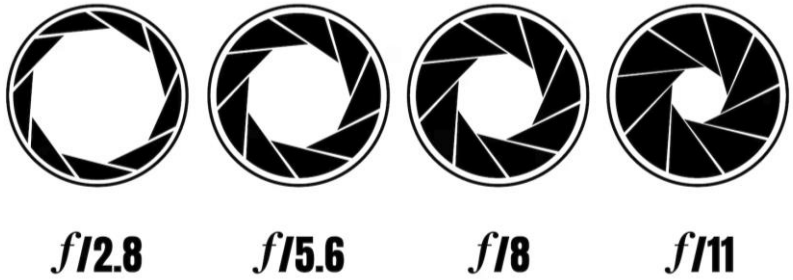
Focus Plane

Depth of Field

f stop explained



Depth of Field

Aperture is expressed as F/number (focal length of lens) such as *f*2.8 - *f*5.6 and so on.

Basically it refers to the size of the hole through which light hits the sensor.
The number describes the diameter of the aperture.
F/8 on one lens it will let the same amount of light into the camera as F/8 on another lens.

The aperture also has an direct impact on the depth-of-field. Large f-stops like f16 or f22 will allow for a large area to be sharp, bringing more foreground and background into focus.
Going 'wide open' (f-stops like f1.4 or 2.8) will isolate either the foreground or background objects and make everything else blurry. Because more light is hitting the sensor this is also good when the light levels are low

Bruce Lovelace, Better digital photo tips

Impact of Depth of field/aperture on close up and macro photography

The technicalities of macro or close up photography mean that you will have a very shallow **depth of field**

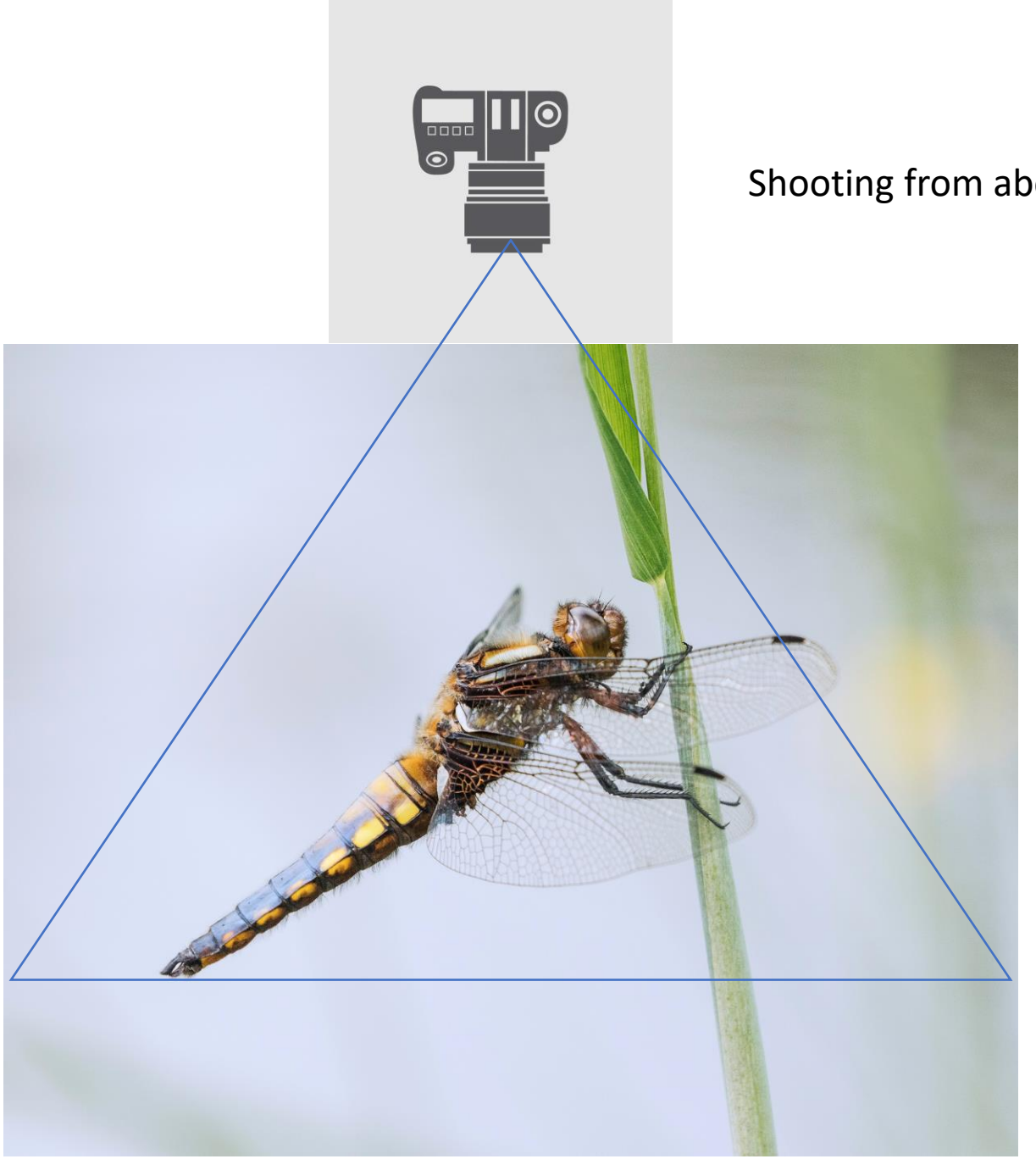
In other words the 'depth' of the image that will be in focus will be very shallow – often just millimetres

