
Subject: : Beginner Forum

Topic: : Limestone Stream....

Re: Limestone Stream....

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URL:

A limestone stream flows out of the ground usually at a very large spring, but sometimes the spring isn't so large. The springs flow out of limestone aquifers deep in the ground, and generally have very high flow rates. For instance as I write this the flow at Big Spring is 27 cfs, the flow and the mouth of the WB Perkiomen Creek, a freestone stream is 6 cfs. Comparing that to the mean, Big Springs flow doesn't change substantially from one season to the next. Also the flow from the spring is great enough to moderate the stream temperature throughout the watershed.

On the other hand, a freestone stream such as WB Perkiomen flows from many small springs and seeps. It maintains temperatures low enough to keep trout from cooking, but not enough to keep them from being stressed during the hottest weather. The flows however are dependent on ground water flows through the system and these are totally dependent on precipitation, not the water store in the deep aquifer. This is the biggest difference between the two types of streams. Limestone streams flow from very large aquifers, and since limestone is relatively soft water is store in the rock as well as large caverns. Freestone streams ground water is not stored in large underground caverns and basically comes out of the ground about as quickly as it enters the ground.

Freestone streams can be very fertile through is they flow through the Catskill formation. This formation of rock adds buffering and fertility to the stream. In the Poconos for instance many of the streams start in wetlands, are warm and acidic, but as they drop they pick up flow from lower strata and cool down and pick up the Catskill flows becoming very fertile streams along the way. They warm some in the hottest months but still maintain temperatures cool enough for trout.

One brookie stream I know of in the Reading area has a temp at the headwater of 51 degrees and flows at that temperature all year, to the mouth. Freestone streams in the area get too warm for trout. There is another type of stream that is rare in PA, that is a spring creek that flows from a glacial moraine or a periglacial area.

Germania Branch and Sunken Branch both in Potter County are periglacial streams. The streams on Long Island are moraine streams. These streams have good cold flows that are fairly stable, but the moraine streams give me the impression of maintaining much better flows. These streams are very fertile.