

# New records of invasive copepod *Sinodiaptomus sarsi* (Copepoda, Calanoida) in West Ukraine and coexistence with local calanoid species



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## Introduction

In autumn 2020, *Sinodiaptomus sarsi* (Rylov, 1923) was found in ponds of the Nyvka Park in Kyiv, Ukraine (Svetlichny, Samchyshyna 2021). It was a second finding of this species in Ukraine. The record by Dr. Mykitchak in 2016 was the first for the Europe. He found *S. sarsi* in the lake of Novostuzhytske forestry and trout pond of an old farm both located in the watershed of the upper Uzh River in the Carpathian Mountains (Mykitchak, 2016, 2018; Mykitchak & Koval, 2018).

A few years later in 2018-2019, *S. sarsi* was recorded in north-east Romania, in several small ponds, located in a fish farm region called "Lakes Fälticeni", in Suceava County, on the Șomuzul Mare River, a tributary of the Siret River (Battes et al., 2020). As for European part of Russia, the species was recently found in the Middle Volga Region (Podshivalina & Sheveleva, 2020). Within the rest of Russian Federation, the species is known from the Dagestan, the Krasnodar area, the Far East (Borutzky et al., 1991), the East Siberia (Afonina & Itgiliva, 2010), and the Bering Island (Novichkova & Chertoprud, 2015). Much earlier of European records, the appearance of *S. sarsi* was observed in south-east Turkey several times (Gündüz, 1998; Ustaoglu, 2004; Bekleyen, 2006).

## Goal of the project

To establish in 2021 and onward the regular monitoring of the ponds in the Nyvka Park as well as to start a detail taxonomic survey of calanoid copepods from fish farms in Ukraine.

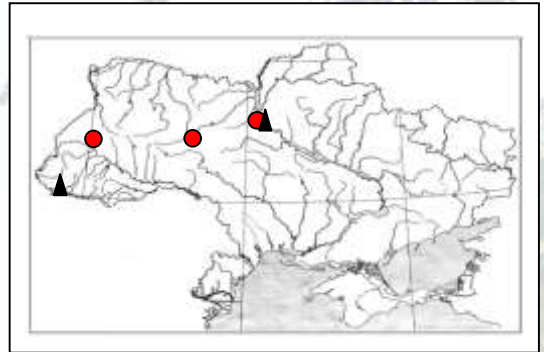


Figure 1: Map depicting collection sites of *Sinodiaptomus sarsi* (Rylov, 1923) in Ukraine. Circles represent sites from personal observations in 2021. Triangles represent literature data (2016-2021).

## Preliminary results

As a result of the first detail taxonomic study of calanoid copepods from the several fish farms in the West Ukraine, *S. sarsi* was identified in zooplankton samples collected in 2021 from the next farms: 1) fish farm ponds #1,3,10v,10g,15,19 of the Limited Liability Company, the Karpatsky vodohrai, located in the Dniester watershed, Pustomyty, Lviv region; 2) fish farm ponds #2,3,4 of the Private Joint-Stock Company, the Khmel'nitskrybhos, located on the Khomora river, Velyka Berezna, Polonne, Khmel'nitsky region.

In the ponds of the Karpatsky vodohrai, *S. sarsi* is coexisting with other calanoid copepods, as *Eurytemora velox* (Lill.) in the pond #3 and with *Eudiaptomus transylvanicus* (Daday) in pond #19. Where are several cyclopoid species and number of cladoceran ones as well as in the both ponds.

In the Nyvka Park of the capital of Ukraine, Kyiv, the species has established a breeding population in 2021.

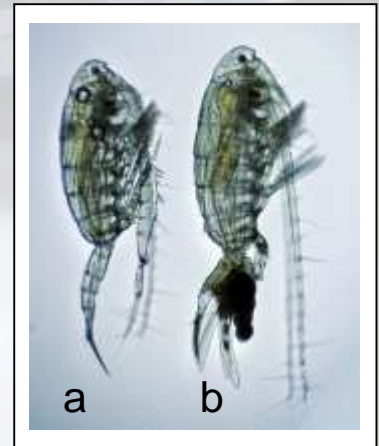


Figure 2: *Sinodiaptomus sarsi*: a - male; b - female (Photo: L. Svetlichny).

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