Focus stacking is one option but requires certain skills (another time)

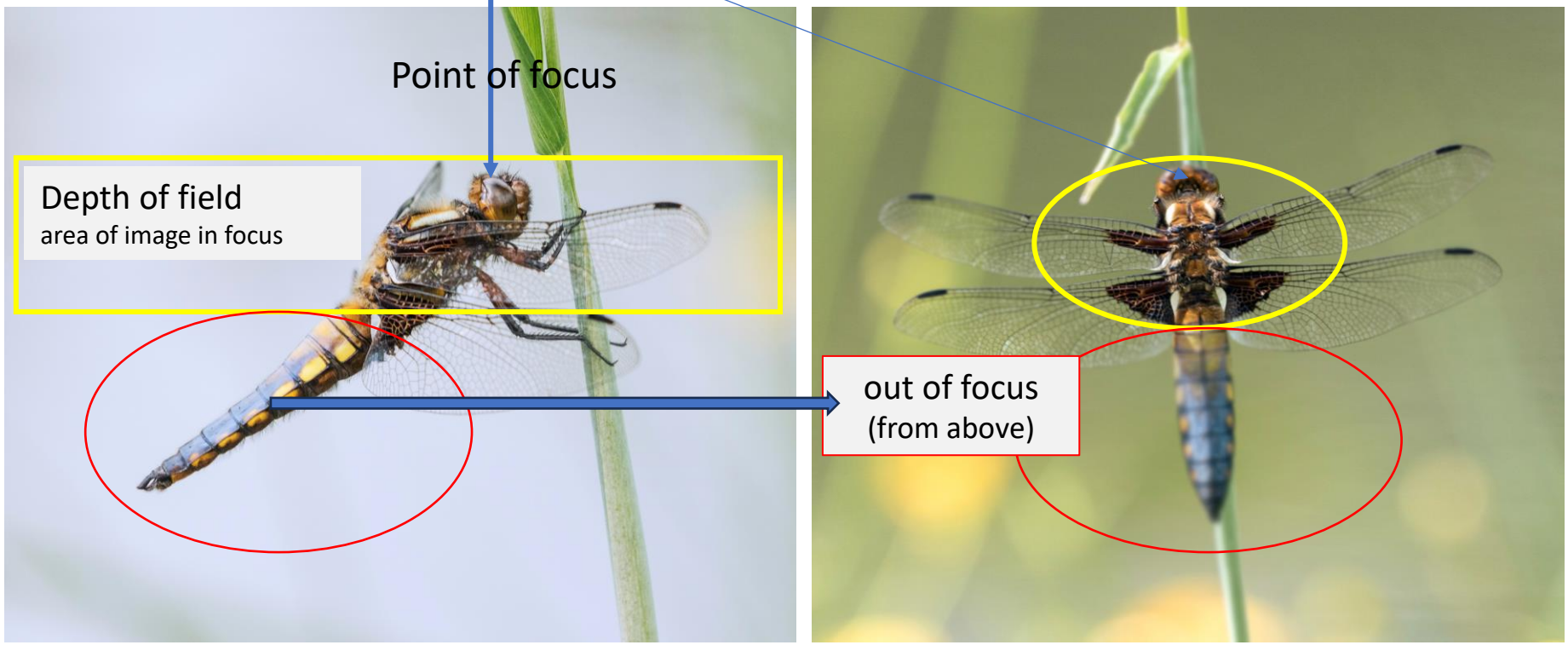
The depth of field (DOF) is the distance between the nearest and the furthest part of an object(s) that are in acceptably sharp focus

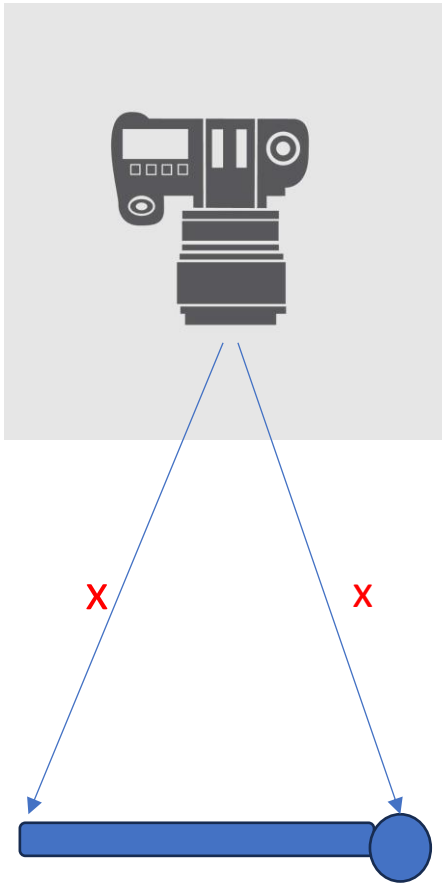
So, if you want front to back or head to tail sharpness, aligning yourself to the **plane of focus** is one way to achieve this.

