

# Shooting Insects

## With a Point-and-Shoot Mega-Zoom Camera

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If you're looking to achieve high-quality insect macro-photography, your best bet is a digital single lens reflex (DSLR) or mirrorless camera with macro or telephoto lenses. But if you aren't so much a high-powered photographer, lower-cost "super-zoom" cameras (usually around \$400 or so) will produce fine images — provided you know how to use them.

Standard point-and-shoots tend to be impractical for wildlife photography because their zooms (typically around 4x) aren't powerful enough for magnifying small animals like insects and songbirds. Yes, you can use any point-and-shoot's *macro* setting for wonderful insect shots, but that setting requires you to approach your subject usually to within inches. You'll often lose the insect before you get the shot.

Instead, if insect (or bird) photography will be big in your life, go with one of the "super-zooms" (or "mega-zooms"), whose reach runs anywhere from 24x to 60x or even more. These big zooms allow you to stand back, lower the risk that your bug (or bird) will fly away, shoot at high magnification, and then go about your business finding more insects. Will your shots win you awards or land on magazine covers? No, not likely. But for most casual photographers and naturalists, particularly wildlife watchers, these point-and-shoots are the way to go. Here's what you need to know when using these cameras for daytime insect photography (not nighttime moth photography):

1. **Light matters** — a lot. You'll get far better images in direct morning or evening sunlight. (Mid-day light tends to be harsh for photography, but still is often better than shade with insects and these point-and-shoot cameras.) Even consider using the camera's flash when you're within 10 feet or so of the insect, even in daylight; flash can add sharpness and definition to your subject.
2. Don't use AUTO mode. Shoot instead in **APERTURE PRIORITY** mode ("A" or "Av" on your camera's mode dial). This means that *you yourself* set the lens opening (f-stop) (with a button or another dial). Open the lens **as wide as it will go** using the *lowest f-stop number*, probably f2 or f4 or so. As you zoom, the lens will close down on its own (maybe to f-5.6 or f-6.3, which you'll have to accept and which is usually fine). Here are three reasons why you need a wide open lens:
  - As I said, you need to gather light for decent photos with these cameras, and for that you need an open lens. The more open the lens, the more light gets into the camera to make your picture. If you know about depth of field, don't worry about it with insects at a distance with an open lens — it is, for the most part, only an issue when you're in close using the camera in its macro (tulip) mode. So open the lens wide (low f-stop number).
  - If your insect is moving, or even if it's not, you'll need a relatively fast shutter speed. Remember, in aperture priority mode, you yourself set the lens opening (wide), and the camera, all by itself, chooses a corresponding shutter speed to properly expose the photo. A wide open lens gives you more light to the sensor, and as a result the camera can and will choose a faster shutter speed, which is helpful even if your insect is sitting still.



Common Buckeye (*Junonia coenia*) in the circle and then shot at 60x. © Bryan Pfeiffer

- If you know about ISO, you want the ISO on your camera to be set **as low as possible** (usually below 400). These are point-and-shoots, after all, whose sensors tend to produce grainy, lousy images at high ISO (above 400 or so). So manually set your ISO to 400 or, preferably, lower. But understand that at lower ISOs, your camera isn't as sensitive to ambient light, which is another reason you need to open the lens (and let more light reach the sensor). In most cases, with decent ambient light and a wide open lens, the camera will choose a shutter speed that's fast enough to "freeze" your insect and avoid motion blur. So set your ISO below 400, even to 100 or 200 (at which I almost invariably shoot with great results). Only reluctantly increase your ISO above 400 — basically if your camera is choosing shutter speeds that are too slow for the shot (less than 1/60th or so).

3. **Shoot in burst mode: lots of images in rapid fire.** After all, shooting insects with these cameras is somewhat of a crap shoot. So shoot early and often. Some point-and-shoots have "high-speed" burst and "low-speed" burst; might as well go high (or go home). As long as your insect isn't moving around a lot, you will probably get nice shots in burst mode, even at crazy-slow shutter speeds while hand-holding these cameras. If your insect is flying or hovering, well, you've got other problems because it is REALLY TOUGH to shoot insects in flight with these cameras (or any camera). If the insect is nectaring or crawling, fire away in burst mode and hope for a good shot among many. You'll often get one. Two other points about burst mode:



Aurora Damsel (*Chromagrion conditum*) shot at 60x in good light. © Bryan Pfeiffer

- Buy good memory cards that write data fast; otherwise you'll get only a few shots per burst and will have to wait until the camera writes the data (images) to the card before you can shoot more.
  - Note that on most point-and-shoots **the flash won't work in burst mode**. (Good point-and-shoot cameras might give you one firing of the flash in burst mode — maybe not). But I can guarantee you that some day you'll turn on your flash and you won't for the life of you know why the hell it isn't firing. It won't be firing because your camera is in burst mode. So set it back to "single shot" if you want the benefits of your camera's flash.
4. Set your metering to **center-weighted** or **spot**. In this setting, your camera reads light — and therefore decides how to expose the photo — from what's in the center of your frame, which is usually how we shoot wildlife with these cameras. You can crop the shot later for better composition.
  5. Unless you're well-practiced with your camera, shoot insects with them in the center of your viewfinder, with the camera forced to focus there. So set your focusing to some form or "center" or, if your camera has it, a selectable spot in your viewfinder. The main thing is to *not* have your camera set on "face-detect" or similar focusing.
  6. Now that you've got your camera set for insects, use the zoom and fire away. Try to fill the frame with your bug. You'll soon discover some minimum distance away from the insect at which you can get the camera to focus and shoot at full zoom. If you move too close, the camera will no longer be able to focus on your subject at full zoom. So either back away a step or two, or zoom out the lens a bit, and try focusing and shooting again.
  7. When you're shooting, use the camera's viewfinder (rather than the LCD screen). It will help you find and keep the target insect in view as you zoom in for the shot, and it will help keep the camera stable for better image quality. Viewfinders sometimes suck battery life. So if you'll be in the field a lot and away from electricity, buy an extra battery or two. (Be cautious about after-market batteries: they're hit or miss on quality — mostly okay.) And if you're away from electricity, turn off the camera's GPS (if it has the feature) because it also sucks battery life.
  8. Point-and-shoots have lots of buttons and menus. Some of the buttons are programmable — you can assign camera setting to them (like ISO or metering), which is great. Most also have a "quick menu" button. The key thing to know is that you should never need to get into your *menus* to change camera settings while in the field shooting. You should do it all on the fly with buttons. Don't get bogged down in menus: You'll often miss your shot.