Roger Hanlon

Squid spawning in Monterey Bay

The most valuable fishery on the California coast is for the squid species *Loligo opalescens*. These squid are fished directly on their spawning grounds. Despite this, little is known about their reproduction and spawning behavior. In mid-August, Roger Hanlon (Marine Biological Laboratory, Woods Hole, MA) and John Forsythe (Marine Biomedical Institute, Univ. Texas) completed their second field season of ROV dives in the squid spawning grounds of southern Monterey Bay. The project was scheduled to start in 1998, but had to be postponed for two years because squid did not return to this area during the El Nino years of 1998-1999.

This year's ROV dives were highly successful. Hanlon's team observed dozens of small spawning aggregations, and also one large aggregation of hundreds of mating pairs. They were able to characterize and quantify the mating behavior, rate of egg laying by females, and movement of squid in and out of the spawning grounds. They also observed for the first time the "head-to-head" mating position of squid that had been inferred on the basis of stored sperm in the female's seminal receptacle. Tissue and egg samples were collected for tests of paternity patterns and population dynamics, in collaboration with William Gilly (Hopkins Marine Station of Stanford Univ, located on shore next to the study area). These data will contribute to development of an official management plan for the squid fishery, due in 2003.

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