



# Macrophotography

*or my love affair with bugs ...*

*Where I started ....*

*What I tried ....*

*What I do now ....*

# *My brief photographic background ...*

- *In The Beginning ...*

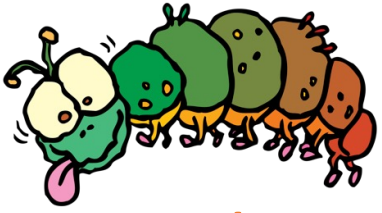


- I took photographs with the cheap plastic cameras of the time when I was a child / teenager ... **but** couldn't really afford the film processing
- Took some photographs as a young adult ... had a basic Olympus SLR ... **but** couldn't really afford the film processing
- Did very little photography for a **l o n g, l o n g** time .....



## *My brief photographic background 2...*

- After 32 years in the primary school classroom I gained employment at the Brisbane Botanic Gardens, Mt Coot-tha as an Education Officer (for 11 years)... **one day my wife said *'you used enjoy photography'* ...**
- So I bought an Olympus DSLR and then later a Nikon DSLR ... *could afford this type of processing!*
- Started taking lots and lots of photographs .....



## *Why macrophotography 1 ...*

- At the botanic gardens my role as a Education Officer required me to work with school children (P-12) to adults.
- For the school children the program required us to offer activities that were linked to the Australian curriculum with subjects such as science, geography, art, mathematics.
- There wasn't a strong botanical emphasis.
- (Great! As I'm not a plant person).

## Why macrophotography 2 ...



- I learnt about the plants that I needed to know about and many others along the way.
- But I did become very fond of the insects, arachnids and all sorts of bugs that I came across when working with the school children.
- *New note : I retired from the botanic gardens' education program 5 years ago but I'm still at the botanic gardens usually about once a week doing what I love to do.*
- *Working at the botanic gardens was the 'good stuff' of teaching ... teachers will know what I mean.*

## Why macrophotography 3...



- I began to take photographs of bugs (lots and lots with limited success).
- I joined a couple of macrophotography groups on Meetup.com and was still using a standard zoom lens at this stage.
- I needed to learn more so I watched many YouTube videos on macrophotography.
- From here I dived headlong into one of the hardest and most frustrating types of photography I could ever attempt.
- (but OMG I'm now addicted!)



# *What did I learn in the beginning ...*

## *The lens ...*

- Initially I tried an extension tube on my Nikon 18-300mm zoom lens with limited success.
- One day the tube became stuck on the lens and I had to cut it off with a very fine hacksaw. (very stressful stuff ... but the lens survived) 🙌😄🙌
- I very soon realised I needed a macro lens if I was to get the level of success that I was looking for.

## What did I learn in the beginning 2...



### The lens ...

- After much research I settled on a Tamron 90mm macro lens to suit my Nikon D500. I read that 90mm was in the popular range of 90 to 105mm and, therefore, had a reasonable working distance.
- A reasonable working distance means less chance of scaring away your subject as you don't need to get so close.
- *New note : This lens died after it was out of warranty and was too expensive to fix so I sold it as is and bought a Nikon 105mm macro lens.*



## *Aperture ...*

- I soon found out that when shooting very small subjects, such as insects, the depth of field is extremely narrow .. a number of millimetres or so.
- As I primarily shoot hand-held I embarked on much experimentation with regard to the aperture trying to get as much as possible of the subject in focus.
- I also read that a macro lens will probably have a sweet spot with regards to aperture.

## Aperture 2 ...

- After much trial and error I found out that the Tamron was around f10 - f11.
- *New note : The Nikon 105mm macro lens was f13.*
- *My new OM System 90mm macro lens is f11.*




## Shutter speed and focusing ...

- I soon found out that the small vibrations from your hands, breathing, etc will make focusing harder.
- I mostly use 1/250 sec as I use a flash. (higher in natural light)
- The flash also helps to 'freeze' the subject.
- After a while I began to get used to the technique of using the autofocus to find the subject and then doing a body-rocking motion to manually focus in an attempt to get the best possible results.
- *(Possible Side Effect ... Passing out from holding my breath too long)*
  - *New note : gone back to using autofocus more due to issues with my right eye.*



