Photography Group: Pictorial Session

Butterflies and Flowers

by Stephen Jones

Flowers and Butterflies

by Stephen Jones

Flowers and Butterflies

by Stephen Jones

Except as noted, all photos were taken with APS-C format cameras.

ISO200, f8, 1/125th sec., 16 mm focal length

ISO200, f11, 1/250th sec., 17 mm focal length

ISO200, f9.5, 1/200th sec., 31 mm focal length

ISO100, f7.1, 1/320th sec., 40 mm focal length

ISO100, f9.5, 1/90th sec., 16 mm focal length

ISO200, f11, 1/250th sec., 31 mm focal length

ISO100, f11, 1/125th sec., 90 mm Macro lens

ISO125, f8, 1/200th sec., 90 mm Macro lens

ISO100, f8, 1/200th sec., 210 mm focal length

ISO100, f8, 1/250th sec., 85 mm focal length

ISO100, f9.5, 1/250th sec., 24 mm focal length

Samsung Galaxy S4 mini smartphone

ISO64, f2.6, 1/11,200 sec, 3.7 mm focal length

Sony A6000 camera

ISO100, f5.6, 1/1,000 sec, 41 mm focal length

Lighting Matters

Lighting Matters

Front lighting

will generally provide fairly even lighting, but with little or no shadows, the subject could look dull.

Brightly coloured flowers can end up overexposed with the highlights burnt out – to try to avoid this when using the standard evaluative exposure metering, select minus 1 or even minus 2 stops exposure compensation. Alternatively use a selective or spot camera metering option.

ISO100, f8, 1/250th sec., 70 mm focal length

ISO100, f9.5, 1/200th sec., 70 mm focal length

Lighting Matters

Front lighting

will generally provide fairly even lighting, but with little or no shadows, the subject could look dull.

Brightly coloured flowers can end up overexposed with the highlights burnt out – to try to avoid this when using the standard evaluative exposure metering, select minus 1 or even minus 2 stops exposure compensation. Alternatively use a selective or spot camera metering option.

Backlighting

can provide an attractive halo effect around the subject. Either use fill-in flash or increase indicated exposure to retain shadow detail.

ISO200, f8, 1/200th sec., 85 mm focal length

ISO200, f8, 1/320th sec., 62 mm focal length

Lighting Matters

Front lighting

will generally provide fairly even lighting, but with little or no shadows, the subject could look dull.

Brightly coloured flowers can end up overexposed with the highlights burnt out – to try to avoid this when using the standard evaluative exposure metering, select minus 1 or even minus 2 stops exposure compensation. Alternatively use a selective or spot camera metering option.

Backlighting

can provide an attractive halo effect around the subject. Either use fill-in flash or increase indicated exposure to retain shadow detail.

Sidelighting

produces shadows which can add contrast and show detail.

ISO200, f8, 1/250th sec., 70 mm focal length

ISO100, f4, 1/250th sec., 45 mm focal length

Lighting Matters

Front lighting

will generally provide fairly even lighting, but with little or no shadows, the subject could look dull.

Brightly coloured flowers can end up overexposed with the highlights burnt out – to try to avoid this when using the standard evaluative exposure metering, select minus 1 or even minus 2 stops exposure compensation. Alternatively use a selective or spot camera metering option.

Backlighting

can provide an attractive halo effect around the subject. Either use fill-in flash or increase indicated exposure to retain shadow detail.

Sidelighting

produces shadows which can add contrast and show detail.

Top Shade

with bright flowers, you can sometimes get better results when the sun has gone in, or when the flowers are in the shade.

ISO200, f5.6, 1/50th sec., 38 mm focal length

ISO100, f11, 1/125th sec., 10 mm focal length

Lighting Matters

Front lighting

will generally provide fairly even lighting, but with little or no shadows, the subject could look dull.

Brightly coloured flowers can end up overexposed with the highlights burnt out – to try to avoid this when using the standard evaluative exposure metering, select minus 1 or even minus 2 stops exposure compensation. Alternatively use a selective or spot camera metering option.

