217. Cave colonization by fish: the role of bat predation
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A population of the characid Astyanax fasciatus was found
living at the outflow of a subterranean source of water.
Field observations revealed differences in behavior when
compared with river populations. Affinity of this fish for
the subterranean cavity was evidenced by behavior and
distribution of individuals. Fish almost always carried
bait into the subterranean cavity prior to feeding. They
also went into the cavity when fishing bats are active in
the evening. If fish are experimentally attracted to the
pool during this period, fishing-bat activity increases.
Laboratory studies demonstrate that avoiding open areas in
the evening is characteristic of these fish. Predation by
fishing bats thus can be a selective pressure favoring
cave dwelling, a hypothesis on the origin cave
colonization alternative to entrapment and directional
evolution.

These observations also suggest that behavioral changes
may precede morphological ones during initial stages of
cave entry, and that behavioral adaptations may occur
quite rapidly.