

- [4] Hrudka, Jaroslav CFD modeling of sewage treatment plant objects. In Advances in Architectural, Civil and Environmental Engineering: 23rd Annual PhD student conference. Bratislava, SR, 30.10.2013. Bratislava: Nakladateľstvo STU, s. 796-800. ISBN 978-80-227-4102-6, 2013
- [5] Hrudka, Jaroslav -- Stanko, Štefan -- Holubec, Michal Vplyv stokovej siete na dažďové nádrže v čase povodňových stavov. In 12. Zdravotno-technické stavby Malé vodné diela - krajina a voda. : Zborník z konferencie s medzinárodnou účasťou, Tatranská Lomnica, SR, 25.-27.11.2013. Bratislava: Nakladateľstvo STU, s. 189--194. ISBN 978-80-89385-27-0, 2013
- [6] Holubec, Michal; Stanko, Štefan CFD analysis of the inlet zone of a settling tank in the WWTP Humenné. In Water Management and Hydraulic Engineering Proceedings of the 13th International Symposium. Bratislava, SR, 9-12.9.2011 Bratislava: STU, 2013, s. 157--164. ISBN 978-80-227-4003-6, 2013
- [7] Kozúbková, Milada. Modelování proudění tekutin FLUENT, CFX. Ostrava : VŠB-technická univerzita Ostrava, 2008
- [8] Molnár, Vojtech. Počítačová dynamika tekutín: interdisciplinárny prístup s aplikáciami CFD. Bratislava : Slovenská technická univerzita v Bratislave, ISBN 9788081060489, 2011
- [9] Urcikán, P.: Stokovanie a čistenie odpadových vôd II., STU v Bratislave ISBN: 978-80-227-3434-9, 2011
- [10] Wang, S a Wang, H et al. Study on strategies of CFD technology application International Journal of Multiphase flow. Taiyuan, CN : s.n., 2010, Zv. 1, p. 225-228, 2010

FEATURES OF HEAVY METALS ACCUMULATION FEATHERS ROCK DOVES KAZAN CITY

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ABSTRACT

In order bioindication environment is often used live objects. Birds - labile and an integral part of the urbanized landscape, are convenient objects bioindication and biomonitoring. Synanthropic population Rock Doves plentiful, are found in various types of residential construction, available throughout the year, tied to their places of residence, they can be used as test objects. Feathers pigeons tested for heavy metal content. Level of accumulation of metals in feathers corresponds to the metal content in the snow cover and soil. The metal concentration in the feathers varies depending on food habitats, season of the year, the type of power pigeons.

It is important that after taking samples for research animals remained degree of accumulation of heavy metals in feathers reflects the dynamics of the level of the toxic load on the habitats of birds.

Keywords: ecotoxicology, Bioindication, heavy metals, dove feathers.

MATERIAL AND METHODS

We analyzed the features of the accumulation of heavy metals in feathers urban population of Rock Doves. Investigations were carried out in the city of Kazan (East European part of Russia) during the year. Pigeons were caught in seven locations around the city, took them right steering pen ringed and released.

When sampling took into account the type of food morphotype, weight lifting morphometric parameters, possibly determined by gender, age, season and habitat noted. Morphometric measurements were performed according to the method [1]. Belonging to a trophic group determined preliminary visual observations. By type of food can be divided into 3 groups of pigeons: flyers, gatherers and scavengers [2]. To carry flyers pigeons are fed mainly grain and make daily flights to the Barn. Pigeons, who march along the sidewalks, roads and pick up the crumbs, belong to the group of collectors. Scavengers - it pigeons feeding kitchen waste in garbage containers in the yards of homes. Trophic groups differ in composition and feed intake, and foraging