

## WHICH TERRESTRIAL?

By Ed Herbst

Scientific research in both the USA and Britain indicates that once the spring hatches of aquatic insects are over, terrestrial insects form the bulk of trout food and that over the course of a season more terrestrials are taken by trout because they are available for more hours of the day than the sporadically hatched aquatic flies.

In England, Dr J.V. Woolland studies the stomach contents of 105 brown trout over a twelve month period on the river Dee in Wales and found that from late spring onwards aerial insects were not only the single major food source but that they were the majority food, being greater than the total of all other food sources.

What is even more interesting is Dr Woolland's finding that as trout grew older they took more surface food and that from early spring to late autumn, terrestrial insects were taken in much greater numbers than aquatic insects in all but one month.

In the hotter climate of South Africa this tendency is probably even more pronounced but of three major terrestrial insects in trout diet, the grasshopper, the ant and the beetle, which is the most likely to find favour with your quarry?

Most fly fishers would probably put their money on the hopper but would this be the correct choice?

Gary LaFontaine, who spent ten years studying trout underwater with scuba gear, from hides on the bank and with radio-tagged trout while researching his book, *The Dry Fly – New Angles* (Greycliffe Publishing Company, 1990), unequivocally selects the beetle.

He points out that good hopper fishing is dependent, as always, on how prolific these insects are near the river and that their numbers fluctuate – some years grasshoppers are an absolute plague and a hopper pattern is deadly but several years can pass between such occurrences.

“Fly fishermen need to understand certain facts about grasshoppers”, he says. “For one, they aren't the most abundant or even the most important terrestrials along trout streams. In wooded sections beetles provide most of the drop-in fare, and in meadow areas leafhoppers fall into the stream much more frequently (on the order of fifty to one). The ubiquitous ant also stands well ahead of the grasshopper. Often an imitation of one of these smaller insects will catch more trout than a grasshopper pattern. It is easy to recognise when this is happening. The fish roll up at that bigger fly, and maybe even nip it, but every strike ends short (call it a curiosity refusal).”

“A beetle imitation may not only be the most useful all-round terrestrial, but the most valuable fly for general searching. The deerhair Crowe beetle serves me better than a grasshopper or ant pattern as a general terrestrial fly because the ubiquitous beetle is much more prevalent in the trout's diet than

most fishermen realise, a trout's stomach isn't always jammed with them, but there are always a few in my sampling."

He also points out that the beetle is a very good pattern for breaking a hatch and persuading selectively rising fish to try something different. This has been empirically proved again and again on the ultra-selective and demanding fish on the Henry's Fork.

Significantly, LaFontaine considers a weighted grasshopper fished beneath the water surface to be a more successful pattern than when it is fished, as it usually is, as a dry fly.

I have just finished reading *The Pursuit of Wild Trout* (Merlin Unwin Books, 1991), by Mike Weaver who is considered to be the leading authority on fishing Britain's small freestone streams. Admittedly Britain's high rainfall and damp climate are not conducive to big hopper hatches but Weaver also chooses the beetle above all other terrestrials.

"If I had to pin all my faith on imitating one of these terrestrial insects it would be the beetle that would get my vote," he says. He is quick to point out that he is talking about the deer hair Crowe beetle rather than traditional British beetle imitations such as the Coch-y-bonddhu.

Certainly my own experience on Cape streams, in the few trout stomachs that I have seen opened, is that a beetle or two almost always seem to be present and I understand that they are also commonly found in the stomachs of Natal stillwater trout.

This is not surprising when one considers that beetles are not only the largest group of insects but also the largest order in the entire animal kingdom.

It is not difficult to understand why the beetle is such a successful fly. While mayflies have become the symbol and leitmotif of flyfishing, beetles are far more prevalent in trout diet. Beetles, or Coleoptera to give them their Latin name, are the largest order of living organisms with an estimated 350 000 species. In contrast to this the Mayflies have about six hundred different species. Most Mayflies breed only once a year and the adults live for about two days at most. Many species of beetles however are multi-brooded, producing up to four generations a year. What is even more impressive is that beetles are exactly the same shape as another large order in the insect kingdom, the bugs or Hemiptera and there are some 60 000 species, such as leafhoppers, cicadas and aphids, in this family. The major difference between beetles and bugs is that the beetles have jaws with which they bite and chew, but the bugs live exclusively on liquids and have sharply pointed snouts adapted for piercing and sucking either sap from plants or blood from other creatures. Thus we have four hundred and ten thousand species of insect sharing the same general silhouette – an oval shape with three legs on either side – and which are available throughout the year, compared with six hundred species of mayfly which are available as adults for a brief period each year.