## Shutter speed and focusing 2 ...

Focus, You Fool, Focus

- I also quickly realised that if I got 1 shot out of 5-6 or more for each subject in 'some sort' of focus I was actually doing well.
- I remembered reading these words: *'Expect to throw away lots of images when doing macrophotography'*.
- I average around 6-8 shots I keep out of every 80-100 I take.
- As I usually shoot bugs and other small creatures that are often moving quite quickly I rarely use a tripod. 
- *New note : My new camera will do in-camera focus stacking (with flash) and I won a focusing rail so I'm slowly experimenting with these as well.*



## Angle ...

- Initially I made the common mistake of conveniently snapping the photo from where I stood ... often just looking down at the subject.
- This made my images look like every other newbie macrophotographer out there .. *a bit boring*.
- My research suggested that I should look for uncommon angles, such as shooting the subject from the side, from the front, or from below.
- So now I mostly try to look for variation in shooting angles.
- Not easy as age creeps up on you .....



## Flash and diffuser ...



- I initially would take all my macro shots only using natural light.
- This was fine until the subject was in a low light situation.
- It often also resulted in a really high ISO and subsequently quite noisy images.
- *New note : I would use auto ISO to keep the shutter speed and aperture constant.*
- I soon realised that I needed to use a flash and some sort of diffuser after watching more experienced photographers at work and seeing their results.
- I proceeded to experiment with a number of diffuser types ...

## *Simple diffuser ...*

- This was the simple diffuser that came with my flash (Nikon SB-910)
- It added some light to the subject
- Some diffusion did occur
- Too far from subject
- Not able to direct the light onto the subject



## *Slip on diffuser ...*

- Simple slip on diffuser
- Simple foldup design
- Quite reasonable diffusion
- Directs some light to the subject
- Cheap
- Still somewhat too far from the subject
- Easily blocked by leaves, etc





## *Honeycomb diffuser ...*

- I tried to think outside of the square
- Found this on the internet
- Relatively cheap
- Does diffuse the light somewhat
- Difficult to direct towards the subject
- Too far away from subject
- Easily blocked by leaves, etc



## Ring flash ...

- Popular with many photographers
- Attaches to end of the lens
- Illuminates the subject better than the others
- Can be set to **flash** L/R/Full
- Can be set to **constant light** L/R/Full
- Generic brands are not too expensive
- Not blocked by leaves, etc
- **Not overly bright**
- **Leaves little circles on the bug's eyes** 🐛



## Flash Diffuser ...

- All that I use now
- Very good diffusion (softens the light well)
- Reduces highlights
- Light is directed towards the subject
- Easily fits to existing flash and camera lens
- Built to suit the flash and lens
- Not so much affected by leaves, etc
- Solidly built
- Can bump leaves and twigs which can scare the subject if you're not careful



## My Current Macro Lens...

- OM Systems 90mm Pro Macro Lens f3.5
- Full frame equivalent is 180mm.
- Most macro lenses have distance limiters on them.
- It takes a while to get used to these.
- This lens on the **S** Macro setting is 2:1 most macro lenses are 1:1.
- I usually start with **0.25m to  $\infty$**  and change to a different limiter if I need to get closer.



## Camera Settings for my OM-1 Setup...



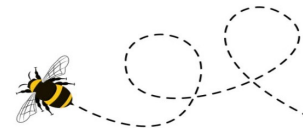
- I use the flash and diffuser for every shot.
- After much experimentation I have settled on the following ...
- Always in Manual Mode
- Shutter speed .. 1/250sec
- Aperture .. F11
- ISO .. 200
- Flash .. Manual power adjustment only (*usually beginning at ¼ strength*)
- I only alter the flash power setting if I find the image subject is over or underexposed. I don't change the camera settings at all.

## *Other Considerations ...*

- I use a **very small** custom single focus point which I will place over the subject's eye. If I don't get the eye in focus the image is usually discarded when processing.
- I use spot metering.
- When first using the mirrorless for macro I found that everything was **dark** in the viewfinder. This had me worried. But ... YouTube to the rescue.
- I then found out about the S-OVF setting that turned off the effects of exposure, white balance, etc in the viewfinder. It is in effect simulating an optical viewfinder. Now I could see the subject, etc (especially at night).

