Trout Treats or Essential Food?

Terrestrials may play an important role in the growth cycle of trout. Terrestrials haven’t exactly been ignored by fly fishers, but they haven’t been widely embraced either. Every summer, every major fishing magazine runs an article or two to remind us that mayflies and caddisflies aren’t the only things that trout eat. Terrestrials, we’re reminded, are the chocolate chips of the trout’s world. After reading such articles, I dutifully go forth and tie some of the latest ant or beetle patterns and put them in a corner of a fly box. Too often, that is just where they stay, until, sometime after the fishing season, I find them again, buried in my vest.

But are terrestrials more than just tasty treats for trout that are weary of eating the same old pale morning duns for lunch? It’s possible that terrestrials provide essential protein at a critical time of year for trout growth. Aside from the life cycles of individual species of aquatic insects, there is an overall annual pattern to the abundance of insect life in a stream or lake. In general, the peak abundance of aquatic insects occurs during the winter months. Eggs, deposited during the mating flights of spring and summer, have mostly hatched by late fall, causing a significant jump in the number of small nymphs and larvae. At the same time, winter weather causes water temperatures to drop quickly. Still, even at near freezing temperatures, most young insect larvae feed and grow slowly throughout the winter. Trout, on the other hand, feed less and grow slowly or not at all during cold winter weather.

When water temperatures begin to rise in late winter and early spring, trout and insects alike begin to feed and grow more quickly. This is when there is a plentiful supply of food for fish in most trout streams. Aquatic insects continue to be abundant throughout the spring and early summer, as insect emergence reaches a peak of activity. This provides a plentiful food supply for trout as their feeding activity continues to increase with warming temperatures.

In many temperate trout streams, July and August mark a change in the amount of aquatic-insect life available to trout. Though water temperatures may be ideal for trout growth, the majority of aquatic insects have emerged, and their eggs lie quietly on the stream bottom. It is precisely during this midsummer period—when aquatic insects are sparse and fish are most active—that terrestrial insects peak in abundance. As a result, in many streams throughout the country, terrestrial insects become a significant component in the diet of trout when trout are growing the fastest and can best utilize a rich source of protein.
**ENTOMOLOGY**

**The Big Three**

The diversity of terrestrial insects is far greater than that of their aquatic cousins. Given this wild array of life, unmatched by any other group of animals on the planet, three groups of terrestrial insects stand out as important food sources for trout: ants, beetles, and grasshoppers.

**ANTS:** Ants make up the family Formicidae in the order Hymenoptera (ants, bees, and wasps). Hymenoptera is one of the larger orders of insects; more than a hundred thousand species occur worldwide. There are more than 15,000 species of ants worldwide, and approximately 700 species are currently known in North America. Ants occupy every conceivable habitat. You can verify this by simply taking a little time to look closely wherever you might be outdoors (or indoors, for that matter). Whether it is in the middle of a shopping mall parking lot or on the bank of a stream, ants seem to be present, following their queen’s marching orders with unyielding dedication that would make any Marine proud—Be all that you can be; join the Formicidae!

Ants always seem to be present around water. And we all know how fish seem to love ants. As a result, even the occasional ant that finds itself drifting on the water’s surface rarely goes unnoticed by the trout.

Like other social insects, most ants are sterile workers. But once a year the colony produces winged males and females to ensure that the species stays healthy and widespread. Swarms of the winged adults fly from the nest in all directions, looking for new nest sites. These swarms of flying ants often end up over, and in, streams and lakes. Such are the moments anglers live for.

Most fly fishers have a story or two about an ant fall they experienced and of the wild fishing that ensued. I remember three days of fishing on a coastal lake when large fat trout were so easy to catch that I began to think I was the greatest fly fisherman since Halford. Then the ants disappeared and I was quickly reminded of my more limited ability.

**BEETLES:** When it comes to diversity, beetles (order: Coleoptera) top the scale. More than one third of all living animals on the planet are beetles. The true number of beetle species is anybody’s guess (300,000, 400,000, 500,000), but there is no disagreement about their overwhelming diversity. Beetles range in size from the smallest of known insects—flea beetles, which reach a whopping one millimeter in length—to some of the largest of known insects—Dynastes tityus, or the rhinoceros beetle, which can be larger than a shrew.

