

Midges

by

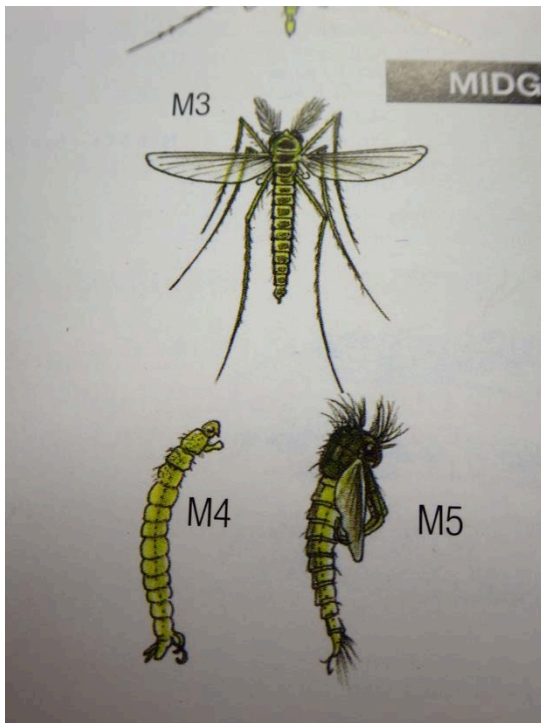
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Many of you, like me, recall those days fly-fishing we saw someone catch more fish in five minutes than you caught all day. I recall one particular experience at Roaring River in August 1995. A lady with a fly rod caught at least 10 trout in one-half hour in the late afternoon. I watched her cast, trying to determine what she had at the end of her line. No indicator and it appeared no fly. I asked her and she kindly told me she was using a size 20 black midge. She was high sticking and watching the contact of the leader with the water surface while at the same time watching for the erratic swimming motion or white mouth to set the hook.

Size twenty was beyond my abilities. I tried to fish with a 7X tippet and failed every time. I put midge fishing on the same plane of experience as climbing the Eiffel Tower.

The spring of 2012, Russ introduced us to midge fishing using a size 14-16 hook with a tungsten bead and tied on the front half of the hook with a 6x tippet. We were in heaven. Thirty fish days were common, sometimes fifty. The learning curve was beginning.



Midges (Chironomids) are like aliens in the '50's, they are everywhere. There are estimated 200 genera and 3500 species in North America. They have a complete metamorphosis, egg, larva, pupa and adult. The pupa and adult stages are what we need to keep in mind as fishermen. A few adults are as large as an inch, but most are as small as this parenthesis, (. Despite resembling mosquitoes, adults do not have mouthparts and are called non-biting midges. Their numbers are outstanding and produce sounds with their multitudes that give them the name "buzzers". The largest midges have life spans of one year. Size 20's have multiple generations over a year period. Some Chironomids are capable of surviving with near zero oxygen content. This is possible with their concentrated hemoglobin and they are commonly and mistakenly called bloodworms.



One tiny female lays an egg mass numbering in the hundreds or thousands. The fertile egg is one dot in this egg mass and microscopic. Think of the size of the abdomen of a female midge with hundreds of eggs to understand the concept. The egg mass falls to the bottom of the stream or lake. The lucky fertile eggs that escape predation and disease hatch into larva and begin growing.



Midge larva eats the organic material at the bottom of the water column, the benthic zone. The lucky larva that falls on a patch of sand or mud burrows into their home. The density of these burrows has been reported at 7000 per square meter. Think of carp searching for food in the bottom muck. At first the larva exchange

gases through their cuticle shell. As they eat and enlarge, they break out of the first cuticle and develop a thicker cuticle. Gas exchange becomes difficult and gills develop to acquire oxygen. With gills, their growth rate increases. The larva grows through two or three more larval cycles, called instars. Each molting reduces the size of the larva while organs mature along with legs, wings and antenna. The cuticle thickens preventing carbon dioxide from dissipating. The pupa stage begins. As the pupa matures it produces more carbon dioxide trapped in the dense cuticle.