Backlighting

can provide an attractive halo effect around the subject. Either use fill-in flash or increase indicated exposure to retain shadow detail.

Sidelighting

produces shadows which can add contrast and show detail.

Top Shade

with bright flowers, you can sometimes get better results when the sun has gone in, or when the flowers are in the shade.

Flash

can be used to help isolate a subject.

ISO100, f6.7, 1/200th sec., 90 mm Macro lens, flash

Depth-of-Field

Flowers and Butterflies

Depth-of-Field

This is the distance in front of and behind your subject which will be in focus.

Depth-of-Field

This is the distance in front of and behind your subject which will be in focus.

The depth of field varies according to three variables:

1. The aperture

Depth-of-Field

This is the distance in front of and behind your subject which will be in focus.

The depth of field varies according to three variables:

1. The aperture
2. The focal length of the lens

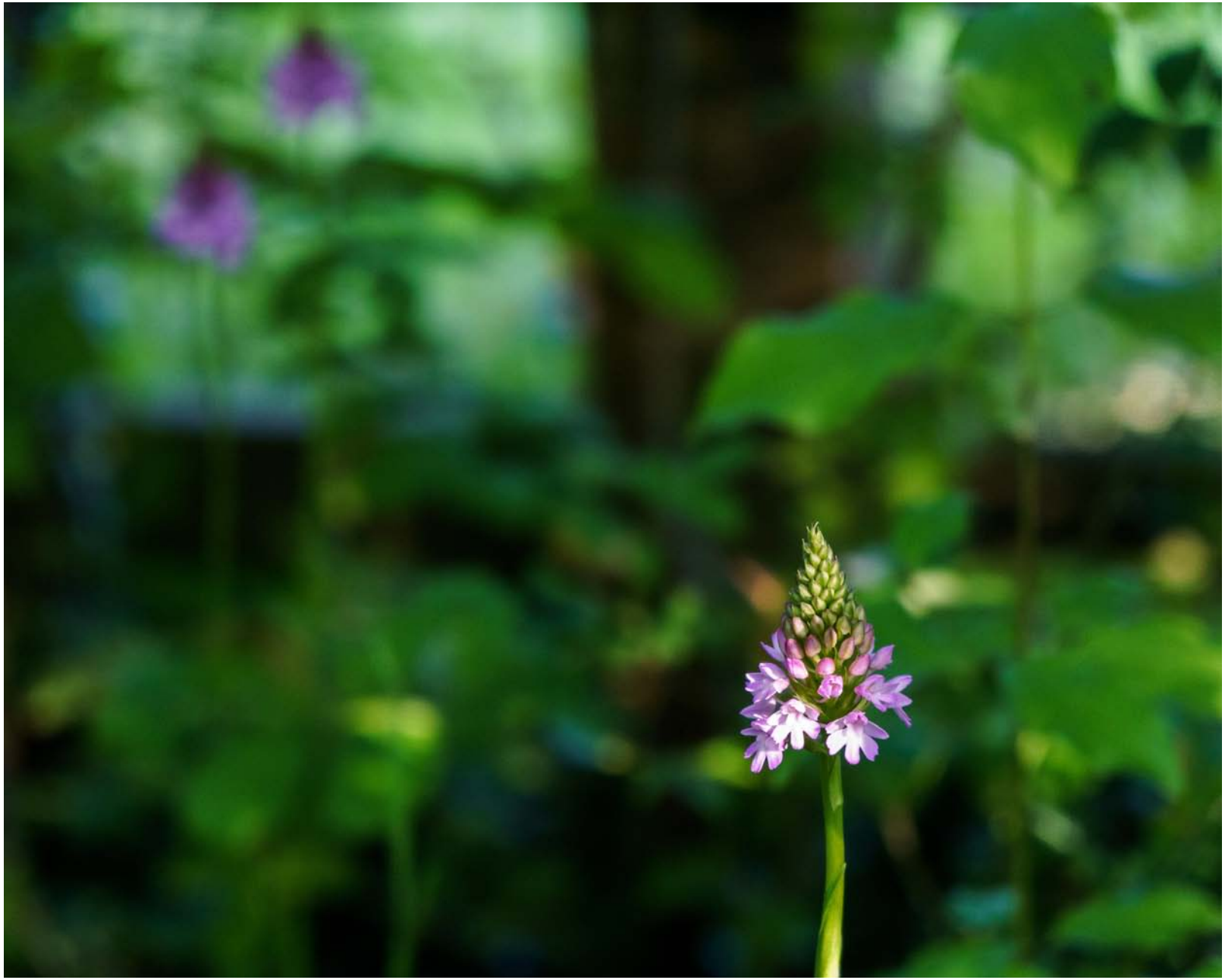
Depth-of-Field

	f16	f4
16mm		

Depth-of-Field

	f16	f4
16mm		
70mm		

Depth-of-Field



ISO1600, f4, 1/125th sec., 70 mm focal length

Depth-of-Field

ISO200, f8, 1/125th sec., 38 mm focal length

Depth-of-Field

ISO200, f6.7, 1/125th sec., 53 mm focal length

Depth-of-Field

This is the distance in front of and behind your subject which will be in focus.

The depth of field varies according to three variables:

1. The aperture
2. The focal length of the lens
3. The distance of the camera from the subject

Depth-of-Field

90 mm Macro lens, approx. 500 mm subject-to-sensor distance

Focus point is “HOME”

f16

f4

Depth-of-Field

90 mm Macro lens, approx. 500 mm
subject-to-sensor distance
Focus point is “HOME”

f16

f4

90 mm Macro lens, approx. 300 mm
subject-to-sensor distance
Focus point is “5”

f16

f4

Close-up

To take close-up photographs, closer than the camera lens' capability:

Close-up

To take close-up photographs, closer than the camera lens' capability:

For cameras with fixed lenses:

Use close-up lenses

Close-up

Close-up lenses act just like a magnifying glass and screw in (or push on) to the front of the camera lens, in the same way as a filter.

They can be a cheap introduction to close-up photography.

Close-up

Close-up lenses act just like a magnifying glass and screw in (or push on) to the front of the camera lens, in the same way as a filter.