In their book, *Terrestrials – A Modern Approach to Fishing and Tying with Synthetic and Natural Materials* by Harrison Steeves and Ed Koch (Stackpole Books, 1994) the authors estimate that terrestrial insects are more available to trout than aquatic insects by a ratio of 7-1.

This is borne out by a study cited by the late Charles Brooks in his books, *The Trout and the Stream* (Crown Publishers, New York 1974). Using drift nets to trap floating insects, scientists found that in early spring 80 per cent of floating food taken by trout consisted of aquatic insects. By midsummer the balance had shifted and now 60 per cent of trout food consisted of terrestrial insects. Taking the year as a whole, the trout derived 70 per cent of their food from non-aquatic, land-based insects. "Match the hatch if there is one on but, if there is not, look to terrestrial insects", said Brooks.

Keep in mind though that beetles are not just familiar to trout as terrestrial or land bound insects. There are several species of aquatic beetles and bugs such as Diving Beetles, Water Scavenger Beetles, Whirligig Beetles, Backswimmers and Water boatmen which swim about underwater and of which trout are very aware.

Experienced fly fishers the world over testify to the effectiveness of beetle patterns whether fished as a dry fly or beneath the surface. Mike Lawson is a professional fly fishing guide on one of the most famous trout rivers in the United States, the Henrys Fork. This slow moving river has massive mayfly and caddis hatches and the fish can be notoriously choosy and difficult to catch even on the smallest flies and the lightest tippets. In the Autumn 1990 edition of *American Angler and Fly Tyer* magazine Lawson writes: "If I had to pick one dry fly to use on spring-creek waters, without hesitation I would choose a black beetle. Even though I have seldom encountered situations where I knew trout were actually feeding on beetles, I have probably caught more fish on beetles than on any other fly".

Tasmanian angler, David Scholes devotes an entire chapter to the Black Beetle, which he fishes upstream and beneath the surface, in his book *Trout Days* (Kangaroo Press, 1986). "I'd rather fish a beetle than a nymph. As a saver of blank days, the Black Beetle is high on the list", he says.

Canadian angler, Dave Engerbretson (*Tight Lines*, Bright Water Solstice Press 1986), places great faith in a pattern he calls, "My Beetle". It is tied on a size 16-18 hook and consists of only two materials - a shellback of duck, goose or turkey wing fibres and a dry fly quality hackle. He ties the wing quill in at the bend and then ties in and winds the hackle forward. He clips off the hackle fibres on the top and bottom of the hook leaving a few fibres sticking out at the sides to resemble legs. The wingfibres are then pulled forward to provide the back of the beetle and tied off at the eye of the hook. Two fibres are left sticking forward over the hook eye to resemble antennae.

Says Dave, "Since I first realised just how much trout like to eat beetles, this pattern has become my ace-in-the-hole fly in many difficult angling situations in all parts of the country. If I am fishing to rising trout in still water, and they show little interest in the fly which, to me, appears to be a good imitation of the natural - I tie on a beetle. If they aren't taking what I think they are taking, I don't have a close match for the natural, or I don't know what they are taking - I try a beetle. Or, as so often happens after a major hatch is over and the big 'bank feeders' are sipping insects from the wind row of bugs that have collected along the edge of a stream - a beetle is usually my number one choice. And in the late summer when most of the hatches are over and the terrestrials make up a large portion of a trout's diet, you guessed it! I opt for my box of beetles. You should too".

British author, A. Courtney Williams, whose book, *A Dictionary of Trout Flies* (A & C Black) went through five editions and numerous reprints between 1949 and 1979 also felt that the majority of anglers were unaware of the importance of beetles in trout diet. "The importance of beetles to the fly-fisherman is not fully appreciated as it should be", he wrote.

"All through this book I have endeavoured to emphasize that, except on those few streams where the up-winged duns (mayfly adults) are of paramount importance, the food of trout is made up of a great variety of different sorts of insects and amongst them the great Coleoptera order, which contains no less than eighty-six families of beetles and goodness knows how many thousands of species, cannot be ignored.

"Beetles are present in tremendous numbers in almost every river, brook, lake and pool, and there are hundreds of species of aquatic beetles which both in their adult and larval; states are freely taken by trout and grayling, as is clear from the frequency in which they occur in autopsies.

