A March Brown by Any Other Name...

Where these insects are concerned, the East and West don't quite meet.

March browns provide a perfect example of what I call "common-name confusion." In the early 1800s, North America wasn't exactly a hotbed of fly-fishing knowledge, and most angling information and techniques had come from Great Britain, along with many of the early settlers. Even though there is virtually no overlap of aquatic-insect species between North America and Great Britain, some eastern hatches were similar in appearance to those in England. Thus, an insect with similar size and color characteristics as one from England was quickly given the same common name, without regard to scientific classification.

As American anglers slowly moved westward, they took with them the same approach to naming insect hatches: if a bug looked the same as one back home, it must be the same. Thus, common names such as March brown, green drake, pale morning dun, willow fly, and many others spread across the country, even though the western species were quite different than their eastern (and British) namesakes.

Entomologists have been battling this common-name confusion ever since, and, as a result, much confusion still exists among anglers today. So, for the sake of history, let's take a look at eastern and western March browns and see how they are the same and how they are different.

Beasts of the East

In this corner we have the eastern species, *Stenonema vicarium*, commonly called the American March brown. The genus *Stenonema* belongs to the family Heptageniidae, and includes 20 other species, with all but one (*Stenonema terminatum*) restricted to eastern and midwestern streams. *Stenonema vicarium* is a well-known and important hatch throughout the Catskills and Adirondacks. Other well known species of *Stenonema* include the light Cahill (*Stenonema ihalca*) and cream Cahill (*S. modestum*, *S. mexicanum integrum*, *S. mediopunctatum*, and *S. ferox atratum*). A frequently mentioned species in early fishing-entomology books is...
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*Stenonema fuscum* or gray fox. However, entomologists now consider *S. fuscum* identical to *S. vicarium* and thus no longer a unique species. In addition, the genus *Stenonema* has been split into two, adding the genus *Stenacron*.

The nymphs of *Stenonema vicarium*, like all species in the family Heptageniidae, are referred to as “clingers” because of their flat, pancake-like bodies, of which the head is the widest part. Nymphs have gills on abdominal segments one through seven, but the gills on segment seven are very slender, instead of flat plate-like gills. The tips of the gills (except those on segment seven) are rounded rather than pointed as in *Stenacron*. *Stenonema vicarium* is the largest species of the genus with lengths between one half and three quarters of an inch, and nymphs are typically reddish brown in color.

American March brown duns are best distinguished from other Heptageniids by their wing venation, mottled wing coloration, and size. Spinners are best recognized by their wing venation, size, and the shape of the male genitalia, which are visible only under a good microscope. In general, nymphs are easier to identify than duns or spinners, so to help confirm which species of duns and spinners are on the water, collect either mature nymphs from the stream bottom or empty nymphal sheaths left floating in the water after dun emergence. The American March brown is not just the largest species of the genus *Stenonema*, but it's also the first of the season to emerge.

Even though *Stenonema vicarium* is a clinger and shaped for living in fast water, nymphs of this species are most abundant in slow- to moderately flowing sections of streams and rivers. They are found in a wide range of waters, including freestone streams, weedy spring creeks, and even slightly silty rivers. Hatches typically begin in mid- to late May, when water temperatures reach the mid-50s, and continue until early July. Prior to emergence, the nymphs migrate to slower, more placid margins of streams. Fish seem to pay special attention to this movement and target the migrating nymphs up to a week before duns begin hatching. When emergence begins, the nymphs swim to the surface, where they often struggle in the surface film, creating even more opportunities for hungry fish.

There are two basic tactics for fishing nymph patterns before and during an emergence. One is to fish an imitation along the bottom as the nymphs migrate to the margins. Try this well before you see any sign of duns on the water. Then, when a hatch is underway, fish a nymph in or just below the surface.

A March-brown hatch usually occurs in the afternoon and is typically best on overcast days, when the emergence may last for three or four hours. When the weather warms, in early summer, the hatch may begin earlier, say mid-morn-

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While both species are classified as "clingers," American March-brown nymphs (left) favor moderate to slow currents, and western March browns (right) prefer slightly faster water with a cobble substrate.

ing, or later, not starting until temperatures cool in the evening. As the duns attempt to dry their wings, they often create quite a disturbance on the surface by flapping and fluttering before getting airborne. At other times, they float quietly on the water for long distances, creating great opportunities for surface feeding.

Spinner flights can also be impressive, with large numbers of insects forming mating swarms from early evening to dark. Surface activity can be fast and furious when the females begin laying eggs in riffles and runs.

Because of the good surface feeding created by this hatch, dry-fly fishing is both fun and productive. Use a high-floating dry to imitate the large duns fluttering on the surface, and make the pattern twitch and flutter as it drifts. When duns are more sedate, use a lower-floating pattern, and dead-drift it. Finally, when the spinner fall is on, use a flush-floating spinner pattern, and dead-drift it through the feeding lanes of rising fish.

