Stop 3/4. Baymouth barrier of Tiligul liman (TLBB).

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The Tilgulsky Liman (known as Deliogolsky Liman before the XVII century CE), which covers an area of -14 km^2 and is more than 4 km wide, is located on the border between Odessa and Nikolaev Regions. To the north, the baymouth barrier abuts the Odessa- Nikolaev highway. The mainland shores of the liman form the western and eastern boundaries of the barrier (Fig. 40, 42).

Its surface is covered by salt-rich soils (solonchak and solonets), solonchak meadows, and partially by steppe xerophyte areas. Large seaward portions of the barrier have been developed for resort complexes, recreation facilities, and motels.

The erosional depth of Tiligul River at the mouth of the modern liman reaches approximately 38 m. In the geological section of the barrier, numerous boreholes reveal alluvial deposits (Antsky horizon) of the Neoeuxinian regressive phase, liman sediments of the transgressive Neoeuxinian basin, and Holocene liman-marine and marine deposits (Fig. 42). The alluvial facies are represented by a 0.5-1.0-m-thick basal gravel horizon and channel sands with a total thickness of 4-6 m. On the reworked alluvial surface, the barrier lithosome consists of liman clays with peat horizons in its upper part, which is 18- 2.0 m thick in the valley. Based on liman borehole #9, located near the barrier, the age of these deposits is 9,500 ^{14}C yrs BP.

The Neoeuxinian deposits are overlain by Drevnechernomorian and Novochernomorian organic muds (8.8-6.2 ky BP) according to dates from ca. 19-m-deep boreholes taken from the liman valley. Along the eastern side of the baymouth barrier, two generations of sandy bars separated by muds are distinguished. The origin of the lower generation is apparently linked to the Tyrasian regressive phase of the basin, which we established at ca. 6.2 ky BP. The formation of the second generation that lies at absolute elevations o f - 14 to -10 m is related to the Khadzhibeian regression 4.0 ky BP. Higher in the section, marine muds containing Black Sea fauna correspond to the Nymphaean transgressive phase.