"In addition, there are, of course, scores of land beetles which accidentally get carried onto the water, where the buzzing disturbance they create serves to attract the attention of the fish.

"If a census were taken of the sub-surface insect population of any stream or loch, it would be found that Coleoptera constitute a major group. In view of all these circumstances, it is surprising that anglers as a whole trouble so little about imitating them".

The deer hair beetle to which Mike Weaver referred has been largely superseded by patterns constructed of closed-cell foam. Dean Riphagen had some heady moments on the Jan du Toit's River in the Western Cape last year when trout refused his usual poison - the G&B Low Floater - but succumbed to an Orvis "Bright Spot" beetle. This has a blob of bright enamel paint on its black foam back and special Orvis "Beetle Legs" made of what seems to be lacquered black monocord.

If you lack these materials don't despair. A roll of weather stripping foam (which I believe is also used for sealing fridge doors) is available from any hardware store and will provide you with a lifetime of beetle material. Black krystalflash is a good substitute for the Orvis beetle legs which, although Dean swears by them, I find a little hard and stiff.

To make the beetles easier to see in choppy water follow Dave Whitlock's proven method of tying a piece of brightly coloured synthetic wool on top of the pattern. Remember to tie the little strip of wool parallel to the hook shank and not at right angles to it as using the latter method causes the wool to splay out sideways and makes it easier for the fish to see from below.

Foam beetles are even easier to see if made from yellow camper's mattresses. All you do is colour the bottom half of the beetle with a black waterproof felt-tip pen leaving the back in its original yellow.

These types of foam are surprisingly easy to shape and sculpture. I use a pair of Fiskars scissors which are made under licence by Wilkinson Sword. They are carried by most pharmacies as nail

scissors and I have yet to find anything better for the heavier work such as trimming deer hair. They come in straight-point (red handle) and curved-point (blue handle) models and would probably cost between fifty and sixty rand at the moment.

In a back issue of *Kingfisher*, Tim Rolston described a trip to the Jan du Toit's where the difference between success and failure was a single ant pattern, the only fly in which the fish seemed interested, and which was accordingly protected for the duration of the trip as though it was made of gold.

Tim says that they were only about five metres from the fish which was unaware of their presence and feeding hard. It ignored a wide variety of flies including lightly-weighted nymphs. Finally a small, black ant pattern was tied on. Then, and only then, the fish sidled sideways and took it without a qualm.

The late Vincent Marinaro, who with Charles Fox pioneered midge and terrestrial fishing in the USA, and Lefty Kreh each voted the ant as the most deadly terrestrial pattern.

In his latest book, *Advanced Fly Fishing Techniques* (Delacorte Press 1992) Lefty says; "If there is one terrestrial that every angler should carry, it's the ant. Just about any place you find trout, you'll find ants. And trout seem to go out of their way to eat them." And, in *What The Trout Said* (Nick Lyons Books 1987), Datus Proper writes: "The crawling ant is the most important summer fly on many streams in Eastern America."

In the Western Cape, and no doubt elsewhere, ants take off from their underground nests just before rain on nuptial flights which can carpet the water with their bodies. The river is alive with rising fish on such occasions and without the correct imitation you don't stand a chance. On one such occasion I watched a small bass rising to these ants. He had already consumed a great many and would only react to the ants which were still alive and struggling. The dead ants he ignored – proving once again that movement is an all important triggering factor for fish.

