

Winter Evening Report

John Parker – 22/10/15

John made the transition from coarse to trout fishing about 12 years ago. He likes to think that his catch rate has steadily improved because he takes the time to study the conditions before tackling up. A couple of years ago he came upon a book "The Barometric Breakthrough" by Andrew Bett which is a relatively recent publication dealing with salmon and trout in the UK. The book contains several references to the ability of fish, albeit not salmonoids, to detect changes as small as 0.5 mb in atmospheric pressure under laboratory conditions

The theory, from the angling point of view, is that the volume of the swim bladder controls the buoyancy of the fish and that under conditions of high pressure, the bladder shrinks and the fish is forced to swim higher in the water (and vice versa). Smaller fish reacted more rapidly than larger varieties. There are millions of anglers who have faith in the effect of the phases of the moon on catch rate, so could barometric pressure be another factor. He thought that it would be a good idea to test the effect of pressure under practical fishing conditions.

He lives in Cambridge and regularly fishes at Earith. He persuaded the owners to provide a weekly catch rate against which he plotted the barometric pressure. He had a Casio watch incorporating a pressure gauge which was found to be in good agreement with the pressure recorded by local weather stations. He concluded that there was no correlation between barometric pressure and catch rate. There was a brief report on the results in the May/June issue of Trout Fisherman and John provided a comprehensive analysis of his experiments to individuals in the audience

Atmospheric pressure is measured in millibars and the average at sea level is 1013 mbar. This is the same (I think) as 1 atmosphere in old units (14.5 psi) which is capable of supporting a column of water 34ft in height. The variation in atmospheric pressure is unlikely to exceed 10 mbar in a day, maybe 20 mbar in a week*. 20 mbar is about the equivalent of a hydrostatic change in pressure experienced by a fish moving vertically 8 inches. It is almost the amount of change the fish might experience normally, swimming in a heavy wave. I suspect that the pressure waves, albeit pulsed, generated by the propeller on an outboard might be significantly higher.

It is also worth pointing out that the volume of the swim bladder in mature fish is controlled, not only by the fish gulping air from the surface, but through an internal mechanism where oxygen is transferred via the blood stream. I think the volume is adjusted to provide stability according to the depth and not the other way around. The statistical significance of the total catch rate for a water must also be questioned as it has been suggested that 80% of the fish are caught by 20% of the anglers. An individual's success rate might be more appropriate. Boat anglers are generally more successful than those fishing from the bank. This is probably due to the greater mobility provided by a boat and hence increased chances of finding the fish.

Anglers in the audience reckoned that heavy rain spooked fish. On the other hand, the sudden appearance of a cloud in an otherwise clear sky can definitely turn fish on, even momentarily. Many thought that fish followed the food which is mostly daphnia in the large reservoirs, which in turn rise and fall in the water column according to the intensity of the

ambient light rather than external pressure effects.

Brown trout seem to be more sensitive to light than rainbows and are most likely to be caught late in the day at last light.

So the practical experience in the audience supports the research results however tentative they may be. Possibly we have not given it enough thought in the past or confused cause with effect. Sat under a high pressure zone with little wind and high temperatures, intuitively tells us that we would rather have the cloud and breeze associated with low pressure.

John fishes at Earith on average twice a week. As he lives in Cambridge, it can be considered local. The fishery is open all through the year. The fellow anglers and staff are friendly. The setting is beautiful with crystal clear water, 12 acres in extent, with an average depth of 12 feet. There are lots of different species of birds. Fly life is prolific. There are plenty of fish because of the high stocking policy. Now you might consider this an ideal water in which to try imitative patterns. John's favourite is an Apache which he described as an orange damsel. I had a look in the Fish4Flies web site and it turned out to have a body wrapped in mink with an extended tail of marabou feathers, available in a range of colours including black and white and all shades in between. A blob with a tail!

The charges for 2015 were £15 for 4 fish and £25 for 8 fish. Unlimited fishing on a season ticket cost £400. Further regular entries appear on their Facebook page: Earith Lakes Fishery.

*Cambridge weather records can be found on:
<https://www.cl.cam.ac.uk/research/dtg/weather>