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THE STATUS OF THE ROUND GOBY POPULATIONS *(NEOGOBIUS MELANOSTOMUS* PALLAS 1814*)* IN THE AZOV SEA

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Nowadays the round goby (Neogobius melanostomus Pallas 1814) is one of the main commercial fish species in the Azov Sea. The Azov Sea conditions are favorable for reproduction and development of the round goby whose habitat occupies the whole sea body. The fish biomass varied from 5,0 th.tons to 201,6 th.tons (32,0 th.tons in average) in the period of 1952–2012. The status of the round goby is fairly changeable. The abundance of the round goby differs considerably which is typical of the fish with a short life period, the productivity of generations can differ dozens or even hundreds times. Taking into consideration the ecological and commercial importance of the round goby as the most common species among the Azov Sea gobies, we should say that it is urgent to conduct the monitoring of its population and stocks.

Keywords: *Azov Sea, round goby, biomass, number, population, distribution, craft.*

1. Vorobiev V.P. Bentos Azovskogo morya. Simferopol', 1949. 190 s.
2. Stark I.N. Godovaya i sezonnaya dinamika bentosa v Azovskom more // Tr. AzNIIRH. T. 1, vyp. 1. Rostov n/D, 1960. S. 167 – 230.
3. Averkiev F.V. Sbornik statisticheskih svedeniy ob ulovah ryb i nerybnyh objektov v Azovo-Chernomorskom basseine za 1927–1959 gg. // Tr. AzNIIRH. Rostov n/D, 1960. 75 s.
4. Bondarenko T.S., Rascheperin V.K. K metodike ucheta chislennosti molodi bychkov v Azovskom more // Rybohozyay-stvennye issledovaniya v Azovskom basseine po zapasam ryb i usloviyam ih obitaniya. M., 1963. Vyp. VI. S. 111 – 117.
5. Kovtun I.F. Ekologiya i promysel bychkov v usloviyah izmenyayuschegosya rezhima Azovskogo morya : avtoref. dis. … kand. biol. nauk. M., 1980. 22 s.
6. Maiskiy V.N. Sostoyanie zapasov bychkov, hamsy i tyul'ki v Azovskom more v 1931–1958 gg. // Tr. AzNIIRH. T. 1, vyp. 1. Rostov n/D, 1960. S. 381 – 413.
7. Cema N.I., Aleksandrova U.N., Samarskaya E.A. Ocenka sostoyaniya nerestovoy chasti populyacii bychka-kruglyaka (Neogobius melanostomus Pallas 1814) Azovskogo morya v sovremenniy period // Sb. nauch. tr. (2011–2012 gg.). Rostov n/D, 2012. S. 271 – 283.
8. Kostyuchenko V.A. Biologiya i dinamika chislennosti bychka-kruglyaka (N. Melanostomus Pallas) Azovskogo morya : dis. … kand. biol. nauk. Dnepropetrovsk, 1964. 166 s.
9. Aleksandrova U.N., Korpakova I.G., Frolenko L.N. Osobennosti razvitiya zoobentosa i pitanie azovskogo bych-ka-kruglyaka (Neogobius melanostomus (Pallas, 1811) v uslo-viyah osoloneniya Azovskogo morya // Voprosy rybolovstva. M., 2013. Vyp. 4.
10. Belousov V.N. Formirovanie i ispol'zovanie zapasa poluprohodnogo sudaka Stizostedon lucioperca v usloviyah izmenyayuschegosya rezhima Azovskogo morya : dis. … kand. biol. nauk. Krasnodar, 2004. 114 s.
11. Kostyuchenko V.A. Vliyanie promysla na populyaciyu azovskogo bychka-kruglyaka // K voprosu dinamiki chislennosti osnovnyh promyslovyh ryb Azovskogo i Chernogo mo-rey. M., 1966. Vyp. 24. S. 17 – 34.

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COMPARATIVE CHARACTERISTICS OF BLACK SOIL OF PROTECTED AREAS OF THE ROSTOV REGION

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The results of studies of ecological and biological properties of soil of protected areas (PA) Rostov region. Meaningfully integral indicator of biological condition of soil can be ranked as follows: Persianovskiy reserve steppe – the protected deposit "Azov steppe" – deposit Botanical Garden SFU. The reference section in the study of human impact is recommended to use ordinary black Persianovskiy reserve steppe, as other areas of PA are still in the recovery stage.