## Other Considerations 2...

- I use a programmable setting on the camera to store my macro settings (*S-OVF, the autofocus preferences, image stabilisation preferences, shutter speed, ISO, aperture and all the 'other stuff' I've been fiddling around with for months*)
- I have turned on the preview mode in the camera (1 sec) when doing macro as it allows me to instantly check that my subject is in focus without taking my eye from the viewfinder.
- I don't use burst mode for macro as it doesn't allow me to quickly and carefully check my composition and focus before releasing the shutter. But I will take 5-6 shots in progression if I get the chance. (some subjects are very elusive and flighty)



## Other Considerations 3...



- I try not to press the shutter release too firmly in my excitement when photographing the subject as this can cause a blurred image ... **gently, gently.**
- Using back button focus helps to reduce the chance of vertical camera movement when photographing the subject and, also, by turning off the autofocus activation on the shutter release button it doesn't 'mess up' the focus when using manual focus **because ...**
- I have set my camera to respond to both autofocus and manual focus. (S-AF+MF)
- I have also tried MF focus peaking with 'some' success.



## *Other Considerations 4...*

- I use single autofocus as I find it's more effective than continuous autofocus for macro photography.
- My OM System 90mm macro has a programmable button on the lens body which I have also set to activate autofocus when needed.
- When doing night macro photography (quite a challenge) I use a modelling light on the flash to help focus on the subject.
- My Olympus flash has a built-in one but my Godox doesn't so I Velcro an LED light to the body and use that when using that flash.

## *Post Production Considerations...*

- I want the subject to be nicely illuminated (hence the flash and diffuser).
- I like to image to tell a story so I usually have some of the background in the image (usually subdued and I don't heavily crop).
- The macro lens naturally creates a lovely bokeh.
- I often add a soft vignette to my images to help to keep the background a little more subdued and highlight the subject.
- The camera settings I use basically take every image underexposed.
- It's the flash that illuminates the subject and I work on it from there.

## Post Production ...

- After much experimentation and agonising I have come to terms with and now use the following software ...
- *DXO Pure Raw 3* (all 'keepers' are processed through this program initially)
- *Adobe Bridge*
- *Adobe Camera Raw* (most of my editing is done here)
- *A bit of Photoshop*
- *The Nik Collection* (especially *Color Efex Pro* and the *Sharpening* tools when needed)
- *I also use a Wacom tablet to assist with editing, especially masking ...*

New file

Open

Home

Learn

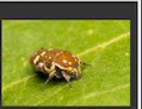
FILES

Your files

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Lightroom p

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P10626...XD.dng



I will make some global adjustments when first working on a image.

But I use the masking tools extensively in my editing to make very selective adjustments.  
eg:  
exposure, contrast, highlights, shadows, sharpening, texture, etc

If I think it will help I may go into the Nik collection and use control points, etc in, say, ColorEfx Pro or Sharpening to improve the image even more.



ISO 200 90 mm f/11 1/250s

+ Create New Mask

Mask 2

Brush 1

Intersect

Mask 1

Show Overlay

Brush

Size 2

Feather 75

Flow 100

Density 100

Auto Mask

Mask 2

Preset None

Amount 100

Light

Exposure +0.45

Contrast +11

Highlights 0

Shadows +12

Whites 0

Blacks +10

Color

Temperature 0

Tint 0

Fit (88.8%)

100%

☆☆☆☆☆

Camera Raw 16.1  
P1142704-ORF\_DxO\_DeepPRIMEXD.dng - OM Digital Solutions OM-1



ISO 200 90 mm f/11 1/250s

Roundness +25  
Feather 61  
Highlights 0  
Grain 0

Curve

Color Mixer

Mixer Point Color



Hue 0  
Saturation 0  
Luminance 0

Range +50

Hue Range 15 / 24 58 / 72  
Saturation Range 6 / 32 68 / 100  
Luminance Range 37 / 88 100 / 100

Color Grading  
Detail  
Optics  
Lens Blur Early Access

Fit (84.8%) 100%

Adobe RGB (1998) - 16 bit - 3444 x 2583 (8.9MP) - 300 ppi

Cancel Done Open Object

I'm also finding the new Point Colour tool quite useful when working with highlighted areas that may be created by the flash on shiny bugs.

