Today, there are a few different points of view concerning the last glaciation chronology and development in the Archangelsk Region (Fig. 1). The Late Valdai glacier cover is the most advanced in the reconstructions of M.G. Grosswald [9], who modeled the Great Arctic glacial shield covering a substantial part of the European north. The glacier also advanced considerably in the last glaciation maximum reconstructed by Kh.A. Arslanov [1, 2] and A.S. Lavrov [4]. According to A.S. Lavrov [4], in the Late Valdai a few glacial ice sheets advanced to the northern part of Eastern Europe: from the Kola Peninsula and adjacent Barents Sea areas (Kola–Mezen’ glacier stream), to the Barents Sea areas and Pechora River lower flow (Barents Sea–Pechora glacier stream), the southeastern part of the Barents Sea shelf, Novaya Zemlya Islands, and also the northern part of the Urals (Pai–Khoya) (Novaya Zemlya–Kolva glacier stream). A vast part of the region north of 65° N was covered by ice. Later on, A.S. Lavrov and L.M. Potapenko [5] laid off the boundaries of the Late Valdai Scandinavian and Barents Sea–Novaya Zemlya–Kara glacial shields in close proximity to the boundaries offered by M.G. Grosswald [9]. In their opinion, the glaciation attained its maximum at the isotopic oxygen stage 2 (IOS 2).

According to A.A. Velichko et al. [3, 14], the late glaciation maximum (20–18 thousands uncalibrated years ago) was marked by intensive development of the Scandinavian glacier cover, while other ice caps were limited in occurrence. The Scandinavian glacial shield reached its maximum northeastern boundary (almost from Vologda to the Vaga River middle part) about 24,000 uncalibrated years ago [14]. According to I.N. Demidov et al. [7, 8], E. Larsen [11], and Kjær et al. [10], the Scandinavian glacier maximum advance boundary eastwards passes through the northwestern part of the Kanin Peninsula over the White Sea bottom southwards to the Kuloi River mouth, then reaches the eastern end of the Kuloi Plateau, overlaps the lower and middle parts of the Pinega River, and turns westwards along the Northern Dvina River valley (Fig. 1). The chronological framework of this event is within 18–16 thousands calibrated years ago or about 14.5–12.5 thousands uncalibrated years ago. This point of view on the boundaries and chronology of the Scandinavian glacier coincides for the most part with the opinion of the QUEEN research team [13]. The QUEEN researchers suggest that the White Sea was covered with ice, and the end of the eastern glacier reached the western coast of the Kanin Peninsula, where it was merged with the shelf glacier of the Barents and Kara seas. The valleys of the Vaga and Sukhona Rivers were flooded by waters of the glacier-dammed lakes with water flowing out into the Volga River and Caspian Sea. The melted glacier waters were unloaded northwards along the glacier.

Abstract—Twelve new AMS (Accelerator Mass Spectrometry) dates of large Quaternary mammal remains were reported: mammoth (Mammuthus primigenius), bison (Bison priscus), and musk ox (Ovibos pallantis) found in the Archangelsk Region. The absolute age of the identified samples varies from 46,000 to 22,000 calibrated years ago. These data suggest that a substantial part of the Archangelsk Region was not covered by ice during the indicated time interval.

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margin, eastwards through the southern part of the Kanin Peninsula, and then between the continent and southern end of the Barents–Kara glacial shield.

The data on findings of Quaternary mammal bones in the Archangelsk Region are rather poor. Having studied the museum collections, V.I. Smirnov [6] obtained and marked on the map the data on findings of 137 large mammal bones in the Vologda and Archangelsk regions, and also in the Komi Autonomous Soviet Socialist Republic. As a rule, these are findings in the riversides without confinement to any particular geological bodies. Most of them are concentrated in