They can be a cheap introduction to close-up photography.

The “power” of a close-up lens in measured in dioptres and several lenses can be screwed into one another to give additive magnification. With the camera lens focussed to infinity, using a +2 dioptre close-up lens will provide focus at 0.5 m, a +4 dioptre will provide focus at 0.25 m. Aberration (fuzzy edges and colour “fringing”) can be intrusive and the more added lenses, the more intrusive.

Close-up

Close-up lenses act just like a magnifying glass and screw in (or push on) to the front of the camera lens, in the same way as a filter.

They can be a cheap introduction to close-up photography.

The “power” of a close-up lens in measured in dioptres and several lenses can be screwed into one another to give additive magnification. With the camera lens focussed to infinity, using a +2 dioptre close-up lens will provide focus at 0.5 m, a +4 dioptre will provide focus at 0.25 m. Aberration (fuzzy edges and colour “fringing”) can be intrusive and the more added lenses, the more intrusive.

Double-lens type of close-up lenses are more expensive but are designed to minimise or cut-out aberration.

Close-up

To take close-up photographs, closer than the camera lens' capability:

For cameras with fixed lenses:

Use close-up lenses

For cameras with interchangeable lenses there are four options that can be used:

1. Close-up lenses
2. Extension tubes

Close-up

Extension tubes are fitted between the lens and the camera body and have the effect of increasing the distance of the rear element of the lens to the sensor and at the same time reducing the distance of the front lens elements to the subject.

Extension tubes can be added to each other to increase the spacing between lens and camera.

Extension tubes can be manual, or automatic (i.e. integrated with the camera's exposure and auto-focussing systems)

The magnification provided depends on the focal length of the lens and the total length of the added extension tubes.

Close-up

Extension tubes are fitted between the lens and the camera body and have the effect of increasing the distance of the rear element of the lens to the sensor and at the same time reducing the distance of the front lens elements to the subject.

Extension tubes can be added to each other to increase the spacing between lens and camera.

