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| УДК 664.952/.957 DOI: 10.17217/2079-0333-2025-72-8-23Original article**HIGH-PROTEIN POLLOCK NOODLES – A NEW PRODUCT FROM KAMCHATKA**Elina V.M., Blagonravova M.V.Kamchatka State Technical University, Petropavlovsk-Kamchatskу, Klyuchevskaya Str. 35.In this paper, we discuss the development of technology for a new type of molded product, which imitates pasta, but is made from minced pollock. The organoleptic parameters were corrected by the addition of whey in the receipt. The results of substantiation of optimal product receipt allowing to simulate the appearance of pasta are presented. As demonstrated, our new product is characterized by a high protein content and low calories. The draft norms of raw material consumption in the production of this new product is provided.**Key words:** pollock, whey, raw material consumption norms, organoleptic properties, nutritional value, minced fish, technology, molded products. |
| УДК 582.261/.279 DOI: 10.17217/2079-0333-2025-72-24-38Original article**LIPID COMPOSITION OF *TETRASELMIS SUECICA* AND *PHAEODACTYLUM TRICORNUTUM* UNDER THE INFLUENCE OF INDOLYL-3-BUTYRIC ACID**Kovalev N.N.1, Barsova E.A.1, Mikheev E.V.2, Leskova S.E.11 Far Eastern Federal University, Vladivostok, Russky Island, Ajax 10.2 Far Eastern State Technical Fisheries University, Vladivostok, Lugovaya Str. 52B.Currently, microalgae are considered one of the most promising sources of raw materials for various industries. Hormones of exogenous origin make it possible to control the growth and biochemical parameters of microalgae. The purpose of this study was to determine the effect of optimal concentrations of indolyl-3-butyric acid (IBA) on the growth parameters and dynamics of the lipid composition of *Tetraselmis suecica* (Kylin) Butcher, 1959 and *Phaeodactylum tricornutum* Bohlin, 1897 cultures. The study established growth-promoting concentrations of IBA for *T. suecica* at 0.4 × 10–5 mol · L-1 and for *Ph. tricornutum* at 0.6 × 10–5 mol · L-1. A decrease in the content of polyunsaturated fatty acids (PUFA) is indicated for *Ph. tricornutum*. The stimulating effect of phytohormone on the accumulation of chlorophyll and lipids of *T. suecica* was revealed. The content of monogalactosyldiacylglycerol (MGDG) decreased, but digalactosyldiacylglycerol (DGDG), sulfoquinovosyldiacylglycerol (SQDG) increased. The prospects of regulating the production characteristics of microalgae under the influence of IMC in an enrichment culture is discussed.**Key words:** auxins, fatty acids,indolyl-3-butyric acid, lipids, microalgae, *Phaeodactylum tricornutum*, *Tetraselmis suecica*. |
| УДК [595.384.2:574.2+574.5](262.54) DOI: 10.17217/2079-0333-2025-72-39-60Original article**REPRODUCTIVE STATUS, TYPE OF REPRODUCTIVE STRATEGY OF MALES AND FEMALES OF THE CRAB *RHITHROPANOPEUS HARRISII* (GOULD, 1841) (BRACHYURA: PANOPEIDAE) FROM THE TAMAN BAY OF THE AZOV SEA IN 2011**Ovcharuk A.S., Sudnik S.A.Kaliningrad State Technical University, Kaliningrad, Sovetskiy Prospekt 1.Analysis of the reproductive status of the Taman Bay Harris crab showed that July was part of its spawning period in 2011, during which females could spawn at least twice. The age of males was up to five years, females – three years. Some reproductive features of the species were obtained for the first time: carapace width of the first maturation of males was 9.8 mm, females – 9.1 mm; gonadosomatic index of mature females amounted to 18% ((12.6 ± 4.8)%), absolute individual fecundity amounted to 414–2 314 mature oocytes with sizes (0,22 ± 0,03) × (0,26 ± 0,04) mm; 65% of females revealed signs of portion spawning, realized fecundity reached 2 805 eggs, sizes of recently laid eggs were (0,25 ± 0,01) × (0,26 ± 0,01) mm; during embryogenesis the size of eggs increased twice.**Key words:** Harris crab, fecundity, batch spawning, oocyte sizes, egg sizes, reproductive strategy, maturation, Taman Bay, *Rhithropanopeus harrisii*. |
