

## The First Data on Bryozoans from the Lyaiol Formation (Upper Devonian, Upper Frasnian) in South Timan

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**Abstract**—For the first time the systematic composition of the bryozoan assemblage from the Lyaiol Formation (Upper Frasnian, Upper Devonian) in the Ukhta region of the Timan–Pechora province is described. The assemblage consists of eight species, including one new species, *Neotrematopora lyaiolensis* sp. nov., and seven species left in open nomenclature. The bryozoans are represented by cosmopolitan genera common in the Frasnian of Eurasia and North America.

**Keywords:** bryozoans, Frasnian, Lyaiol Formation, Timan

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### INTRODUCTION

Since the 18th century the Devonian deposits of South Timan have attracted researchers by the representative sections, hydrocarbon and mineral resources, facies diversity, and richness of fossil flora and fauna (Menner et al., 1992; *Putevoditel'...*, 2010; *Upper Devonian...*, 2015). It is noteworthy that the stratotypes established within the boundaries of the Ukhta region in South Timan for the Timan–Pechora province are also applicable to the entire East European Platform: e.g., Timan Horizon (Formation) of the Givetian Stage of the Middle Devonian and Domanik Horizon (Formation) of the Frasnian Stage of the Upper Devonian. It is from the stratotype of the latter that the name *domanikites*, the world-famous facies type of oil-bearing rocks, is derived. The Upper Devonian deposits of the Ukhta region were most thoroughly studied. They contain a variety of paleontological remains: conodonts, brachiopods, ostracods, bivalves, rugose corals, ichthyofauna, and miospores (Kushnareva et al., 1974; Ovnatanova et al., 1999). However, the available literature contains no information on bryozoans.

The purpose of this paper is the description of a new species, *Neotrematopora lyaiolensis* sp. nov., and the characterization of the bryozoan assemblage newly discovered in the late Frasnian of the Ukhta region.

### MATERIAL AND METHODS

In 2013, N.V. Berg (OOO Geotech-2, Ukhta) handed over to the second author of this article (E.S.P.) a limestone sample from the Lyaiol Forma-

tion of the Upper Frasnian, measuring 1 × 2 × 5 cm (collected by N.S. Sivash, UGTU, Ukhta). The treatment of this material has shown that it contains very small fragments of the colonies of trepostomate and cryptostomate bryozoans. Twelve specimens were examined microscopically in 24 oriented thin sections using an Altami PS0745 stereomicroscope. The identification of taxa was based on the morphological features of the skeletal structures of the colonies, which are specific for each order of the phylum Bryozoa. The photographing of the thin sections was performed using a Leica MZ6 stereomicroscope.

The material under consideration is stored in the A.A. Chernov Scientific Geological Museum (NGM) (structural subdivision of FGBUN “N.P. Yushkin Institute of Geology, Komi Scientific Center, Ural Branch, Russian Academy of Sciences”), Syktyvkar, coll. no. 519.

### GEOLOGICAL CHARACTERIZATION

The Lyaiol Formation of the Upper Frasnian (Evlanovo Regional Stage (Horizon), upper *jamieae–rhenana* conodont zones) was established by A.I. Lyashenko (Lyashenko 1956; Ovnatanov et al., 1999) with a stratotype on the Lyaiol River and paras-tratotype on the Vezhavozh River. The deposits of this formation are widespread in the southern part of the Ukhta Anticline, which tectonically is part of the Ukhta–Izhema Swell (Fig. 1). The formation is divided into 4 members (from base to top): the first (10–25 m), composed of greenish-gray clays with thin