Plane of focus is an imaginary field which is parallel to the sensor (90 degrees)
Whatever lies along this 'plane' should be in focus



Shooting from above

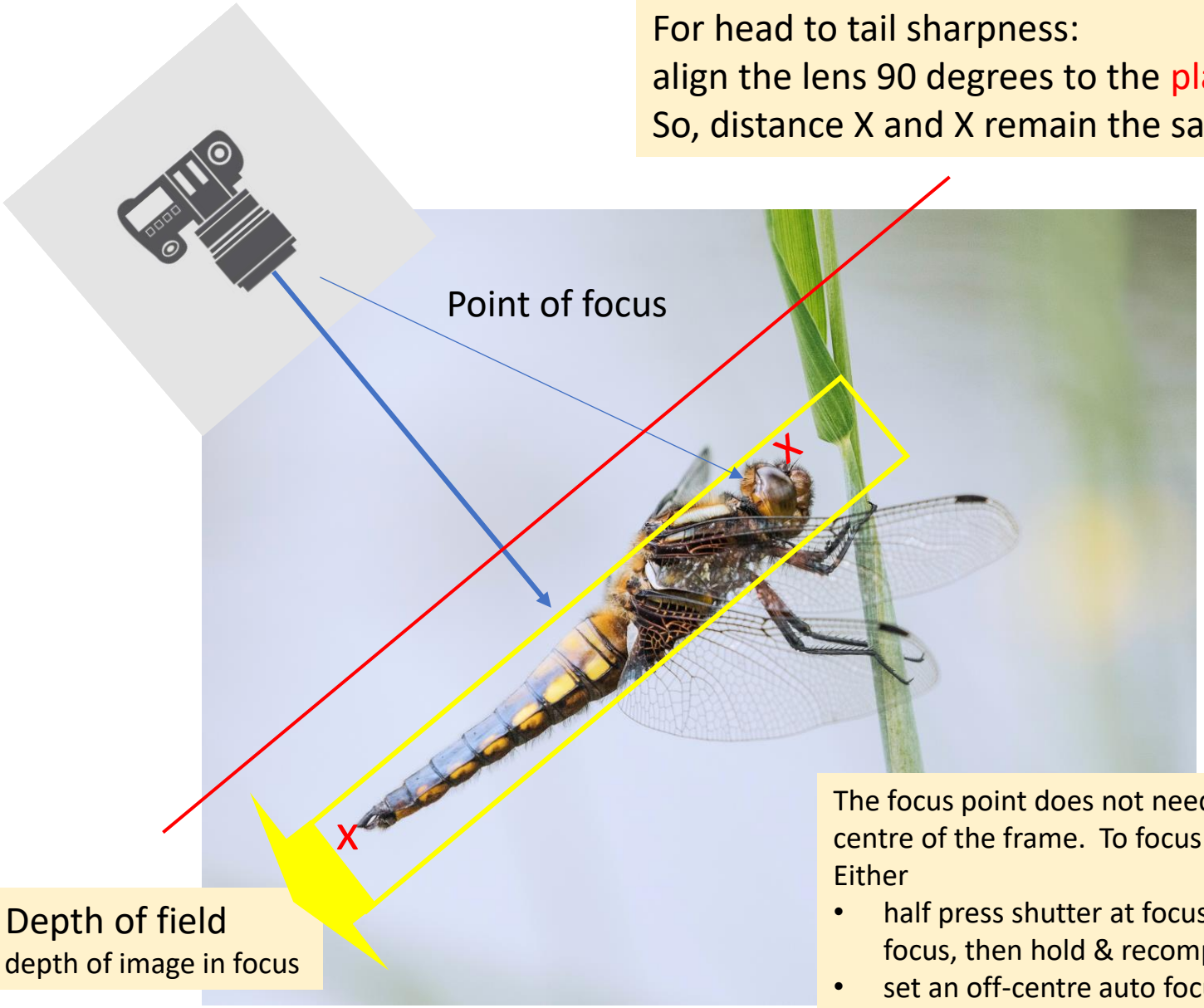

Point of focus
Depth of field
area of image in focus
out of focus
(from above)



Align dragonfly 90 degree to the plane of focus

Distance to head and tail (x) is the same

For head to tail sharpness:
align the lens 90 degrees to the plane of focus
So, distance X and X remain the same



Depth of field
i.e. depth of image in focus

The focus point does not need to be in the centre of the frame. To focus on the eye. Either

- half press shutter at focus point to engage focus, then hold & recompose, or
- set an off-centre auto focus point, or
- focus manually.

So, hopefully, front to back sharpness