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## **New Developments in the Larval Pink Shrimp Study of Dry Tortugas**

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THIS RESEARCH was performed under contract with the Bureau of Commercial Fisheries. The results will be published by this Agency.

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## **Survival of Stained, Tagged, and Unmarked Shrimp in the Presence of Predators**

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### **Abstract**

The survival rate of tagged, stain-marked, and unmarked shrimp held in tanks of sea water has been compared. Predaceous fish were introduced into the tanks and predation upon the three groups of shrimp compared. Unmarked shrimp and shrimp marked with biological stains survived at approximately the same rate with respect to each other with or without predators present; tagged shrimp incurred excessive mortality exclusive of predation and highly variable mortality with predators present.

DETERMINATION OF MORTALITY rates in populations of marine shrimp presents a challenging problem. Estimation of these important parameters using commercial fishery statistics has not yet proved feasible whereas their measurement by means of mark-recapture experiments promises an immediate solution. Successful application of the mark-recapture technique requires, in the case of any species, knowledge of the extent to which the experimental animals are affected by the type of mark employed. This is particularly significant in the case of shrimp since they are comparatively delicate organisms.