

(59/1% of all known Mexican species occur in the California Current area) than in the SW tropical coastal area (only 26.7% of the species are registered there). The Gulf of California, on the contrary, features an unusual (relative) richness with up to 73.3% of the species recorded there. It should be stressed, however, that most of the collecting effort of the last 30 years has been done in the Gulf of California and along the west coast of Baja California. A first draft of a monograph on the isopods of the Pacific coast of Mexico is presented, including keys to families, genera and species, data related to distribution and habitats of species, synonymy, characteristics and illustrations of each species.

Felder, Darryl L.

Department of Biology, University of Louisiana, Lafayette, USA.

ENDEMIC POPULATIONS OF COASTAL GHOST SHRIMP (*LEPIDOPHTHALMUS* SPP.) IN THE EASTERN PACIFIC (DECAPODA: CALLINANASSIDAE)

Recent studies of western Atlantic *Lepidophthalmus* spp. raised the number of known congeners there to at least seven. Endemism of those populations has been attributed to their obligate fossorial habitat and abbreviated larval dispersal, characteristics which appear to be shared with Pacific coast species. Historically, reports from the eastern Pacific long indicated that only one or two wide-ranging species of the genus occurred there, depending upon whether the names *L. bocourti* and *L. eiseni* were treated as separate species or synonyms. In addition, a new species, *L. rafai*, was recently described from a single locality in southern Colombia. Re-examination of these materials, in addition to new collections from Colombia, Panama, and Costa Rica reveals no less than five separate eastern Pacific species, two of which are new. Despite certain similarities in ventral abdominal sclerites (armor) *L. bocourti* and *L. eiseni* are distinct forms; both are wide-ranging and may occur in sympatry. *L. rafai* and two newly described species all appear to be endemic forms with much more restricted distributions. It is noteworthy that eastern Pacific populations of the genus now appear to be almost as speciose as the western Atlantic ones, despite the relative absence of conspicuous physiographic barriers to coastal distributions in western Mesoamerica. It is also notable that both ventrally armored and ventrally unarmored members of the genus occur in the eastern Pacific, as is the case in the western Atlantic. Ongoing studies of commensals with populations of this genus should determine if their diversity has also been underestimated.

^{1,2}Fernández Gimenez, Analía Verónica & ^{1,2}Jorge Lino Fenucci

¹Departamento de Ciencias Marinas, Universidad Nacional de Mar del Plata, Argentina, ²CONICET.

VITAMIN E REQUIREMENT OF THE PRAWN *ARTEMESIA LONGINARIS* (DECAPODA, PENAEIDAE)

Two trials were conducted to evaluate the growth and survival of Argentine prawn *A. longinaris* fed with different levels of vitamin E and BHT in a semipurified diet. Three replicate aquaria were assigned to each of the diets (20 prawns/m²). The feeding trial consisted of 0, 1500 and 3000 mg/kg diet, and 0.5 mg BHT/kg diet (trial 1) and 500, 1000, 1500 and 2000 mg/kg diet (trial 2). After 40 days (trial 1), survival of prawns fed diets with 3000 mg/kg diet was significantly ($p < 0.05$) lower than the others treatments. Prawns fed diets supplemented with 1500 mg/kg diet exhibited higher weight gain than the rest, but no significant differences were determined among treatments. After 32 days (trial 2), prawns had survivals between 53 and 72% and the percent weight gain ranged from 38.1 to 62.6% with no significant differences among treatments. The results of this work indicate that the dietary vitamin E requirement of *A. longinaris*, under the present experimental conditions appears to be approximately 1500 mg/kg diet.

Franzoso, A., R. C. Costa, F.L.M. Mantelatto, M.A.A. Pinheiro & S. Santos

NEBECC, Depto. Zoologia, IBB, Unesp, 18.618-000, Botucatu, SP, Brazil.

DISTRIBUTION AND ASSEMBLAGES OF SHRIMPS SPECIES (PENAEIDAE AND CARIDEA) IN FORTALEZA BAY, UBATUBA, SÃO PAULO, BRAZIL

The present study describes the community of Penaeidea and Caridea shrimps inhabiting non-consolidated sublittoral grounds in Fortaleza Bay (SP), Brazil, with emphasis on its distribution and species abundance. Sampling were monthly carried out in seven transects of 1 km each, using a shrimp fishing boat equipped with double rigged net. The distribution of collected species was correlated with abiotic factors. A total of 17,047 specimens was recorded, comprising 13 species (10 Penaeidea and 3 Caridea) and five families. The most abundant species was *Xiphopenaeus kroyeri* (Heller, 1862) representing 84.5% of sampled shrimps in all transects. The remaining species comprised accidental occurrences with the exception of *Artemesia longinaris* BATE, 1888, which represented 9.6% of the specimens collected. In general, the highest diversity was found in the transect II ($H' = 1.49$, Shannon-Wiener index), where sediments are mainly composed of coarse sand and high organic matter. Both abiotic factors and life cycle types characteristic of each species can be responsible for changes in the structure of this community.

Franzoso, Adilson, Maria Lucia Negreiros-Franzoso, & Giovana Bertini

NEBECC, Depto. de Zoologia, IBB, UNESP, 18618-000 Botucatu, SP, Brasil.

SEXUAL MATURITY OF THE GHOST CRAB *OCYPODE QUADRATA* (FABRICIUS, 1787) (BRACHYURA, OCYPODIDAE) FROM UBATUBA, SÃO PAULO, BRAZIL

The relative growth of *O. quadrata* from Ubatuba, São Paulo, Brazil was studied in order to determine the body size required for this population to achieve sexual maturity. A reproductive study was carried out revealing a smaller size of maturity for both sex of this population when it was compared to a Texas ghost crab population. Carapace and abdomen width, cheliped propodus length and height, and first gonopod length were measured for 368 specimens. Carapace width was used as the independent variable against the others. A power function was adjusted to the dispersion points using the least-squares regression method. Departures from isometry ($H_0: b = 1$) were tested using a student's t-test on the obtained slope values ($p > 0.05$). Sexual maturity is achieved with carapace length of 20 mm in males and 21.5 mm in females. Most relationships showed an allometric positive growth and a different allometric coefficient between juvenile and adult crabs. For this population *O. quadrata* acquire external sexual maturity at the same time they achieve gonad maturity. It could be supposed that the differences observed between these two populations of *O. quadrata* might be attributed to distinct environmental conditions in which each population lives.