Refining the chronology of archaeological sites in the South Russia since the Early Bronze Age by ^{14}C dating

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AMS ^{14}C dating results on the samples from three archaeological sites: one is the Early Bronze Age in the Stanitsa Dinskaya, Krasnodar kray, North Caucasus, Southern Russia (45°14'42.258"N, 39°12'26.573"E) and two sites of the Early Iron Age in the Samara region, Middle River Volga area: Koptevo (50.1976N, 53.323E) and Manchikha (53°19'32.7"N, 50°06'6.2"E). There is very little radiocarbon dating for these archaeological cultures, so it is important for refining the chronology. During excavations of 6 mounds at the Dinskaya site, valuable findings were discovered, such as wooden carts, which are characteristic of the Novotitorovskaya culture of the Early Bronze Age, remains of people and animals, ceramic and bronze vessels, gold jewelry, etc. During detailed sampling, charcoals, human bones and teeth from different burials of four mounds at the Dinskaya site for AMS ^{14}C dating were taken. Archaeological research has shown that the mounds contain materials belonging to several cultures of the Early Bronze Age. All AMS ^{14}C data are given as the average of three burial materials with significant of 2 sigma Cal yr BP. It has been established that burials from four mounds at the Dinskaya site have the following radiocarbon age in the decreasing order in years ago: Early Yamnaya 4780±215, North Caucasian culture 4715±190, Catacomb culture 4690±155, Novotitorovskaya culture 4690±160, for this culture data on the analysis of charcoals is 4520±165, charcoals were taken from the same burials as the teeth. The ^{14}C dates from charcoals are somewhat younger than those obtained from tooth analysis. In the 1st mound of the Dinskaya site, 6.5 m high, there was an entrance rich Sarmatian burial with a gold jewelry, large bronze cauldron, weapons and other finds, age 2015±145 Cal yr BP. Thus, the necropolis of the Dinskaya site with 6 mounds was built over a period of 100 years during the Early Bronze Age. We also dated materials from two settlements of the Early Iron Age of the Belogorsk culture in the Samara region of River Volga area. For ^{14}C dating charcoal, animal bones and teeth were used. The average of two AMS ^{14}C dates obtained from animal remains of the Manchikha site is 2320±190 Cal yr BP, from the charcoal – 2200±145 Cal yr BP. For the Koptevo settlement, two close dates were obtained: 2490±135 Cal yr BP and one date differs from them – 2190±120 Cal yr BP. Thus, the settlements of the Belogorsk culture included in the widespread Ananyin community functioned in the Samara region of Middle River Volga area during 2300–2500 yrs ago. Judging by the literature information, our radiocarbon AMS dates fit into the periods previously established for these archaeological communities.

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