

## BRATISLAVA RADIOCARBON MEASUREMENTS II

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Radiocarbon dating facilities were built at the Department of Nuclear Physics, Comenius University in 1967 (Usačev *et al.*, 1973). Initially, sample pretreatment and combustion systems for a proportional counter filled with CO<sub>2</sub> were installed (Chrapan, 1966). One group adopted methods based on the use of methane (Usačev *et al.*, 1973), a second group continued radiocarbon dating using an Oeschger-type proportional counter filled with CO<sub>2</sub> (Chrapan, 1968). Later a modified Oeschger-type proportional counter with 1L active volume and with a background of approximately 8.10<sup>-2</sup> bq was built (Schmidt and Chrapan, 1970). The pressure used in this counter is 10<sup>5</sup> Pa. 0.95 NBS oxalic acid is used as a standard of the present biosphere and the year 1950 refers to the zero year. Calculated radiocarbon ages are based on a 5568 ± 30 year half-life as recommended by the 8th International Radiocarbon Dating Conference. Statistical errors are calculated as a combination of the 3σ standard deviations of the sample count and the background. Samples were treated by HCl, NaOH or other chemicals according to their initial conditions.

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### I. PEDOLOGIC SAMPLES

#### **Komiatice series**

Samples were prepared from recent soils of the Komiatice dist (48° 9' N, 18° 10' E), Nitra, S Slovakia. Coll and subm 1968 by E Vašková, Štur's Geol Inst, Bratislava.

**Ba-221. Komiatice T** **5330 ± 265**

Sample from recent soil from Komiatice-tehel'na.

**Ba-222. Komiatice I** **11,500 ± 1100**

Sample from humus underlying soil at depth 2.5m.

**Ba-324. Pukanec No. 2** **800 ± 80**

Sample was prepared from recent soil underlying border hill, 2.3m below surface, 0.5km E of Pukanec (48° 21' N, 18° 42' E) Levice dist, middle Slovakia. Coll and subm by J Klinko, MNV Pukanec.

## II. ARCHAEOLOGIC SAMPLES

**Ba-223. Medvedia jaskyňa 17,700 ± 800**

Bones (*Ursus speleus* Rosnm & Heinr mandibula) from Medvedia jaskyňa (Bear Cave) in Slovakian Paradise region (49° 5' N, 20° 22' E) at depth between 0.25 to 0.45m from top of cave sediment in Bludisko sec of cave. Coll and subm 1969 by Z Schmidt, Štur's Geol Inst, Bratislava.

**Pukanec series**

During excavation for a new building damaged wooden cellars were found 3m below surface in center of Pukanec (48° 21' N, 18° 42' E) Levice dist, middle Slovakia. Coll 1974 by J Chrapan.

**Ba-224. Pukanec No. 1 390 ± 50**

Wood from a supporting beam, Sec A-1.

**Ba-225. Pukanec No. 1 380 ± 50**

Wood from a supporting beam, Sec B-2.

**Ba-235. Pukanec No. 3 450 ± 40**

Fragment of excavated wood from 2.5m below surface near old mine W of Pukanec. Coll 1974 by J Chrapan.

**Vodná veža series**

During excavations a water tower was found on left bank of Danube at Bratislava (48° 10' N, 17° 10' E), SW Slovakia. Coll and subm 1974 by K Klinčoková, Pamiatkový ústav mesta Bratislavy.

**Ba-226. Vodná veža A2 1670 ± 70**

Charcoal fragments from tower structure at depth of 6m, Sec S-12.

**Ba-227. Vodná veža A3 1818 ± 60**

Charcoal fragments from tower structure at depth of 8m, Sec S-9.

**Ba-228. Vodná veža A8 320 ± 60**

A piece of wood from depth of 9.3m, Sec S-16.

**Ba-229. Vodná veža A6 2120 ± 180**

Charcoal fragments from construction parts at depth of 7.7m, Sec S-9.

**Ba-230. Vodná veža A7 18,090 ± 3500**

Charcoal mixed with humus and calcite gravel from depth of 2.7m, Sec P-1.

**Ba-231. Vodná veža All 600 ± 60**

Wood from damaged structure of wall.

**Šášov series**

Wooden beams from Šášov castle (48° 31' N, 18° 55' E) 25km W of Zvolen, middle Slovakia. Coll 1974 by P Lesay, Comenius Univ, Bratislava.

**Ba-232. Šášov III-1** **540 ± 50**

Wooden beam from castle.

**Ba-233. Šášov III-2** **270 ± 20**

Wood from castle window.

## REFERENCES

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