Extension tubes can be manual, or automatic (i.e. integrated with the camera's exposure and auto-focussing systems)

The magnification provided depends on the focal length of the lens and the total length of the added extension tubes.

Unfortunately, the light reaching the sensor falls off dramatically as the spacing between lens and sensor increases.

Using a 50 mm lens, using 25 mm of extension tubes will provide 0.5x magnification (half life size), however in this example, you would need to increase exposure by about 1 stop to maintain correct exposure.

Close-up

To take close-up photographs, closer than the camera lens' capability:

For cameras with fixed lenses:

Use close-up lenses

For cameras with interchangeable lenses there are four options that can be used:

1. Close-up lenses
2. Extension tubes
3. Lens reversing ring
4. Macro lens

ISO100, f4.5, 1/250th sec., 90 mm Macro lens

ISO640, f11, 1/200th sec., 90 mm Macro lens

ISO100, f2.8, 1/350th sec., 90 mm Macro lens

ISO100, f8, 1/45th sec., 90 mm Macro lens, flash

Close-up

Pros and Cons:

1. Close-up lenses
   - Aberration
   - Limits distance over which camera lens will focus
   - Need new lenses for each filter ring size camera lens

2. (Auto) Extension tubes
   - Need to remove camera lens to install
   - Reduces light reaching sensor
   - Limits distance over which camera lens will focus

3. Lens reversing ring
   - No automatic aperture control or auto-focussing
   - Exposes rear of camera lens
   - Need new adaptor ring for each filter ring size camera lens

4. Macro lens
   - Cost

Butterfly photography

Samsung Galaxy S4 mini smartphone

ISO50, f2.6, 1/125 sec, 3.7 mm focal length

Sony A6000 camera

ISO800, f9.5, 1/200 sec, 70 mm focal length

Butterfly photography

General Tips

- Plant shrubs and flowers in your garden that are attractive to butterflies and/or if you do not have a garden, plant up a pot or two. (for help, see http://butterfly-conservation.org/12217/gardening-for-butterflies.html and http://butterfly-conservation.org/files/bc_pollinators_a4-information-flyer_06.pdf

Butterfly photography

General Tips

- Plant shrubs and flowers in your garden that are attractive to butterflies and/or if you do not have a garden, plant up a pot or two. (for help, see http://butterfly-conservation.org/12217/gardening-for-butterflies.html and http://butterfly-conservation.org/files/bc_pollinators_a4-information-flyer_06.pdf

- Butterflies need sun and warmth so if you are going out specifically to photograph butterflies, choose warm, sunny days - not windy and rainy conditions

ISO640, f8, 1/160th sec., 70 mm focal length

ISO400, f8, 1/125th sec., 70 mm focal length

ISO100, f8, 1/250th sec., 70 mm focal length

ISO125, f8, 1/250th sec., 90 mm Macro lens, flash

ISO160, f7.1, 1/200th sec., 70 mm focal length

ISO640, f11, 1/200th sec., 90 mm Macro lens

Butterfly photography

General Tips

- Plant shrubs and flowers in your garden that are attractive to butterflies and/or if you do not have a garden, plant up a pot or two. (for help, see http://butterfly-conservation.org/12217/gardening-for-butterflies.html and http://butterfly-conservation.org/files/bc_pollinators_a4-information-flyer_06.pdf

- Butterflies need sun and warmth so if you are going out specifically to photograph butterflies, choose warm, sunny days - not windy and rainy conditions

- To maximise your chances of seeing butterflies, go out with someone else, better still go out with a group (e.g. U3A Wildlife Group)

Butterfly photography

General Tips

- Plant shrubs and flowers in your garden that are attractive to butterflies and/or if you do not have a garden, plant up a pot or two. (for help, see http://butterfly-conservation.org/12217/gardening-for-butterflies.html and http://butterfly-conservation.org/files/bc_pollinators_a4-information-flyer_06.pdf

- Butterflies need sun and warmth so if you are going out specifically to photograph butterflies, choose warm, sunny days - not windy and rainy conditions

- To maximise your chances of seeing butterflies, go out with someone else, better still go out with a group (e.g. U3A Wildlife Group)

- I will often take a “long-shot” of a butterfly, creep a bit closer and take another shot, a bit closer still and take a further shot and so on. Like this, I get an initial image and if I’m lucky and the butterfly stays still, I get progressively better and more detailed photos.

