



## Effect of net avoidance on estimates of diel vertical migration

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**ABSTRACT:** Diel vertical migration (DVM) has been hypothesized to actively transport organic material out of the euphotic layer, thus forming a novel part of the "biological pump." However, quantifying DVM is made difficult by observational limitations. Conventionally, the difference between night and day biomass from net tows in the surface has been assumed to be a consequence of species that have migrated up from their deep daytime depths. However, some of this difference might be an artifact of visual net avoidance. Here, we present a method that facilitates quantification of zooplankton that are migrating, those that are not migrating, and those able to avoid net capture. The algorithm is applied to an extensive data set gathered in the Azores Front region. Results indicate that DVM, and thus active carbon transport, calculated in the traditional manner would overestimate the true value by ~50%.

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