| УДК 582.261/.279+574.52 DOI: 10.17217/2079-0333-2025-72-61-86Original article**THE EFFECT OF HORMONAL MODIFICATION OF MICROALGAE COMPOSITION ON THE DEVELOPMENT OF INVERTEBRATE LARVAE**Leskova S.E.1, Kovalev N.N.1, Zlobina A.S.2, Larikova M.V.2, Mikheev E.V.21 Far Eastern Federal University, Vladivostok, Russky Island, Ajax 10.2 Far Eastern State Technical Fisheries University, Vladivostok, Lugovaya Str. 52B.Microalgae are a source of food and energy for all living organisms in aquatic ecosystems. In aquaculture of hydrobionts, microalgae are widely used as a supplement to complex feed diets. For some farmed aquatic species microalgae are the only and irreplaceable food. In order to improve the efficiency of microalgae cultivation, phytohormones affecting the metabolism, growth and differentiation of cells are used. The effect of complex diets with microalgae *Isochrysis galbana* and *Chaetoceros muelleri* grown on media with the addition of various phytohormones, on morphogenesis and survival of Pacific oyster (*Crassostrea gigas*) and sea cucumber (*Apostichopus japonicus*) larvae was evaluated. The size composition and survival of larvae at each developmental stage are described.**Key words:** survival, Pacific oyster, larvae, microalgae, development, growth, Pacific oyster, phytohormones, *Crassostrea gigas*, *Apostichopus japonicas.* |
| УДК [574.2+ 574.5: 595.36]"2018-2019"(470.26) DOI: 10.17217/2079-0333-2025-72-87-106Original article**BIOLOGY OF *PONTOGAMMARUS ROBUSTOIDES* (G.O. SARS, 1894) (MALACOSTRACA: AMPHIPODA: PONTOGAMMARIDAE) FROM LAKE VISHTYNETSKY IN 2018–2019**Shiryaeva N.S., Sudnik S.A. Kaliningrad State Technical University, Kaliningrad, Sovetskiy Prospekt 1.*Pontogammarus robustoides* ‒ a Ponto-Caspian species important in bottom hydrobiocenoses, including Lake Vishtynetsky in the Kaliningrad region, having glacial origin. Analysis of 462 individuals showed a difference in sexual composition (equal sex ratio in November 2018 and dominance of females by 1.5 times in April 2019); juvenile individuals were not encountered. The total body length of individuals was 3.5-17.1 mm; males reached larger sizes than females, but their predominant sizes were close. Females nonbearing eggs (3.5-14.6 mm) were numerically dominant among females. Females in April 2019 carried embryos in early stages of development; the first spawning size was 8.6 mm. The beginning of spawning season was late March to early April. Fecundity reached 60 eggs; length of newly laid eggs was (0.4-0.6) × (0.3-0.54) mm.**Key words:** amphipods, Vishtynets Lake, fecundity, egg sizes,sex ratio, *Pontogammarus robustoides*. |
| УДК 581.526.325(256.52)"2024" DOI: 10.17217/2079-0333-2025-72-107-116Original article**Species composition of phytoplankton from the Avacha Bay (Southeast Kamchatka) in late spring, summer and autumn IN 2024**Kurbanova L.V.1, Klochkova T.A.21 Kamchatka Branch of Pacific Geographical Institute FEB RAS, Petropavlovsk-Kamchatsky, Partizanskaya Str. 6.2 Kamchatka State Technical University, Petropavlovsk-Kamchatskу, Klyuchevskaya Str. 35*.*In this paper, we discuss personally collected data on the number of phytoplankton cells from the Avacha Bay estimated at regular intervals from 12.05.2024 to 23.10.2024. Our study showed that the vertical distribution of the same microalgal species in various closely located areas of the Avacha Bay is different. This may be due to their adaptation to specific environmental conditions, such as availability of light requirered for photosynthesis, increased concentration of organic matter or hydrodynamic peculiarities. Inside the Avacha Bay, phytoplankton development occurs more intense than at the exit from the bay or outside it. To reduce the frequency and intensity of plankton blooming in the Avacha Bay, it is necessary to constantly monitor the number and structure of plankton and reduce the anthropogenic load on the bay.**Key words:** Avacha Bay, anthropogenic load, species composition, diatoms, dinoflagellates, “red tides”, cryptomonads, plankton, ecosystem. |