

Close-Ups

Photographing the diminutive aspects of nature involves learning to handle two special conditions. First, the closer your camera gets to a subject, the shallower the depth of field becomes. The zone of sharpness can be as small as a half-inch or less. Using a small aperture alleviates the problem somewhat, but even then you must be careful to keep your subject's most important features in focus in a plane parallel to the film plane. Movement is also greatly exaggerated at close range. A faint breeze can cause a flower to flutter in and out of focus, while an insect can scurry out of view in less than a second. This problem is aggravated if you are using a slow- or medium-speed film (ASA 25 to 100) to capture fine details and a small aperture to get greater depth of field. In natural light, the combination usually requires slow shutter speeds.

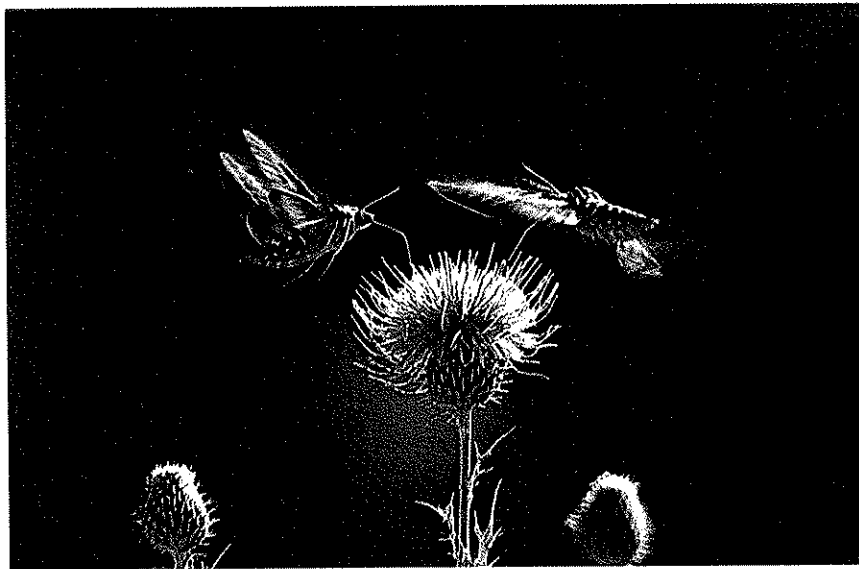
Patience, planning, and a little ingenuity can help you overcome some of these difficulties. A plant can be stilled by constructing a simple windscreen with a couple of stakes and a plastic bag. Insects are most easily photographed when they pause to eat, as in the shot of moths at right. You can also use flash to stop action.

As with a portrait, lighting can make a nature close-up magical or mundane. Follow the general guidelines about the angle of light and light at different times of the day (see pages 50 to 59), and, if necessary, use a piece of white cardboard as a reflector or rig a piece of cloth on broomsticks to serve as a diffusing canopy. You can use flash in close-ups as either the main light source or for fill. It will be softest when diffused or bounced off a reflector. When using a flash, mount it off the camera and determine flash-to-subject distance based on preferred exposure for depth of field. If you can't mount a powerful flash unit far enough away from the subject for correct exposure, cut flash output with a tissue or handkerchief.



A close-up of a shy nocturnal subject, such as the photograph of an owl's eye at left, generally requires stealth and a flash.

To photograph rapidly moving insects such as those below, the best approach is to locate an area where they are active. Find a likely, photogenic flower, set up your camera, and wait for them to feed.



In a close-up photograph, the zone of sharpness can be as small as one-half inch, as this shot of a dewy wild pansy, with its sharply defined petals and out-of-focus stem, shows.

The delicate tracings of frost on these autumn leaves and grass appear almost luminescent. The photographer has used a close-focusing lens to come in close without distorting the shapes of the leaves.



The shallow depth of field in the picture above, usually a disadvantage of close-up work, here helps separate a single blossom from its same-colored background, while also making the feeding insect more distinct.

A macro lens allows you to photograph an object nearly life size. In the picture at left, a spider and its filmy web have been illuminated by an electronic flash, making each strand of the web sharp against the background.

Close-Up Tools

The best camera for close-ups is the single-lens reflex. Unlike a rangefinder, the SLR allows you to see your image through the lens and usually preview your depth of field at smaller apertures. In addition, while there is only one way to obtain close-ups with most rangefinders, the SLR offers several possibilities.

The close-up tools that can be used with either type of camera are the filterlike attachments known as close-up lenses. When screwed onto your camera's lens, they increase its magnifying power and decrease its minimum focusing distance. With an SLR, the magnification can be seen through the lens; with a rangefinder, you must measure and calculate distance and area following the lens's instruction sheet. Close-up lenses are commonly sold in sets of three, rated +1, +2, and +3 diopters, according to their degree of magnification. The greater the number, the greater the magnifying power, and the closer you can get to the subject. Close-up lenses can be combined for additional increases in magnification. They

are compact, inexpensive, and do not require exposure adjustments in a camera with a through-the-lens meter. Sharpness may be a problem, however, and you may have to use small apertures to compensate.

If you own an SLR, a better choice might be extension tubes or bellows. Both fit between the camera and its lens to permit close focusing. Extension tubes can be used singly or in combination and are lightweight and inexpensive. They are available in several lengths—the longer the tube, the closer the lens can focus on a subject. Some SLR systems also have a simple attachment that permits you to reverse any lens for very close focusing.

Bellows, although costly and cumbersome, are more flexible and permit you to get life-size or larger images. Although most bellows attachments will accept a normal camera lens, special lenses designed for the bellows may result in better images. Both extension tubes and bellows reduce the amount of light reaching the film in proportion to their length. As a result, you usually need to correct exposure according to their instruction sheets and your camera's manual.

For the more serious SLR user, a close-focusing, or macro, lens (see page 110) may be a wise investment, despite its high price tag. Specially designed to work at close distances, these lenses are unsurpassed in ease of use and optical performance. Macro lenses are available in normal to moderate telephoto focal lengths and focus smoothly from infinity to just a few inches in front of the lens. They can be used with bellows or extension tubes for greater enlargements. Many newer zoom lenses also have similar close-focusing capabilities.

Other helpful devices include a tripod and a cable release to guard against camera movement during long exposures. Ideally, the tripod should have a reversible center post for low-level subjects. Small, inexpensive electronic flash units are also useful, and many avid nature photographers use two or three for complete control over a scene. Slow- or medium-speed film (ASA 25 to 125) is best for capturing details.