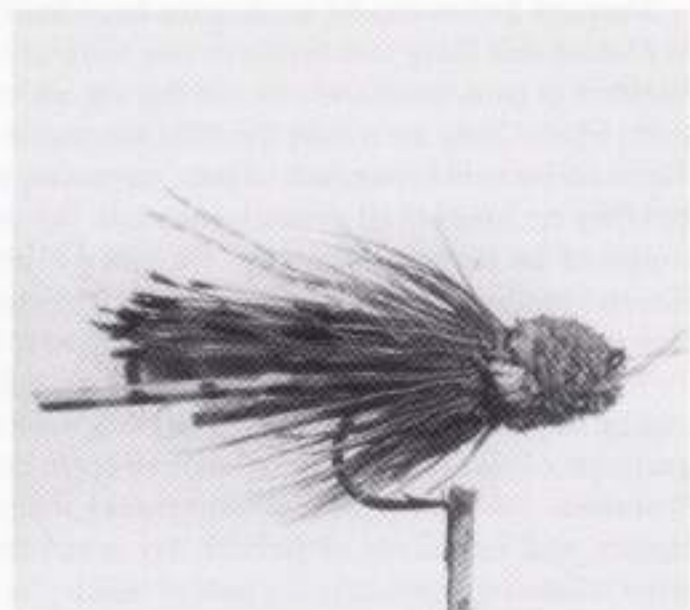
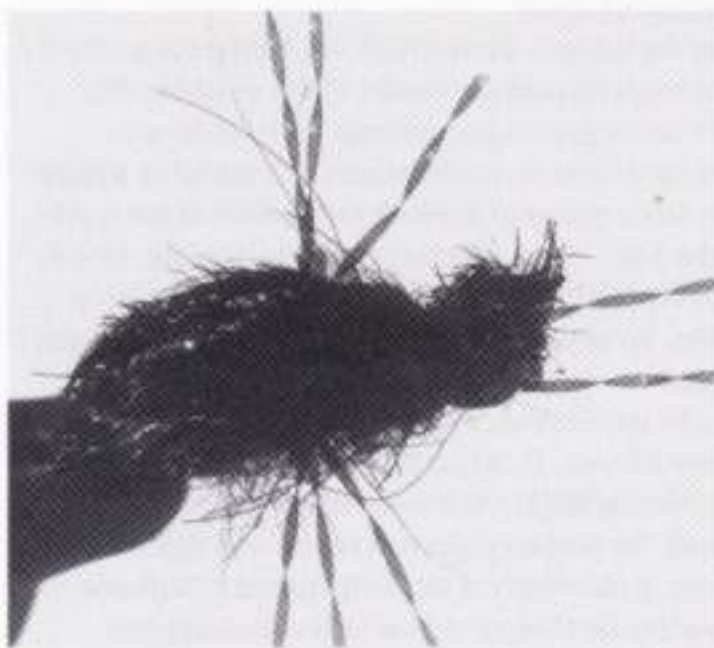
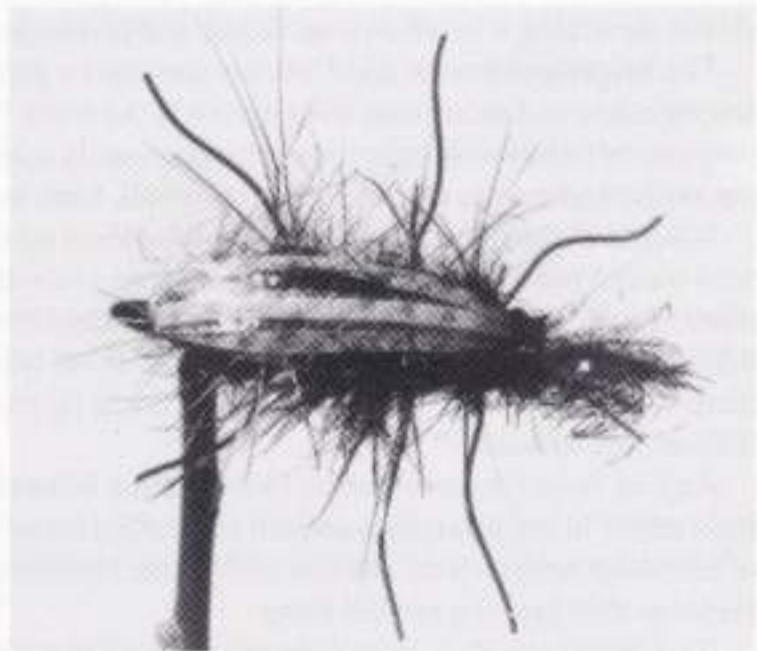
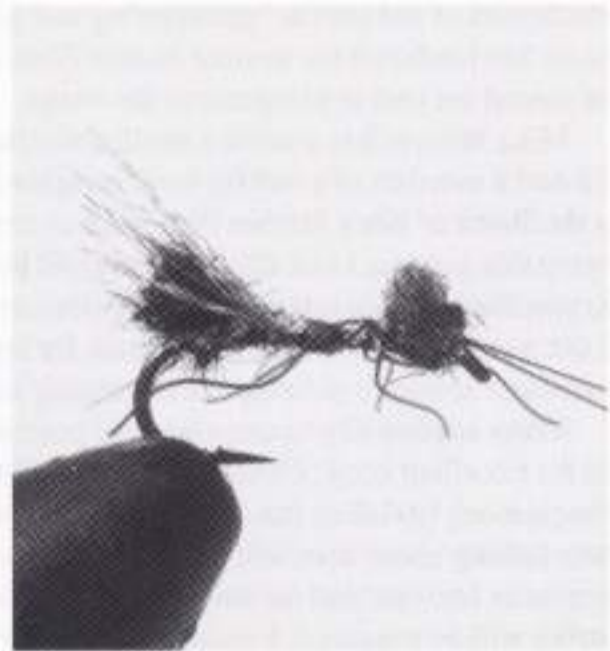
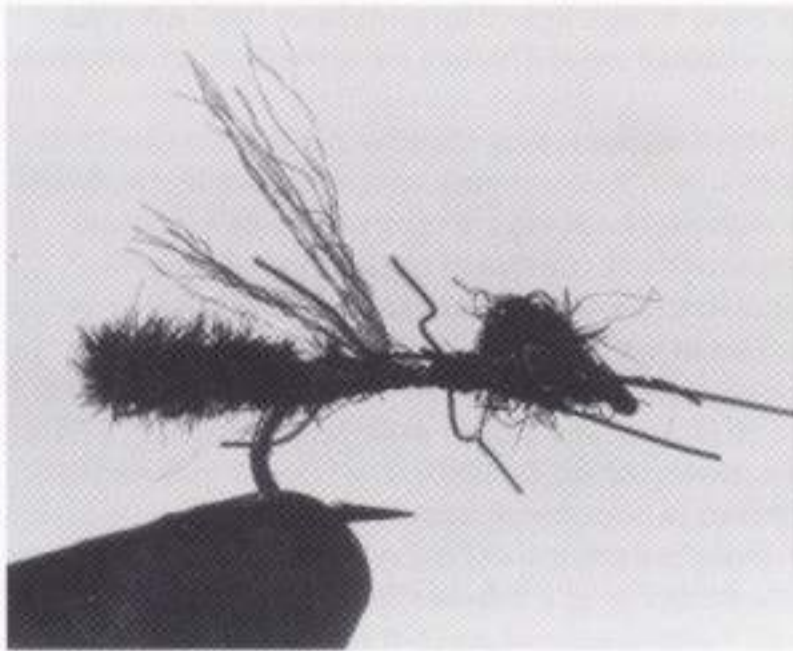
Most ant imitations are simple in construction – a small blob fore and a bigger blob aft with a thin waist in between. The bodies are normally constructed of dubbing with a few turns of hackle in between and clipped top and bottom to represent legs. Gary Berger, as detailed in his excellent book, *Designing Trout Flies* (Tomorrow River Press 1991), ties a parachute version of this fly which has a great deal to commend it.