ISO100, f8, 1/160th sec., 50 mm focal length

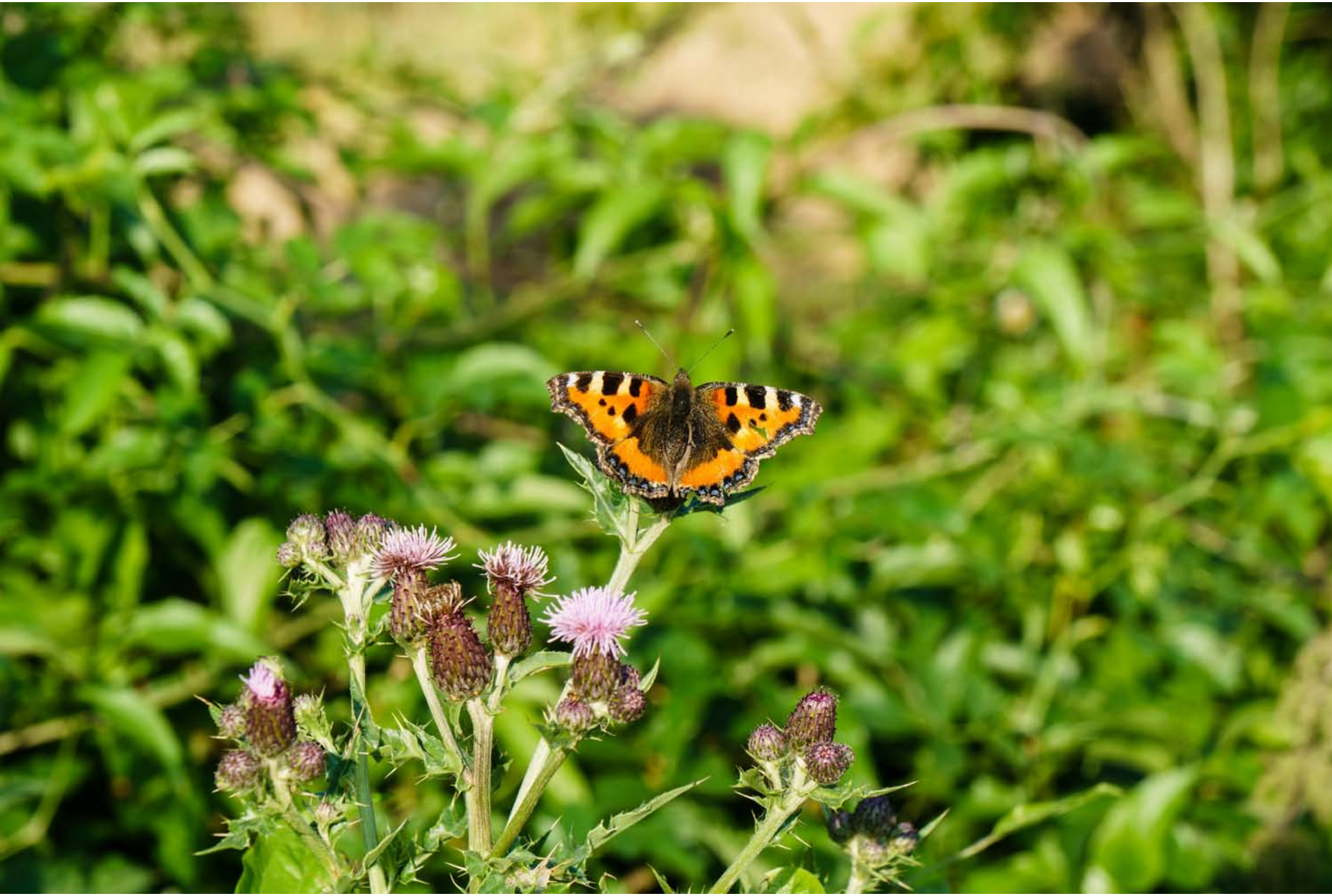
ISO100, f8, 1/160th sec., 50 mm focal length

ISO100, f7.1, 1/125th sec., 50 mm focal length

ISO100, f7.1, 1/125th sec., 50 mm focal length

ISO100, f7.1, 1/125th sec., 50 mm focal length

ISO100, f6.3, 1/100th sec., 50 mm focal length.



