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BREEDING PERIODICITY OF SOME COPEPODS

R.C. SUBBARAJU*, C. KALIAPERUMAL AND D. ASIR RAMESH

Centre of Advanced study in Marine Biology, Annamalai University,
Parangipettai - 608 502, Tamil Nadu, India

Abstract

Breeding periodicity of five species of copepods *Acartia erythraea, A. spinicauda, Pseudodiaptomus aurivilli, P. annandalai, P. serricaudatus and Tortanus gracilis* were studied during 1965, 1967, 1980 and 1990's summer months. The results showed the continuous or discontinuous breeding habitat, variation in developmental time and number of generations of the copepodids.

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INFLUENCE OF ENVIRONMENTAL FACTORS ON THE HEAVY METAL UPTAKE BY BACILLUS PANTOTHENTICUS

R. RAMASUBRAMANIAN AND V.N.R. RAO

Abstract

Uptake and accumulation of copper, mercury and zinc by the bacterium, *Bacillus pantotheenticus* were dependendent on pH and temperature. Uptake was maximum at pH 5. At 35°C uptake of Cu and Hg was maximum while Zn uptake was maximum at 45°C. Uptake of all the metals was very rapid in the first 30 minutes and then levelled off . Generally the uptake of metals was slightly higher in live cells than in dead cells.

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HEAVY METAL (COPPER ZINC AND CADMIUM) INDUCED CHANGES IN THE GLYCOGEN CONTENT OF THE GREEN MUSSEL, PERNA VIRIDIS(LINNAEUS)

S. SENTHILNATHAN AND T. BALASUBRAMANIAN

C.A.S. in Marine Biology, Annamalai University, Parangipettai - 608 502

Abstract

The green mussel *Perna viridis* (Linnaeus) was exposed to the toxic metals viz., copper, zinc and cadmium for a period of twenty days. The glycogen content in different organs viz. gill, mantle, adductor muscle and foot was analysed after 5 , 10, 15 and 20 days of exposure. It was observed othat the glycogen content was significantly decreased in all body tissues after treatment by metals. In general, the reduction in the glycogen content was found to be dose and duration dependent. The order of glycogen depletion, after treatment in different tissues is adductor muscle > foot > gill > mantle for copper and gill > adductor mluscle > mantle > foot for zinc and cadmium.

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ASSOCIATION OF THE CORAL COLONY (*MONTIPORA DIGITATA*) AND THE FISH FRY (*EPINEPHELUS* SP.) ON THE WESTERN SIDE PULLI ISLAND (LAGOON AND REEF CREST OF GULF OF MANNAR).

D. ASIR RAMESH

Research Fellow ENVIS Centre, CAS in Marine Biology, Porto Novo - 608 502

Abstract

480 coral colonies of *Montipora digitata* of various sizes (190 - 1650 gms) were examined for (*Epinephelus* spp.) fish association in Western side lagoon and reef crest of Pulli island, Gulf of Mannar from April, 1993 to March 1994. 240 colonies from the lagoon were examined. Of them, 49 colonies were identified giving shelter to 61 fish fries of Epinephelus spp. 14 out of 240 reef crest colonies gave shelter to 16 fish fries. Three species, *Epinephelus summana* 79%, *Epinephelus undulosus* (12%) and *Epinephelus tauvina* (9%) were distributed on the heads of the branched coral *Montipora digitata*. The association between the coral head and the fish fry was related with the density of coral head in an area, coral head size, interbranchial space and season.

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THE EFFECT OF SEAWEED MORPHOLOGY AND WAVE EXPOSURE ON THE FAUNAL DISTRIBUTION AND ABUNDANCE ON TWO STRUCTURALLY DISSIMILAR RHODOPHYTE OF CAPE COMORIN COAST, SOUTH INDIA

D.A. BENI GIRASPY, C.P. RAJAKUMAR,* R. MAHESH AND R.R. VETHANAYAGAM

Department of Aquatic Biology and Fisheries University of Kerala, Trivandrum -695 007

Abstract

The major invertebrate groups inhabiting two structurally different algae *Spyridia insignis* and *Gracilaria corticata* were encountered from lowtide, midtide and hightide regions of Cape Comorein coast. Wave exposure as well as seaweed morphology have their own impact on the associated animals. The phytal faunal distribution and abundance coincided with varations in wave exposure and macroalgal structure. The structurally complex alga *S.insignis* harbours more individuals than the structurally simple, flat thalloid alga *G. corticata.* The crustaceans occur in great abundance in conditions of low wave exposure and in lower numbers at wave exposed sites. The fauna of midtide level is disturbed by harshness of the waves, while fauna of lowtide level is limited by predation.

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DISTRIBUTION OF MARINE ALGAE ON THE SHORES OF IDINTHAKARAI, SOUTH INDIA I. DESCRIPTION OF SITE, METHODS OF STUDY AND PRELIMINARY OBSERVATIONS ON TRANSECTS

S. SASIDHARAN and V. KRISHNAMURTHY*

C.A.S. in Botany, University of Madras, Madras - 5

Abstract

The distribution of marine algae on the shores of Idinthakarai, on the east coast of South India, has shown a variety of patterns as revealed by studies using four belt transects and 25 quadrats on the shore. While each station showed its own characteristic distribution and floristic composition, there was a fairly good uniformity in the overall vertical distribution of the algae, with an upper algal limit in the lower intertidal zone, a subtidal fringe (both marked by particular species composition) and an algal mosaic in between these two limits. The topography of the shore influenced the types of algae inhabiting certain well defined niches. Sand scouring had its own influence on the algal forms, limiting the growth of some and shifting the distribution of others. In addition, there were also several changes in the pattern of distribution, both in the transects and in the quadrats in the intertidal region. These are influenced by the tidal changes and the consequent changes in exposure of these algae.