Another version is the MacMurray ant which uses two pieces of Balsa wood connected by nylon mono to represent the thorax and abdomen of the ant. However this pattern proved rather fragile and will surely be superseded by the new Orvis Quiksite ant bodies. These are simply thin tubes of black and brown foam with a white section at one end. The tubes are tied on top of the hook with the white section facing forward. The foam is compressed where it is tied in and this represents the waist. Dean Riphagen ties a beautiful Quiksite ant using a parachute hackle, Berger-style, tied round the front segment to represent the legs and two strands of Krystalflash on either side of the abdomen to represent wings. This might be made more attractive if a few strands of Antron were included with the Krystalflash to give a broad spectrum representation of wings.

To emphasise the narrow waist between head and abdomen which is a striking characteristic of the ant silhouette and, accordingly, a trigger factor, I cut the Quiksite ant body into two sections, making the cut about a third of the body length behind the white-painted head section, I trim the inner sections of these segments to a point and tie the bigger section at the bend of the hook to represent the abdomen and the smaller, white-painted section at the eye of the hook. I find that a little Superglue from a Genkem Superglue pen, which dispenses the glue drop by drop, helps to position each body section in the right place. This technique not only emphasises the ant's narrow waist but creates more room in which to tie the materials representing the wings and legs.

Dean found on his recent Cape trip that these ants did not float well but he was fishing them without any floatant. Whenever I tie a dry fly I cover it with floatant and leave it on the window sill so that the floatant can be absorbed before I fish it and the Quiksite ants would probably benefit from such treatment.