Given such diversity, it should be no surprise that beetles have adapted to every conceivable habitat and lifestyle. Fly tiers often find disaster from the work of dermestid beetles (better known as carpet beetles), which seem to enjoy eating only the best dry-fly hackle necks they can find. On a happier note, beetles occur in all varieties of habitats located along streams and lakes. Some are full-time residents of the water itself, but most live along the banks—among rocks, sand, and plant debris—or in the vegetation hanging over the water. Click beetles (family: Elateridae) seem to be frequent travelers over, and often in, the water. This is a diverse family of beetles (only about 900 species in the U. S.) that have the
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entertaining distinction of flipping themselves several inches into the air when laid upside down on a hard, flat surface. This unique method of turning right-side up produces an audible "click," for which they are named. June bugs and Japanese beetles can also be very common along, and in, Midwestern and Eastern streams.

Since any number of different types of beetles can end up on a trout's dinner plate, it is usually not critical to match a specific size, color, or shape of beetle. Exceptions occur, however. Occasionally, a single species will be exceedingly abundant, in which case a more exact pattern will be important to your success. In such cases, careful observation is the best way to figure out what your patterns should look like.

Beetle adults float very low (they often seem more submerged than floating), and thus can be very difficult to see on the water. I try to keep beetles in mind whenever I notice a strong breeze blowing through riparian trees. Even when beetles aren't common on the water, it seems that trout are happy to take a natural or your imitation whenever they have a chance. If you are looking for a good general summertime searching pattern, beetles would be a good first choice.

GRASSHOPPERS: Rounding out the terrestrial "big three" are grasshoppers (order: Orthoptera). While not as common as ants or as diverse as beetles, grasshoppers have two essential qualities that make them great trout food—size and action. Most grasshoppers are a big meal for a fish. And like other big meals—salmonflies and green drakes, for example—such meaty morsels bring the largest fish to the table. Add the enticing kicking action of a grasshopper trying to get back to shore, and you have an irresistible combination.

Grasshopper populations often fluctuate from year to year, depending on prevailing weather patterns and food supply. Warm, dry weather during the spring results in better egg survival and faster growth of young hoppers than cool, wet weather. Populations also tend to be cyclic, with several banner years followed by several sparse years.

When hoppers are abundant, fish routinely gorge themselves. At such times, a hopper pattern will often produce well all day long. However, peak hopper activity usually occurs around midday. It also helps to have a breeze blowing so more hoppers end up off course and in the water. Such "hopper winds" can create incredible fishing for the largest trout in the stream or lake. For the best results, hopper patterns should be fished within a few inches of the bank. The difference between good luck and bad luck when you are hopper fishing may be nothing more than getting your fly six inches closer to the water's edge.

There are many other terrestrials, aside from the big three mentioned above, that become frequent items on the trout's summer menu. Jassids (also called planthoppers), caterpillars, inchworms, moths, spiders, bees, and wasps, all become food for trout during those warm, lazy summer days, when the exciting mayfly and stonefly hatches of spring are long gone.

Testing the Water

To get an idea of which terrestrials commonly fall into the trout's window on your streams or lakes, you can make a simple surface-water insect collector. You'll need a plastic tray about 18 inches long and wide, and about 2 inches deep. Attach some foam strips around the outside of the tray, so it will float easily. Now you're ready to use some string to attach the tray to a log, branch, or a stake, so the tray is floating several feet out from the shore. Fill the tray half full of water mixed with a little dish soap, and your surface-insect trap is ready. Any insects that land in the tray will quickly sink, because the soap eliminates any surface tension. After a day or two, check your trap to
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Rick Hafeld is the author, with Scott Roederer, of Aquatic Insects and Their Imitations. He has been writing the "Entomology" column in American Angler for 21 years. Lucky for him, there are still several hundred thousand insects that he has not yet written about.