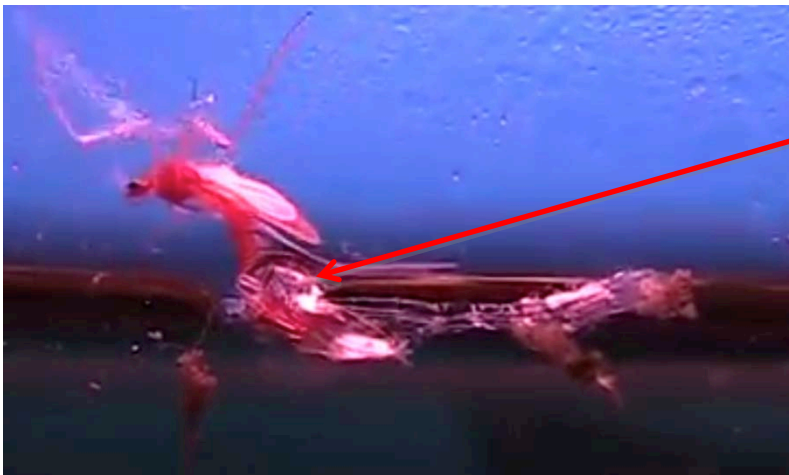
The pupa are buoyant and rise to the surface.



This stage is important to fly fishermen. The pupa rising through the water column becomes a target for trout.



The pupa rising in the water column reduces the pressure on the gases and expands their cuticle. The pupa is trapped under the surface film. If the timing of all these events is perfect, the cuticle bursts open, the carbon dioxide bubble disrupts the water surface and the midge breaks the free. The adult midge flies away to find a mate and begin the cycle again.



Note the gas bubble in the surface film at the end midge's abdomen



This photo was taken at Montauk during C&R season. This area is the size of a quarter. It still amazes me to see the coordinated behavior of the midges around the mating pair. What are they doing? I doubt they are embarrassed at the activity behind them. The sand released during the spring floods provides excellent Chironomid habitat.



Dave Tucker and I have been working on improving our catch rates by modifying our flies based on Internet midge information.

This photo shows the Russ' original size 14 midge on the left. The other two are Harvester midges size 20. The midge on the right is coated with UV and is a better imitation of the cuticle of the pupa. The UV coating improved our catch rate. I found in my collection of flies the following two buzzers tied by Lawrence Finney of Northern Ireland and Christopher Reeves from England. These buzzers are fished in the Irish and English lakes. They are fished with sinking lines and do not require tungsten beads.



Our streams are better fished with tungsten beads on 6X and 7X tippet. These tippet require fly rods with soft tips. A bamboo or fiberglass rod is perfect protection for the small tippet. The new generation of Cabela's fiberglass rods is perfect and cost effective. If you are passing through Rogers, Ar, stop at Cabela's and maybe you can find a fiberglass rod on sale under \$100. Adding UV to the knot at

the leader tippet connection stopped breakoffs. A Pitzen knot eliminates break offs at the fly, even with 7X fluorocarbon.

I discovered the photo of an emerging pupa with gill filaments and added this to my new flies. I waited for the most difficult time to try the gilled midge, a clear blue sky at noon. The pool I was fishing provided 20 trout that morning. Jerry Jester was with us and caught 15 more from this pool. On my first cast with the gilled midge, three trout rushed the fly and started fighting each other for first rights. I caught around ten more trout with the gilled midge.



Sources:

Trout Food; Dave Whitlock

<https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&ved=0ahUKEwiKx5nD66XYAhXMZiYKHbMuBmEQjhwIBQ&url=http%3A%2F%2Fwww.zoo.firma.ru%2Fknigi%2Fgidrobiologija%2F9599-lichinki-i-kukolki-polypedilum.html&psig=AOvVaw0m0lxBnnIweout6rE25uPJ&ust=1514314561548993>

<https://gtjournal.tadl.org/wp-content/uploads/2017/08/Midge-hatching-from-pupa-1-1024x682.jpg>

<http://www.flycraftangling.com/index.asp?p=125>