ISO200, f8, 1/250th sec., 70 mm focal length

ISO200, f8, 1/250th sec., 70 mm focal length

ISO400, f8, 1/200th sec., 90 mm Macro lens

ISO400, f8, 1/200th sec., 90 mm Macro lens

Butterfly photography

Technical Tips

- Butterflies are pretty small and so you will need to be aware that the camera's exposure metering system may well get the exposure wrong: if you can, set the metering to centre–spot.

Butterfly photography

Technical Tips

- Butterflies are pretty small and so you will need to be aware that the camera's exposure metering system may well get the exposure wrong: if you can, set the metering to centre–spot.

- Similarly in close-up photography, because focussing is so critical and there is only a very small depth-of-field, set the camera to spot focussing and zero-in on the butterfly, not its surroundings.

Butterfly photography

Technical Tips

- Butterflies are pretty small and so you will need to be aware that the camera's exposure metering system may well get the exposure wrong: if you can, set the metering to centre–spot.

- Similarly in close-up photography, because focussing is so critical and there is only a very small depth-of-field, set the camera to spot focussing and zero-in on the butterfly, not its surroundings.

- I normally set-up my camera for manual operation to provide centre-spot focussing and centre-spot exposure and I select exposure of 1/200th sec at f9.5. On a sunny, bright day this will give a good exposure at ISO100. I'll get a reasonable depth-of-field and chances are, so long as I'm careful, I won't suffer any camera shake.

Butterfly photography

Technical Tips

- Butterflies are pretty small and so you will need to be aware that the camera's exposure metering system may well get the exposure wrong: if you can, set the metering to centre–spot.

- Similarly in close-up photography, because focussing is so critical and there is only a very small depth-of-field, set the camera to spot focussing and zero-in on the butterfly, not its surroundings.

- I normally set-up my camera for manual operation to provide centre-spot focussing and centre-spot exposure and I select exposure of 1/200th sec at f9.5. On a sunny, bright day this will give a good exposure at ISO100. I'll get a reasonable depth-of-field and chances are, so long as I'm careful, I won't suffer any camera shake.

- I also set the camera ISO setting to "Automatic". This means that the camera will automatically compensate if the sun goes behind a cloud, or the butterfly is in the shade.

Butterfly photography

Technical Tips

- Butterflies are pretty small and so you will need to be aware that the camera's exposure metering system may well get the exposure wrong: if you can, set the metering to centre–spot.

- Similarly in close-up photography, because focussing is so critical and there is only a very small depth-of-field, set the camera to spot focussing and zero-in on the butterfly, not its surroundings.

- I normally set-up my camera for manual operation to provide centre-spot focussing and centre-spot exposure and I select exposure of 1/200th sec at f9.5. On a sunny, bright day this will give a good exposure at ISO100. I'll get a reasonable depth-of-field and chances are, so long as I'm careful, I won't suffer any camera shake.

