

FEEDING HABITS OF WILD AND HATCHERY-REARED PACIFIC THREADFIN *POLYDACTYLUS SEXFILIS* (FAMILY POLYNEMIDAE) IN HAWAII

Tom K. Ogawa*, David A. Ziemann and Scott W.S. Bloom
The Oceanic Institute
Makapu`u Point
41-202 Kalaniana`ole Highway
Waimanalo, Hawai`i 96795 USA
togawa@oceanicinstitute.org

In an effort to study the feasibility of using Pacific threadfin (*Polydactylus sexfilis*) as a stock enhancement species in Hawaiian waters, experimental releases of threadfin have been undertaken since 1993. Assessment of fundamental life history characteristics from recaptured fish provides vital information toward the optimization of release size, density, site and season. As an important indicator of enhancement success, dietary acclimation of hatchery-reared fish into the natural environment was the focus of this study. The dietary characteristics of wild and hatchery-reared *P. sexfilis* captured from the east coast of O`ahu, Hawai`i from September 1998 to July 2000 were very similar. Small benthic crustaceans such as shrimps and amphipods dominated the diet of juvenile threadfin whereas shrimps, crabs and fish were the predominant prey items found in adult fish. Shrimps were the most common prey items found in the diet of both wild (65%) and hatchery-reared (60%) threadfin for all size classes examined. As fish size increased, a greater proportion of the diet contained relatively larger prey items such as crabs and fish. Horn's overlap indices indicated high degrees of overlap between juvenile, subadult and adult wild and hatchery-reared threadfin for both sampling years (>0.85). High overlap between sampling years for same-size wild and hatchery-reared fish was also evident (>0.80). A qualitative discussion of the acclimation period of hatchery-reared juvenile threadfin into a nursery habitat will be presented.