Western Variations

In the other corner, we have the western species, *Rhithrogena morrisoni*, commonly known as the western March brown. The genus *Rhithrogena*—of which there are 23 species in North America—is also a dinger in the family Heptageniidae. Unlike *Stenonema*, which is almost entirely restricted to eastern or midwestern waters, about half the species of *Rhithrogena* occur primarily in eastern streams and the other half in western streams. *R. morrisoni* is one of the true western species, widely distributed from
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the Rocky Mountains to the Pacific Coast, and it does not occur in midwestern or eastern waters. Other important and closely related species include *R. hageni* (western black quill) and *R. undulata* (small western red quill). *Rhithrogena undulata* occurs in some midwestern and eastern streams, as well as the west. While all three species can be important, this discussion will focus on *R. morrisoni*.

Like other clingers, *R. morrisoni* nymphs have a flat body and a flat head that is wider than the thorax or abdomen. This shape is very effective for clinging to rocks in fastwater reaches of rocky streams. *Rhithrogena* species, however, have taken clinging effectiveness one-step further: the gills are large and partially overlap each other, and on segments one and seven they are greatly expanded such that they nearly touch each other under the front and rear of the body. The result is that the gills form a nearly uninterrupted disc around the body, which provides a suction-cup-like grip on the surface of streambed rocks. This gill shape, along with the presence of three tails, makes it very easy to recognize *Rhithrogena* nymphs. *Rhithrogena morrisoni* nymphs can be recognized from other *Rhithrogena* nymphs by their size (three-eighths to half an inch), reddish brown color, and three pale, almost white tails.

The duns and spinners of *Rhithrogena* are more difficult to identify than the nymphs. Wing venation, a somewhat confusing feature, can be used to help identify the genus *Rhithrogena* in that the upper leading edges of the front wings have a small area in which the veins are highly branched. Duns and spinners also have two tails instead of the three found on nymphs (a trait common to most clingers), a light brown to reddish brown body, and are about three-eighths to half an inch long (excluding the tails). Wings of duns are mottled brown, while the wings of spinners are clear. To identify *R. morrisoni* from other species of *Rhithrogena*, one must look at the male reproductive organs under a microscope, a step the average fly fisher is not likely to take. Fortunately *R. morrisoni* emerges a month or two earlier than any of the
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other western *Rhithrogena* hatches, so the time of year can help you confirm which species is on the water.

While eastern March-brown nymphs favor moderate to slow currents, *Rhithrogena morrisoni* prefer slightly faster water with a cobble substrate, but they do avoid the swiftest riffle areas. They are also most abundant in the large, lower-elevation segments of western streams and rivers. The other major western *Rhithrogena* species (*R. hageni* and *R. undulata*) prefer faster water in stream segments at higher elevations, usually above 5,000 feet. *R. morrisoni* nymphs cling so effectively to the stream bottom that they rarely find themselves in the drift where fish can feed on them. However, as emergence nears, they migrate from faster, mid-channel areas to quieter areas closer to shore. This period of migration provides some drifting nymphs for feeding trout.

There is some debate about exactly how western March-brown duns emerge. Some authors have written that the nymphs remain on the stream bottom during emergence and the duns then rise to the surface. Others have said that the nymphs start swimming to the surface and the duns emerge from the nymphs several inches below the surface. Still others state that the nymphs swim all the way to the surface and the duns emerge in the surface film. My own observations lead me to believe that emergence from nymph to dun occurs in, or within several inches of, the surface film. However, given the schizophrenic behavior of many insects, I would not be at all surprised to find some streams where the duns emerge from nymphs on the stream bottom.

The prime times of year for hatches of western March browns are late winter and early spring. In the Pacific Northwest (Oregon, Washington, and Northern California), hatches begin as early as February and last until early May. In the Rocky Mountains, peak hatches generally occur in April and May. In both cases, western March browns generally emerge before heavy spring runoff, and they provide
excellent early-season dry-fly action. Because of the cool, sometimes downright cold weather at this time of year, hatches are concentrated during midday, typically between noon and three o’clock. Overcast, drizzly days often produce the best hatches and surface-feeding activity, so don’t stay home just because the weather looks crummy.

Because _R. morrisoni_ nymphs enter the drift in good numbers only just prior to and during emergence, I imitate the nymphs only in the early spring, when hatches are close to starting or during a hatch when nymphs are rising to the surface. Typical nymphing techniques work fine, but you should adjust the depth of the nymph depending on where the naturals are in the water column. Wet flies also work well for imitating duns that emerge underwater or get caught and drown in the surface film—a common problem on cold windy spring days.

When duns become abundant on the surface, there is almost always great dry-fly fishing. However, if you are not getting many strikes, switch back to a wet fly or a nymph fished near the surface. Many fish keep feeding just below the surface even though duns are plentiful. Finally, unlike the eastern hatch of _Stenonema vicarium_ or other _Rhiithrogena_ species, _Rhiithrogena morrisoni_ does not produce significant spinner falls. Instead, the adults appear to mate and lay eggs sporadically during the day, rather than forming dense mating swarms and concentrated spinner falls.

While the east and the west don’t exactly meet where March browns are concerned, there is enough overlap that our forbears can perhaps be excused for applying similar common names to these distinctly different species. After all, entomologists are still trying to describe and understand the complex array of aquatic insect species in North America. Why should anglers be any different?

Rick Hafele is a professional entomologist for the state of Oregon.