

CADDIS FLY LARVAL TUBES IN POLLTALLOON

by Colin Bunce

Irish Speleology 15 contained a description of Polltalloon and included a mention of "non segmented worms" seen on a series of gour pool dams in an oxbow to the main stream. They were particularly unusual because calcite was forming around them up to 10cm in length and 1cm in diameter. On subsequent visits they were examined in more detail and found not to be worms, but to contain an insect larvae. The accompanying sketch (figure 1) was made and sent to James P O'Connor in the National Museum of Ireland. He identified them as caseless caddis fly larvae, probably of the genus *Plectrocnemia*. These have been previously recorded in several Irish caves in Fermanagh, Sligo and Clare.

Caddis flies belong to two broad groups; those whose larvae construct a portable home or case from small stones or plant fragments, and those larvae which construct a silken net which is used to trap food particles. *Plectrocnemia* belongs to the latter group and is a common genus in Ireland.

The distinctive feature of the larval nets in Polltalloon is that calcite deposition is occurring around them. As these larvae live for less than a year in normal conditions before

metamorphosing, was the calcite forming extremely quickly, or was it a delayed development of the larvae?

Photographs were sent Philip Chapman - a noted U.K. cave biologist. He agreed with the identification and suggested that the location "has a high organic content (hence a good food supply for the larvae) and is fed via flooded mesocaverns - spaces from the surface i.e no air space, so no chance of losing bacterially generated CO₂. The water arrives supersaturated with calcite and suddenly finds itself in the open air and so able to degas and dump its calcite load on the nearest available surface - and what better than a caddis web where the flow rate is reduced and an extremely large surface area presents itself in the form of lots and lots of tiny threads. Result, one encrusted calcite tube".

I would be delighted to hear from anyone with comments on this or who has seen similar deposits. The adult form is often seen in Clare caves - a dull brown colour, 2-3cm in length, wings held tent like over the body and antennae held out in front of the head.