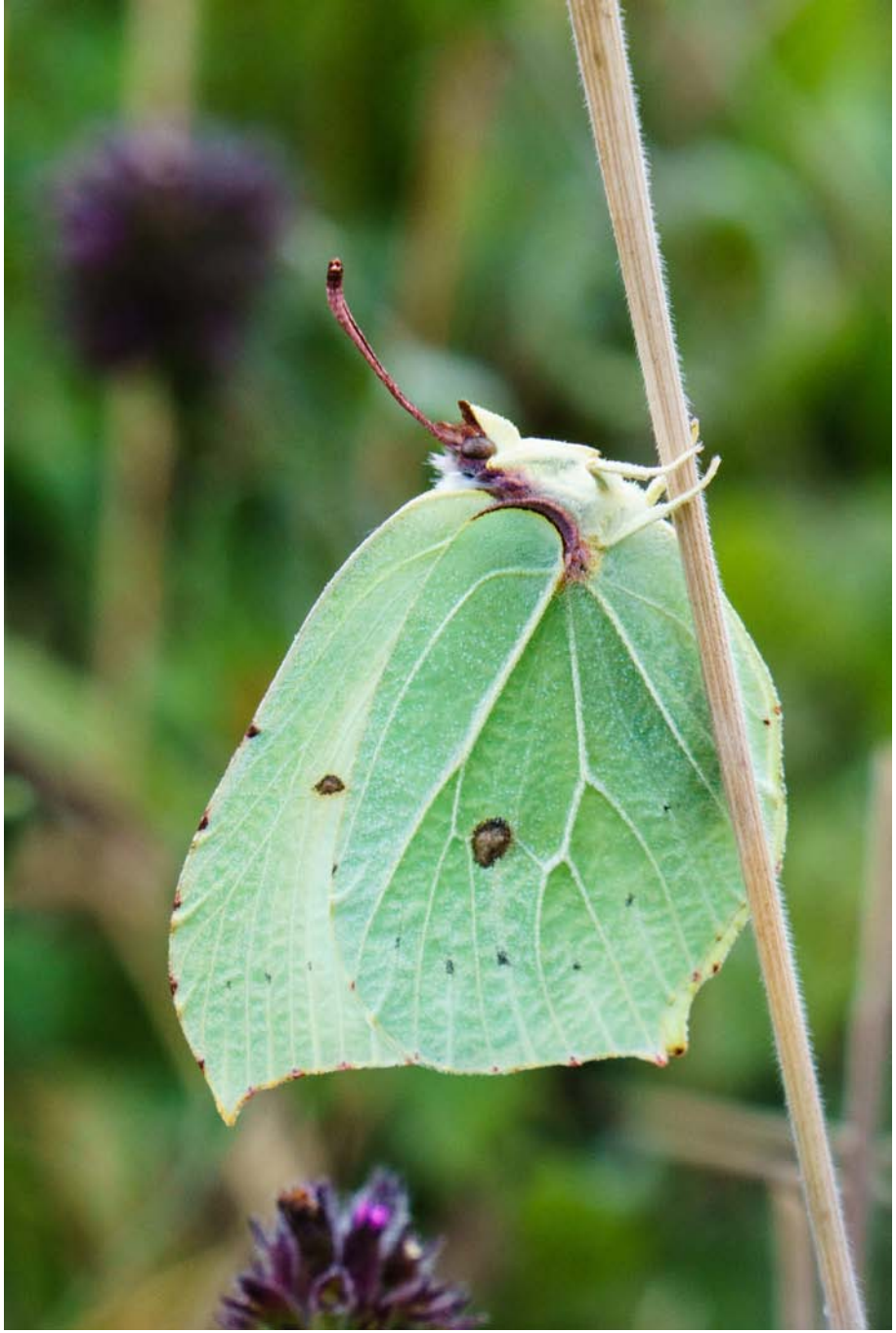
- I also set the camera ISO setting to "Automatic". This means that the camera will automatically compensate if the sun goes behind a cloud, or the butterfly is in the shade.

- Use of flash will help freeze camera shake and a small aperture can be selected to increase depth-of-field.