*\*Some \*Images from \* My \*Collection*



You don't have to be perfect  
To be beautiful !



*Australian Tiger Dragonfly Male*

Taken with 75mm to 300mm OM System Lens



## Australian Tiger Dragonfly

Taken with 200mm to 500mm lens ...





*European honey bee*

I'm not dead!



Male Blue Banded Bee Roosting

# Bluebottle Blowfly





Evening Brown Butterfly



*Aussie Bronze Jumper*

# Crab or Flower Spider



# Crab Spider with Lunch



'The Perils of Pollination'  
(fire-tailed resin bee)

*Dragonfly From a Night Shoot*







Smiling Dragonfly

*Dronefly in Gardenia thunbergia Flower*



Winner of the Australian Pollinators' Week Photographic Competition 2023



*Dronefly*



*Lady Beetle Emerging from Nymph Stage*



*Fiery Skimmer Dragonfly*



*Flesh Fly*



*Fly Showing Its Compound Eyes*

From the Rainforest at  
Dorrigo National Park



*Pink Caps Fungi*



# Coral Fungi



*Favolaschia claudopus fungi*





*Coprinellus disseminatus*

*Garden Jumping Spider*





*Garden Jumping Spider with a Fly Lunch*



*Dead Gerbera Flower in the Breeze*



Golden Tailed Spiny Ant Drinking



*Yellow striped Flutterer female*



# Green Grasshopper





Cute Green Grasshopper



*Mopsus norman male*



Green Lynx Spider

Gumleaf Katydid Nymph





*Cotton Harlequin Bug*



*Cotton Harlequin Bug*



*Cotton Harlequin Bug Male*





*Cotton Harlequin Bug Female*



*'Getta Grip'*



*Honey Bee in Salvia Flower*



*Hoverfly in Camellia Flower*

# Garden Jumping Spider



Juvenile Katydid



# Tiny Midge on Gerbera Petals

2 - 3mm in length



*Mopsus mormon* female with dronefly







*Mopsus norman male*

# Net Casting Spider

AKA Ogre-Faced Spider





# Net Casting Spider

AKA Ogre-Faced Spider



*Phumbago Blue Butterfly Female*



*Happy Praying Mantis with Dinner*



*Another View of the Praying Mantis with Dinner*



Robber Fly

A close-up photograph of an Eastern Sedge Frog perched on a thin green stem. The frog has a brownish-tan body with a prominent yellow stripe running horizontally across its face and back. Its eyes are large and dark. The frog's skin appears slightly textured, and there are some small white, hair-like structures on its back. The background is a soft, out-of-focus green, suggesting a natural habitat. The text "Eastern Sedge Frog" is written in a yellow, cursive font at the bottom left of the image.

*Eastern Sedge Frog*





*Grumpy Eastern Sedge Frog*

# Teddy Bear Bee





*The Next Generation*



*Male Megachile sp. Native Bee*



*Vegetable Grasshopper Head*

*Vegetable Grasshopper Feeding*



# Wasp Mimic Hoverfly





Paper Wasp (Take Photo .. Run Quick)



# Juvenile Katydid



## *Where do I shoot?*

- Brisbane Botanic Gardens, Mt Coot-tha
- Edenbrooke Lake (200 metres away from my home)
- Roma St Gardens
- City Botanic Gardens
- Tamborine Mt Botanic Gardens
- My backyard and anywhere when on holidays