Don't forget that many terrestrials are taken underwater. For many years in the USA ants with lacquered thread bodies have been fished as wet flies, often with devastating effect. I use a little sunken ant imitation which consists of two copper wire sections fore and aft. These are flattened with a small pair of pliers and covered with head cement to give them translucence which is important because on page 86 of *A Modern Dry Fly Code* (Crown Publishers, 1950) Vincent Marinaro describes



*Top row: Size 18 ant patterns with ultrahair legs and microfibbet antennae  
Middle row: Traditional peacock herl beetle (left) and size 18 ultrahair-leg beetle with flashabou wing case  
Bottom row: Sunken beetle with krystalflash legs (left) and rubber-leg hopper*

the bodies of red ants as "glimmering and glowing as though lighted by some inner fire." After the body has hardened the normal feather fibre legs trimmed top and bottom are applied and a few strands of antron are tied in to represent the wings.

Mike Weaver has a sunken beetle imitation which he says is very effective. He ties it in size 16 or 18 and it consists of a wet fly hook weighted with a little lead or copper wire, a peacock herl body and a shellback of black feather fibre such as crow. Although he doesn't suggest or include legs when tying this pattern, I feel this pattern could be improved with one turn of hen hackle or, better still, krystalflash legs to provide a little movement and flash. On my smaller #16-18 beetle and ant patterns I use a crinkly nylon, called Ultrahair, for legs. This material is normally used for tying wings in saltwater streamer patterns but the zigzag shape makes it ideal for legs on imitations of small insects.

Many anglers like to use a body of peacock herl on their foam beetle patterns but Chauncey Lively in his excellent book, *Chauncey Lively's Flybox* (Stackpole Books 1980), says his tests indicate that the peacock herl does not improve the fly and results in it becoming waterlogged more quickly. Lively was talking about deer hair beetles on the slow limestone streams of Pennsylvania. The foam beetles are more buoyant and on our rougher streams the further away a fish sees the pattern the more likely a strike will be triggered. I would, accordingly, use a combination of peacock herl and olive flashabou. Remember that when you are tying very small patterns you can diminish the width of flashabou by slowly stretching it between your thumb and forefinger.

The Brightspot beetles and Quiksite ants have a great deal to commend them. They are fairly aerodynamic and so are easy to cast even in the wind. They are deadly in small sizes which means that they can be fished with light tippets to more easily achieve drag-free floats. They are easily seen by the angler and easy to construct and, above all, trout love 'em!

When is the best time to fish terrestrial patterns such as beetles and ants? "The best of the fishing with beetles takes place during the hottest time of the day, mid-afternoon, according to my observation," says Vincent Marinaro in *A Modern Dry Fly Code*. "It is plain, then, that the fishing of terrestrials is largely governed by the heat, without which these insects remain somewhat chilled and more or less quiescent: the wind is an additional factor, although the beetle is often on the water without this influence."

And, in *Trout* (Andre Deutsch 1979), Ernest Schweibert says: "Like all terrestrial insects, ants are most active in warm weather and are most often found in trout stomachs on hot, windy days." This is of particular relevance on streams such as the Holsloot and Smalblaar where the wind invariably seems to start blowing around noon.

If we have relegated the grasshopper to third place in the hierarchy of the trout's favourite terrestrial food, which is first and which takes the runner-up spot?

Harrison Steves and Ed Koch in the latest book on the subject, *Terrestrials - A Modern Approach to Fishing and Tying with Synthetic and Natural Materials* (Stackpole Books 1994) examine this question in great detail and concede that the ant has a major role to play in trout diet. "Ants are everywhere! They are among the most successful group of insects on the planet, terrestrial or aquatic. There are incredible numbers of ants, surpassing any other group of animals on the face of the earth, and they are found in all terrestrial habitats. But on the basis of total dietary bulk (dry weight, or wet weight of the stomachs' contents), the ants will probably take a back seat to all the other terrestrial insects consumed on any normal day". Perhaps so, but, on any given day, trout will see far more ants than grasshoppers and will thus be more keyed to them.

Which terrestrial then? If you are lucky enough to be on the river when the ants take off on their mating flight then the selection of pattern is made easy for you. If, when walking through streamside grass, your passage puts dozens of grasshoppers to whirring flight, then once again your choice of fly is obvious. But even in these circumstances, if you lack the correct pattern, a beetle will still be a banker. And, for the rest of the time, day in and day out, particularly if the temperature is high and the wind is blowing, the beetle is a pattern which you can fish floating or subsurface with complete confidence.



*Mario Cesare fishes the sunken beetle on the Holsoot*



*A sunken beetle victim – Tom Sutcliffe on the Holsoot*