FURTHER NOTES ON THE DISTRIBUTION OF *PORTUNUS XANTUSII AFFINIS* AND *EUPHYLAX DOVII* (DECAPODA BRACHYURA, PORTUNIDAE) IN THE EASTERN TROPICAL PACIFIC 1)

BY

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INTRODUCTION

In 1967-68, the U.S. Bureau of Commercial Fisheries coordinated a multiship oceanographic expedition "Eastropac" in the eastern tropical Pacific Ocean. "Eastropac" was undertaken in order to relate the oceanographic environment of the area to the spatial and temporal distribution of skipjack tuna. The area studied was bounded as follows: 20°N to 20°S, 126°W to the west coast of Central and South America. This is a report on pelagic swimming crabs (Portunidae) collected during "Eastropac" expedition.

METHODS

Most of these crabs were collected in micronekton net hauls; the micronekton net was described and figured by Blackburn (1968). The micronekton net with a 1.5 by 1.5 meter square frame sampled in oblique hauls from an average depth of 194 meters to the surface at four to six knots for an average period of 44 minutes. Presence or absence of portunids was noted for all of the 859 micronekton tows taken during "Eastropac". One portunid was collected in a 1 m oblique zooplankton tow from 210 meters to the surface, and a few individuals were collected by means of a dip net at the surface. Size range (mm) of carapace width at the widest part was determined for each collection.

RESULTS AND DISCUSSION

During "Eastropac" two species of swimming crabs, *Portunus xantusii affinis* (Faxon) and *Euphylax dovii* Stimpson, were collected; the locations of these collections are shown in fig. 1.

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In an extensive study of the family Portunidae along the Pacific coast of America, Garth & Stephenson (1966) reviewed the literature for these species and reported on a large number of new collections. At depths from shore to 100 fathoms the range of *P. x. affinis* extends from Cape San Lucas and off Rio San Lorenzo, Gulf of California, Mexico to South Bay, Lobos de Afuera Island, Peru (Faxon, 1893, 1895; Garth & Stephenson, 1966). Jerde (1967) reported pelagic *P. x. affinis* in eastern tropical Pacific surface waters up to about 200 miles off-shore. The importance of portunid crabs in the diet of tuna is discussed in Alverson (1963), Jerde (1967), and Blackburn (1968).

The “Eastropac” collections of *P. x. affinis* included 11 young, 44 males (15-48 mm) and 30 females (17-36 mm, none ovigerous); these crabs were caught at 26 different localities. Ten specimens of *P. x. affinis* and one specimen of *E. do:ii* had pedunculate barnacles, *Conchoderma virgatum* (Spengler), attached to the carapace.

With few exceptions the “Eastropac” *P. x. affinis* collections are within the geographical ranges shown in Garth & Stephenson (1966), and Jerde (1967). Consequently the details of the “Eastropac” *P. x. affinis* collections are not shown in this paper. However, it is of interest to note that once again no ovigerous females were encountered in the pelagic collections. This lends credence to Jerde’s (1967) suggestion that the pelagic *P. x. affinis* found far at sea are not part of the reproductive population. Ovigerous females have been collected in benthic trawls in shallow water from February to May (Garth & Stephenson, 1966). While participating in the Scripps Institution of Oceanography expedition “El Golfo II”, on June 6-7, 1965 the author obtained 12 ovigerous female *P. x. affinis* (34-40