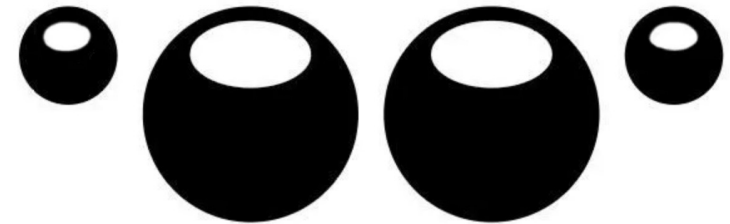
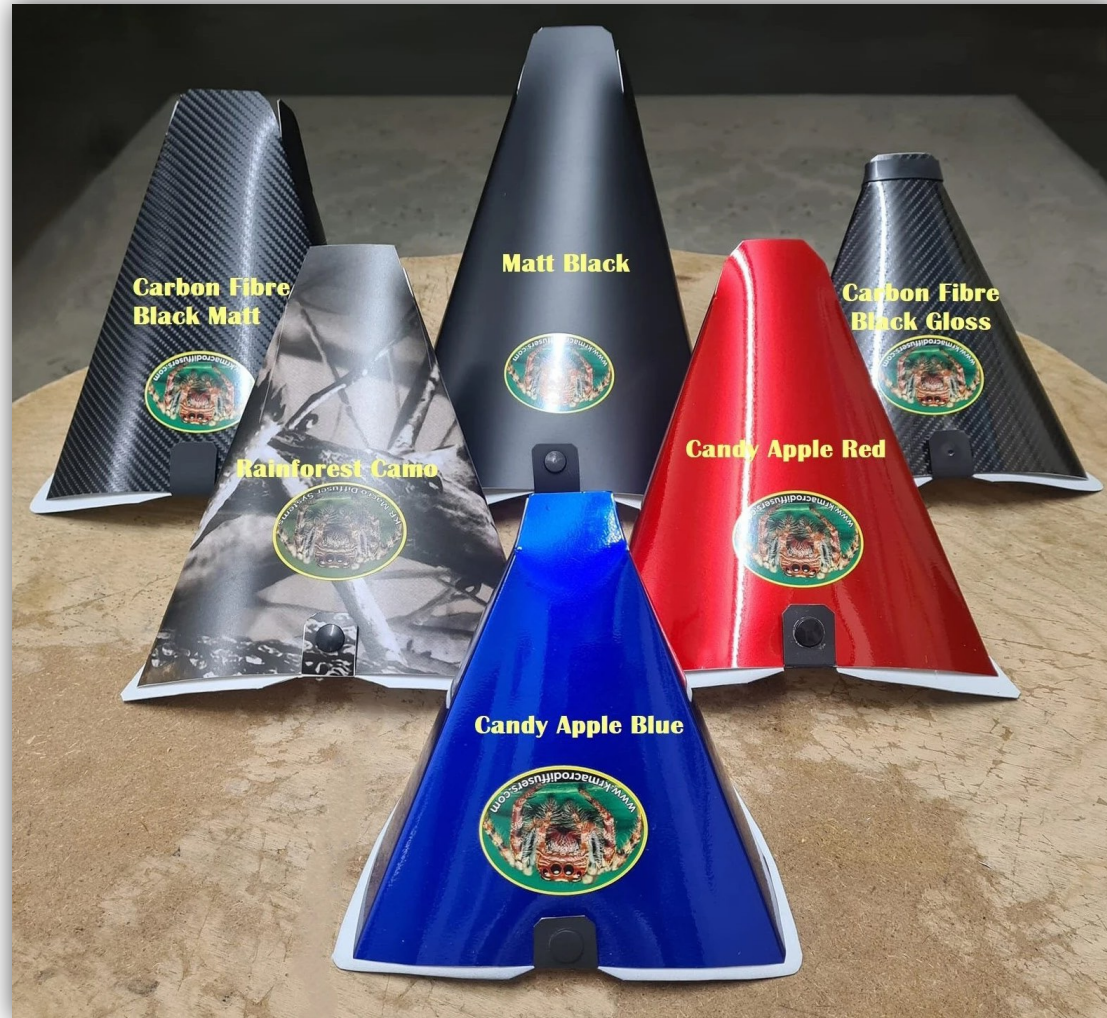


## *Groups to Go With ...*

- **Brisbane Bug Snappers** (Meetup.com) .. Kerry runs this group
- Great bunch of friendly people of all abilities
- My Facebook Group .. **Let's Go Macro**
- I usually do some week days with occasional weekends

# My Diffuser ...

- My current diffuser is made by Kev Russell from Laidley, Qld.



K R M A C R O D I F F U S E R S

[krmacrodiffusers.com](http://krmacrodiffusers.com)

That's All Folks

Let's Go and Photograph My Cousins

