Fool. Canst tell how an oyster makes his shell?
Lear. No.
Fool. Nor I neither; but I can tell why a snail has a house.
Lear. Why?
Fool. Why, to put his head in...

Shakspeare, King Lear

31ST EUROPEAN MARINE BIOLOGY SYMPOSIUM

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SYMPOSIUM PROGRAMME AND ABSTRACTS

Adaptation Strategies of Marine Organisms
Interaction of Marine Organisms in Communities
***Obelia* as a Dominant in Epibiotic Communities**

Organised by:
Alexander F. Alimov, Andrew D. Naumov, Alexey A. Sukhotin and Sofia D. Stepanjants

Zoological Institute
Russian Academy of Science

filiformis is very scarce and *M. bidentata* does not seem to be associated, in the upper sediment layers, with some large species. In the deeper layers, on the contrary, its presence-absence pattern is strongly related with that of some large burrowing polychaetes and, particularly, with that of *Nephthys incisa*. Such pattern suggests that the described association between *M. bidentata* and *A. filiformis* may be not so specific as postulated, and that the observed habitat expansion toward deeper sediments may be due to a less specific tendency to exploit galleries of large burrowers.

T.A. Britayev[1], A.V. Smurov, A.V. Andrianov[1] and A.V. Rhzavsky[2]

[1]*A.N. Severtzov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow, Russia*

[2]*Inst. of Ecology Partizanskaya str., 6 Petropavlovsk-Kamchatsky, Russia*

STUDIES OF THE BIOLOGY OF THE SCALEWORM *ARCTONOË VITTATA* ASSOCIATED WITH STARFISH *ASTERIAS RATHBUNAE* IN AVATCHA BAY (THE PACIFIC COAST OF KAMCHATKA)

The population ecology of symbiotic polychaete *A. vittata* and its host *A. rathbunae* has been studied. The abundant in the Avatcha bay starfish *A. rathbunae* was intensively infested by the scaleworm *A. vittata*. The mean infestation was 59%. Each inhabited host harboured 1 to 4 symbionts. The mean intensity of infestation in inhabited hosts varied from 0.60 to 0.91 symbionts per starfish, the mean intensity for the whole sample varied from 0.40 to 0.62 from site to site. The polychaetes infestations were not regularly distributed throughout the different size categories of hosts. Size-specific infestation is increasing with enlargement of host sizes from 6.7% in the smallest size category up to 100% in the largest. The symbionts were localised on the ventral side of starfishes only. The comparison between oral disk and arms reveal the oral disk was the preferable area for symbionts. 64% of polychaetes preferred the oral disk in the case the hosts being occupied by one symbiont. In the case when 2 or more polychaetes inhabited one host, the largest worm occupied the oral disk and others were forced out to the arms. Worms show two main types of trauma: (1) large traumas of posterior body end, probably caused by predators, and (2) small ones (damage of parapodia, dorsal cirri and head appendages), probably a result of intraspecific aggressive interactions. The frequency of symbionts with type 1 traumas were minimum (8%) in the most sheltered site. The frequency of symbionts with type 2 traumas correlated positively with the density of host population. The gut contents analyses of *A. vittata* reveal the fragments of small polychaetes and crustaceans.

Observations *in situ* showed that symbionts feed on the host's prey. The intraspecific interaction in symbionts population and relationship between *A. vittata* and their host *A. rathbunae* are discussed.

M.V. Chesalin

Institute of Biology of Southern Seas (IBSS), Nakhimov Av. 2, Sevastopol 335011, Ukraine

FEEDING OF THE SQUID *STHENOTEUTHIS OUALANIENSIS* IN THE ARABIAN SEA

The ommastrephid squid *S. oualaniensis* is the dominant species among nektonic predators inhabiting the open waters of the Arabian Sea. The absolute sizes of the squids reach up to 1 m (60-65 cm of mantle length), the biomass in some places of the western Arabian Sea is estimated in dozens tons per sq. km.

The main food of juvenile *S. oualaniensis* are macroplanktonic Crustacea and fish larvae. The subadult and middle-sized adult squids feed on lanternfishes from fam.Myctophidae, especially of *Myctophum* and *Hygophum* genera, mostly on the water surface. The food of the giant females is fishes (79% of virtual volume of stomach) and cephalopods (about 21%), which constitute the main part of epipelagic sound-scattering layer. In feeding spectrum of giant squids predominate myctophida fishes - *Benthosema fibulatum, Bolinichthys longipes, Diaphus thiollierei, D. arabicus, Symbolophorus, Myctophum aurolaternatum* and *Hygophum proximum* (37%). The important role plays also *Cubiceps pauciradiatus* (14%), *Vinciguerria nimbaria* (5%) and fish fam. Bregmacerotidae (4%). Besides, in their stomachs occur the predatory mesopelagic fishes from fam.Gempylidae, Astronesthidae and Chauliodonthidae. The cephalopods are presented predominantly by own juveniles (16%), *Onychoteuthis banksii* (2%), *Abralia marisarabica* (2%) and *Abraliopsis lineata* (1%). Crustacea were causal or transit food items of adult squids, but sometimes their stomachs were fill up by planktonic crab *Charybdis smithi*.

Based on experiments, we determined the daily food ration of the adult squids about 5% wet body weight.

Owing to abundance, large sizes, short life span, fast growth, and high food ration *S. oualaniensis* practically monopolises the upper-most trophic niche in the pelagic ecosystem and becomes the 'master' of the Arabian Sea.

Vanja Emrić

Institute «Ruder Bosković», Center for Marine Research, B. Paliage, 5, Rovinj, 52210, Croatia

COMPOSITION OF NATURAL POPULATION OF *MYTILUS GALLOPROVINCIALIS* (LAM., 1819) AND *MYTILASTER MINIMUS* (POLI, 1795) IN THE NORTH ADRIATIC SEA

Data in this paper are obtained on the basis of preliminary research of the natural populations of marine mussels, *Mytilus galloprovoncialis* and *Mytilaster minimus* in the North Adriatic Sea (Lim Channel) on 14 stations.