Keywords: *ecological and biological properties, ordinary chernozem, protected areas of Rostov region.*

1. Kazeev K.Sh., Kolesnikov S.I, Val'kov V.F. Biolo-giya pochv Yuga Rossii. Rostov n/D, 2004. 350 s.

2. Kazeev K.Sh., Dadenko E.V., Vezdeneeva L.S., Denisova T.V., Kolesnikov S.I., Val'kov V.F. Biogeografiya i biodiagnostika pochv Yuga Rossii. Rostov n/D, 2008. 226 s.

3. Val'kov V.F., Kazadaev A.A., Gaidamakina L.F., Peremuzova L.A., Pelipenko O.F., Staev A.A., Nechepurenko V.E. Biologicheskaya harakteristika chernozema obyknovennogo // Pochvovedenie. 1989. № 7. S. 67 – 74.

4. Kazadaev A.A., Bulysheva N.I., Kremenitsa A.M., Kazeev K.Sh., Kolesnikov S.I., Abramova T.I. Nekotorye biologicheskie osobennosti chernozema obyknovennogo Nizhne-go Dona (celinniy uchastok OOPT «Persianovskaya step'») // Izv. vuzov. Sev.-Kavk. region. Estestv. nauki. Prilozhe-nie. 2004. № 4. S. 91 – 100.

5. Kazeev K.Sh., Val'kov V.F., Kolesnikov S.I. Atlas pochv Yuga Rossii. Rostov n/D, 2010. 128 s.

6. Krasnaya kniga pochv Rossii: Objekty Krasnoy knigi i kadastra osobo cennyh pochv / nauch. red. G.V. Dobrovol'stkiy, E.D. Nikitin M., 2009. 576 s.

7. Val'kov V.F., Kazeev K.Sh., Kolesnikov S.I. Pochvy Rostovskoy oblasti. Rostov n/D, 2012. 492 s.

8. Dadenko E.V., Prudnikova M.A., Kazeev K.Sh., Kolesnikov S.I. Primenenie pokazateley fermentativnoy ak-tivnosti pri ocenke sostoyaniya pochv pod sel'skohozyaist-vennymi ugodiami // Izv. Samarskogo nauch. centra. 2013. T. 15, № 3(5). S. 1274 – 1277.

9. Prudnikova M.A., Dadenko E.V., Ermolaeva O.Yu., Kazeev K.Sh., Kolesnikov S.I. Ispol'zovanie biologiche-skih pokazateley v monitoringe postagrogennyh chernoze-mov // Izv. Samarskogo nauch. centra. 2013. T. 15, № 3(5). S. 1406 – 1409.

10. Prudnikova M.A., Dadenko E.V., Kazeev K.Sh., Ermo-laeva O.Yu., Kolesnikov S.I. Biologicheskie svoistva za-lezhnyh chernozemov Rostovskoy oblasti // Politematiche-skiy setevoy elektronniy zhurnal Kubanskogo gosudarst-vennogo agrarnogo universiteta. 2013. № 89 (05). URL: http://ej.kubagro.ru/2013/05/pdf/17.pdf (data obrascheniya: 11.02.2014).

11. Kazeev K.Sh., Kolesnikov S.I. Biodiagnostika pochv: metodologiya i metody issledovaniy. Rostov n/D, 2012. 260 s.

12. Kunah O.N., Baldin A.A. Ekologicheskiy aspekt tver-dosti pochvy v pristennoy dubrave // Visnik Dnipropet¬rovs'kogo universitetu. Biologiya. Ekologiya. 2011. Vip. 19, t. 1. S. 65 – 74.

13. Scherbakova T.A. Fermentativnaya aktivnost' pochv i transformaciya organicheskogo veschestva. Mn., 1983. 220 s.

14. Peterson E.V., Kurylyak E.K. Svobodnaya i svyazannaya peroksidaza pochv // Pochvovedenie. 1982. № 5. S. 60 – 67.

15. Rusanov A.M., Anilova L.V. Gumusoobrazovanie i gumus lesostepnyh i stepnyh chernozemov Yuzhnogo Preduralia // Pochvovedenie. 2009. № 10. S. 1184 – 1191.

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STUDY THE INFLUENCE OF THE NATURE OF URBAN STRUCTURE ON THE PARTICULAR STRUCTURE OF THE BREEDING ECOLOGY AND BEHAVIOR OF GRAY CROWS WITHIN RESIDENTIAL AREAS OF VOLZHSKIY CITY

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The results of studies on the influence of the elements of urban structure on the characteristics of the breeding ecology and behavior of gray crows within the residential areas of city are submitted. Found that, depending on the degree of urbanization changes the parameters of the nesting territory of settlements and behavior of gray crows. For the various districts and neighborhoods of Volzhskiy city are indicators that reflect the nature of the transformation of structure of settlements gray crows nest.

