



PROGRAM & ABSTRACTS

Distribution of soft-bottom polychaetes in the Avachinsky Bay (East Kamchatka)

Rzhavsky, A.V.¹, E.A. Ivanjushina² and G.N. Chujan²

¹A.N. Severtzov Institute of Ecology and Evolution, Leninskij Prospekt 33, Moscow, Russia, 117071. ²Kamchatka Institute of Ecology and Environment, Partizanskaja 6, Petropavlovsk-Kamchatskij, Russia, 683000

The material was collected in July-August of 1998 in the Avachinsky Bay between the Capes Majachnyj and Shipunskij. We collected 140 samples by the "Ocean" grab of 0.25 m² from 35 stations located at the depths of 25-150 m. Particle size analysis of the bottom sediments was performed. The distribution was analyzed by factor analysis. We found 136 invertebrate species, including 75 polychaetes. Polychaete species richness was highest in the families Terebellidae (9 species), Ampharetidae (7), Maldanidae, Nephthyidae and Spionidae (5). Polychaetes dominated the samples by frequency of occurrence and by biomass. The polychaete biomass ranged from 0.70 to 35.76 g/m² (mean 11.80 ± 1.54 g/m²). Polychaetes *Cistenides granulata*, *Lumbrineris fragilis*, *Chaetozone setosa* and Maldanidae had the highest biomass. *Harmothoe imbricata*, *Ophelia limacine*, *Scoloplos armiger*, *Spio filicornis* and *Nephtys spp.* were frequently occurring, but their biomass was relatively low. Factor analysis revealed neither depth preferences nor correlations between depth and species biomass. However, polychaetes showed preferences for certain particle sizes. For example, *Amphicteis mederi*, *Nephtys longisetosa*, *Harmothoe imbricata* and *Scalibregma inflatum* positively correlated with fine sand and negatively with the fractions of larger sizes. *Nephtys caeca* and *Ophelia limacine* positively correlated with coarse and medium-size sand and negatively with fine sand. *Cistenides granulata* and *Glycera capitata* showed a positive correlation with large and medium-size gravel and a negative correlation with the sandy fraction. *Chaetosone setosa*, *Cirratulus sp.juv.*, Maldanidae *gen sp.1*, and *Travisia forbesii* were found in a wide range of medium-sized sediments and did not show any negative correlations. *Pholoe sp.* and *Terebellides horikoshii* positively correlated with large aleurite fraction. *Owenia fusiformis* and *Phyllodoce (Anaitides) groenlandica* positively correlated with gravel and coarse sand. *Lysippe labiata* and *Laonice cirrata* correlated negatively with small gravel only. *Maldane sarsi* negatively correlated with coarse sand. *Lumbriconeris fragilis* and *Sternaspis scutata* demonstrate a preference for the coarse and fine fractions, but not to the intermediate-size fractions.