

Camera lenses, Types of Cameras and DOF

Compact Cameras and DOF

Due to the physically small size of items in a compact camera and especially its lens which might only be 6 or 7mm in focal length, the real physical size of the aperture is consequently small and therefore it is a high fstop giving the lens a built in high DoF.

As this isn't changed in the camera and the fstop is in fact changed by software, the camera and its associated lens will always have a large DoF.

Compact cameras don't normally have a real aperture, the act of dialling in a different fstop (and that is normally limited to f8) is not to change anything mechanical, all that happens is that the sensitivity of the chip is turned down.

This makes getting a large DoF for macro photography with a compact camera easy, BUT it makes getting an out of focus background very difficult if not impossible.

So as we progress to DSLR and of course normal older film cameras as they both use the same design of lens, the DoF is more easily changed by the use of a real aperture.

This makes a (D)SLR camera with its lenses and the real aperture more suited to getting a macro picture with a controlled DoF.

As we go up in size to 120 film and beyond to plate cameras, the available DoF that the lenses used by these cameras gets decreasingly smaller, to the point where no matter how much you stop down the lens, even going as far as f128 or smaller, will not get you any DoF to work with and the exposure times are for the most part unusable. I suppose that in extreme cases, such as medical or scientific circles, where cost and time is of no object, such limits may be tolerable, but not us, and the chances of sneaking up to a butterfly with a plate camera might be comical to say the least.