Keywords: *urban structure, residential areas of city, breeding ecology, behavior of gray crows, disturbance, the degree of urbanization.*

1. Konstantinov V.M. Vranovye ptitsy kak model' sinantropizacii i urbanizacii // Ekologiya vranovyh ptits v antropogennyh landshaftah : sb. materialov Mezhdunar. nauch.-prakt. konf. Saransk, 2002. S. 9 – 12.

2. Ushakov V.A., Ushakov A.V. Nekotorye osobennosti gnezdovaniya soroki v Nizhnem Novgorode // Tam zhe. 2002. S. 124 – 126.

3. Jankov P. Determination of ecological zones of Sofia // Urban ecological studies in Central and Eastern Europe. Warszawa, 1990. P. 150 – 154.

4. Suhonosenko D.S. Raschetnaya ocenka vliyaniya elemen-tov gradostroitel'noy struktury na formirovanie uslo-viy nakopleniya i rasseivaniya zagryaznyayuschih veschestv v atmosfernom vozduhe zhiloy zony urbogeosistemy g. Volzhskogo // Izv. vuzov. Sev.-Kavk. region. Estestv. nauki. 2013. № 4. S. 69 – 72.

5. Brylev V.A., Zhbanov F.I., Samborskiy Yu.P. Geografiya Volgogradskoy oblasti. Volgograd, 1989. 128 s.

6. Atlas Volgogradskoy oblasti / pod red. A.G. Lyahovoy. M., 1967. 32 s.

7. Klausnitzer B., Richter K. Veranderungen tropischer Strukturen bei unterschiedlich urban beeinflussten Artthropo-gengesellschaften // Tag. ber. 2. Leipziger Symp. urb. Okologie. 1984. P. 19 – 24.

8. Fridman V.S. Preadaptirovannost' ptits k osvoe-niyu gorodskoy sredy: etologicheskie aspekty // Ekopo-lis-2000: ekologiya i ustoichivoe razvitie goroda : mate-rialy III Mezhdunar. konf. M., 2000. S. 176 – 178.

UDC 595.36

IDENTIFICATION KEY OF TERRESTRIAL ISOPODS (ISOPODA: ONISCIDEA) OF ROSTOV REGION

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The detailed information about morphology of woodlice is pointed, the corresponding photos and drawings are given in paper. The main plan of a structure of terrestrial isopods is considered. The identification key of terrestrial isopods which include 20 species of woodlice, inhabiting the Rostov Region: Armadillidium azerbaidzhanum, A. vulgare, Chaetophiloscia cellaria, Cylisticus albomaculatus, C. cretaceus, C. convexus, C. desertorum, C. sarmaticus, Porcellio scaber, Porcellionides pruinosus, Protracheoniscus asiaticus, P. fossuliger, P. major, P. nogaicus, Trachelipus kervillei, T. lignaui, T. rathkii is provided in article.

Keywords: *merrestrial isopods, woodlouse, identification key, Rostov Region, woodlice morphology, woodlice ecology.*

1. Warburg M., Linsenmair K., Bercovitz K. The effect of climate on the distribution and abundance of isopods // The Biology of Terrestrial Isopods. Oxford, 1984. R. 339–367.

2. Paoletti M. Le strategie di vita nella foresta tropicale: interesse teorico ed applicativo anche per gli ecosistemi delle regioni temperate. Il paradosso della fauna pensile del suolo // Natura e Montagna. Bologna, 1981. R. 115 – 128.

3. Paoletti M. Soil invertebrates in cultivated and uncultivated soils in north-east Italy. Redia, 1988. R. 501 – 563.

4. Favretto M., Paoletti M., Lorenzoni G., Dioli E. Lo scambio di invertebrati tra un relitto di bosco planiziale ed agroecosistemi contigui // L'artropodofauna del bosco di Lison. Nova Thalassia, 1988. R. 329 – 358.

5. Warburg M. Evolutionary biology of Land Isopods. Berlin, 1993. R. 159.

6. Rabatin S., Stinner B. Indirect effects of interactions between VAM fungi and soil-inhabiting invertebrates on plant processes. N.Y., 1988. R. 135 – 146.

7. Schmidt C. Phylogeny of the terrestrial Isopoda (Oniscidea) // Arthropod systematics & phylogeny. 2008. № 66. R. 191 – 226.

