HABITAT PARTITIONING AMONGST HYDROPSYCHID LARVAE IN A MALAYSIAN STREAM

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Three species of hydropsychid larvae were found to coexist in the rapids of a West Malaysian stream, the Sungei Langat. In seeking to discover the ecological basis for their coexistence, an exmination was made of the mesh size of nets, food taken and microhabitats occupied by each species.

It was found that one species, **Synaptopsyche klakahana** Ulmer, differed from the other two in having a smaller-mesh net and in taking smaller size food particles with a preponderance of plant material. **Synaptopsyche** also differed from the other two species in occupying parts of the stream bed where fine gravel had accumulated. It was judged that those various features were sufficient to account for the coexistence of this species with the other two.

By contrast, the other species, **Hydropsyche annulata** Ulmer and **Hydropsyche langati (sp. nov.)**, showed no significant differences in net-size nor in the size and nature of the food taken. They did, however, differ in the microhabitats they occupied. **Hydropsyche annulata** nets were constructed mainly as self-supporting structures on the flat or slightly indented faces of boulders. By contrast, the nets of **Hydropsyche langati** had a more complicated support structure and were typically constructed across crevices between boulders.

It is argued on the basis of these latter findings that, in conditions where food can be presumed to be abundant, the use of separate net-spinning sites may be sufficient in itself to permit species coexistence.

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