ISO100, f5.6, 1/250th sec., 70 mm focal length

ISO160, f8, 1/320th sec., 70 mm focal length

ISO640, f11, 1/200th sec., 90 mm Macro lens



ISO500, f8, 1/200th sec., 70 mm focal length

ISO100, f8, 1/250th sec., 90 mm Macro lens, flash

ISO100, f8, 1/250th sec., 90 mm Macro lens, flash

ISO250, f8, 1/250th sec., 90 mm Macro lens

ISO200, f7.1, 1/200th sec., 70 mm focal length

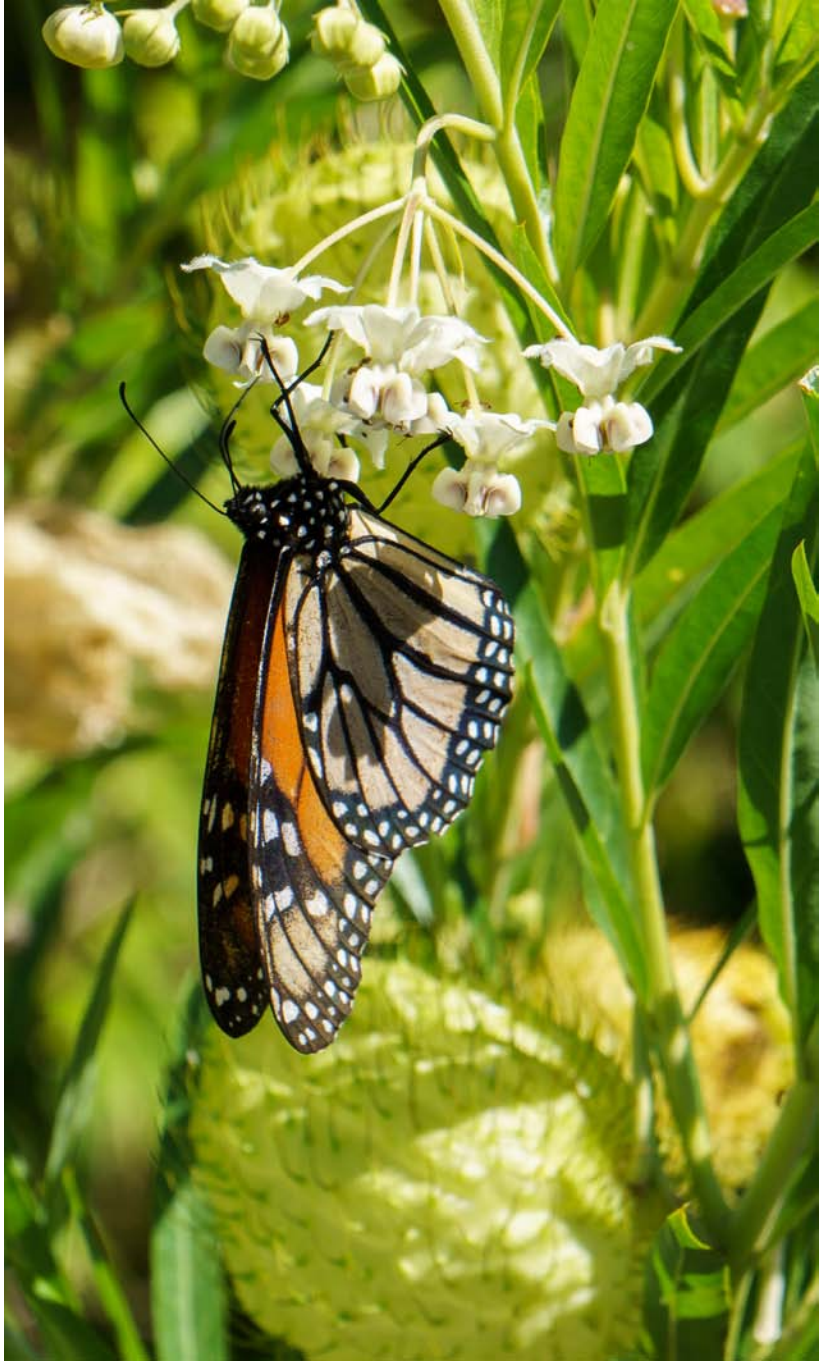
ISO200, f6.3, 1/320th sec., 70 mm focal length

ISO500, f9.5, 1/200th sec., 90 mm Macro lens

ISO100, f9.5, 1/200th sec., 90 mm Macro lens

ISO100, f9.5, 1/200th sec., 90 mm Macro lens

ISO800, f6.7, 1/200th sec., 90 mm Macro lens



ISO100, f7.1, 1/200th sec., 70 mm focal length

ISO200, f5.6, 1/125th sec., 85 mm focal length

ISO200, f5.6, 1/125th sec., 85 mm focal length

Any Questions ?