8. Gruner H. Die Tierwelt Deutschlands. 53. Teil. Krebstiere oder Crustacea. V. Isopoda, 2. Lieferung. Jena, 1966. R. 151 – 380.

9. Vandel A. Faune de France. Isopodes terrestres. Paris, 1960. 416 p.

10. Schmalfuss H. Terrestrial isopods (Crustacea: Isopoda) from the Caucasus region. 5. Cylisticus Schnitzler, Parcylisticus Verhoeff, Cylisticoides n. gen // Stuttgarter Beitrage zur Naturkunde. 2003. Serie A. 38 p.

11. Borutskiy E.V. Novye vidy roda Cylisticus // Zool. zhurn. 1977. S. 28 – 37.

12. Hisametdinova D.D. Ekologo-faunisticheskaya harakteristika mokrits (Crustacea, Isopoda) Nizhnego Dona : dis. … kand. biol. nauk. Rostov n/D, 2009. 200 s.

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EREMURUS REMARKABLE (*EREMURUS SPECTABILIS* BIEB.) CENOPOPULATION'S CONDITION IN THE RIVER KERCHIK VALLEY (ROSTOV AREA)

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Presented results of monitoring the cenopopulation of the Red Book species of Rostov area and RF – Eremurus spectabilis Bieb., which inhabit a valley of the river Kerchik. There are defined floristic structure of association, populated area, density and age structure of cenopopulation. Practical recommendations about species preservation in the Rostov Area are made.

Keywords: *Red Book, Rostov Area, river Kerchik, monitoring, Eremurus spectabilis Bieb., cenopopulation, age structure, repatriation.*

1. Krasnaya kniga Rostovskoy oblasti. T. 2: Redkie i nahodyaschiesya pod ugrozoy ischeznoveniya griby, lishainiki i rasteniya / red. V.V. Fedyaeva. Rostov n/D, 2004. 333 s.

2. Strategiya sohraneniya redkih i nahodyaschihsya pod ugrozoy ischeznoveniya vidov zhivotnyh, rasteniy i gribov: prilozhenie k prikazu MPR Rossii ot 06.04.2004 № 323. M., 2004. 44 s.

3. Zozulin G.M., Pashkov G.D. Redkie rasteniya Rostovskoy oblasti // Ohrana prirody Nizhnego Dona. Rostov n/D, 1969. S. 40 – 45.

4. Krasnaya kniga Rossiyskoy Fede racii (Rasteniya i griby). M., 2008. 855 s.

5. Krasnaya kniga Krasnodarskogo kraya (Rasteniya i griby) : 2-e izd. / red. S.A. Litvinskaya. Krasnodar, 2007. 640 s.

6. Krasnaya kniga Stavropol'skogo kraya. Redkie i nahodyaschiesya pod ugrozoy ischeznoveniya vidy rasteniy i zhivotnyh. T. 1. Rasteniya / red. A.L. Ivanov. Stavropol', 2002. 384 s.

7. Chervona kniga Ukraïni. Roslinniy svit / za red. Ya.P. Diduha. Kiïv, 2009. 912 s.

8. Ikonnikov S.S. Rod Eremurus, shiryash – Eremurus Bieb. // Flora evropeiskoy chasti SSSR. 1979. T. 4. S. 211 –214.

9. Putilin A.P. Eremurus v Rostovskoy oblasti // Introdukciya rasteniy. Rostov n/D, 1964. S. 85 –87.

10. Shmaraeva A.N., Shishlova Zh.N. Sostoyanie popu-lyatsiy eremurusa zamechatel'nogo (Eremurus spectabilis Bieb.) v Rostovskoy oblasti // Sohranenie bioraznoobra-ziya rasteniy v prirode i pri introdukcii. Suhum, 2006. S. 666 – 669.

11. Demina O.N. Ocenka prirodoohrannoy znachimosti rastitel'nyh soobschestv dlya proektirovaniya ECONET v stepnoy zone // Geograficheskie osnovy formirovaniya eko-logicheskih setey v Rossii i Vostochnoy Evrope : materialy elektr. konf. (1–28 fevralya 2011 g.). Ch. 1. M., 2011. S. 74 – 80.

12. Fedyaeva V.V., Rusanov V.A. Monitoring redkih i ischezayuschih vidov rasteniy i gribov Rostovskoy oblasti // Materialy nauch.-prakt. mezhregion. konf. Veshenskaya, 2005. S. 29 – 36.