentioned in my presentation, there is no absolute best or correct way of photographing insects nor is there an absolute worst way, as in "you must never do this or that". There are several differences of opinion among the "full-time" insect photographers with regard to technical issues and techniques. But, the products listed here have all great reviews by everyone.

Camera bodies- Seems like APS-C or micro four/thirds bodies like Olympus, are very popular. Full frame is fine if that is what you have. Mirrorless cameras do have an advantage, especially when it comes to manual focusing with focus peaking enabled.

Lenses- I have found that the Laowa lenses have come highly recommended and I have tested three of them myself. The image quality is equal to or maybe even superior to my Canon RF macro lens. I mentioned the Laowa 90 mm f 2.8. This would be a good general purpose macro lens which could also be used for portraits. It has a 13 blade diaphragm that produces a very nice bokeh. The Laowa 85mm f 5.6 is more of a dedicated macro lens due to the f stop limitation of 5.6. However, I find it to be a real pleasure to use because it is so lightweight and easy to handle even with one hand (which is sometimes necessary). Both of these lenses give 2:1 macro magnification ratio or twice life-size. They are made for full frame cameras but you can use them on a cropped sensor body which is what I do. They also make a 65 mm f 2.8 macro lens for some APS C bodies which is small and lightweight and also provides for a 2:1 magnification ratio.

These lenses are relatively inexpensive but very well built with all metal and glass components. They are completely manual lenses, so no auto-focus and you do have to set the aperture on the lens ring. Neither is a problem though since you will not be changing the aperture much anyway and manual focus is the preferred method for insect macro photography. If you have focus peaking turned on in your camera it is actually easier and more accurate than autofocus.

Closeup filters- Nisi filters are all metal and glass and very well built. They make 3 sizes- a 77mm {filter thread size) which is a 3 diopter strength and suitable for a lens of 200mm to possibly300mm to give a 1:1 magnification ratio. There is a 58mm size which is 5 diopters for lenses with a focal range about 100-150 mm. They also make a 49mm size which is very strong at 9 diopters which could be used on a 50mm or so, and even 100mm but probably not a good option to start with for a beginner.

Note: the higher the diopter- the stronger the filter is. Also you would use a lower diopter for a longer focal length lens to achieve the same 1:1 magnification ratio.

You can also add a closeup filter to a true macro lens to give a higher magnification ratio. For example, a 1:1 macro lens could become a 2:1 lens or twice life size with the addition of the appropriate closeup filter.

The Raynox filters are less expensive but equally as sharp as the Nisi. They come in a 4.8 diopter and an 8 diopter (which is the most common closeup filter used for insect macro photography). The lens screws into a holder which clips on to the inside filter threads of your lens. It fits lenses with a filter size of 52 to 67 mm.

Both the Nisi and Raynox filters are very high quality, either two or three element lenses which will not degrade your image as do the cheap single element lenses.

You should check the manufacturer's literature for correct strength for your lens's focal length and possible vignetting if used with a full frame camera.

Flash- Use what you have. For a small lightweight flash to use for this purpose the Meike MK 320 is a lot of flash for the money. It is powered by 2 AA batteries and has a low profile over your camera. It also has a modeling light which is very helpful.

The Godox V350 is also nice and the one that I use most of the time. It is a little more powerful and has a rechargeable lithium battery pack that lasts all day and recycles very quickly.
Both of these will work for single frame insect photography. If you want to do focus stacking using flash in the future you would need a full size flash to keep up with the fast frame rate. This is a pretty advanced technique but gives amazing results if you want to put in the effort.

Flash diffusers: These will give you a nicer soft light. (Although the diffusers that come with me Meike and Godox are OK to get you started.)

The Angler diffuser available from B&H is very inexpensive and fits over your lens. It is not bad for the price of $6.00.

The one I use is made by AK Diffuser and only available through their website. You provide the make and model of your camera, lens, and flash and they will send you the best fit for your setup. It is by far the best one for this purpose. You should pick up a power supply for the modeling light that is included with the diffuser. The one I use is a nice size - brand is Miady and available from Amazon. As of right now, there is a link listed on AK's website under top gear picks.

I hope that you enjoyed my presentation and if you have any questions feel free to contact me at 708-479-5733 or email amzalvis@hotmail.com.