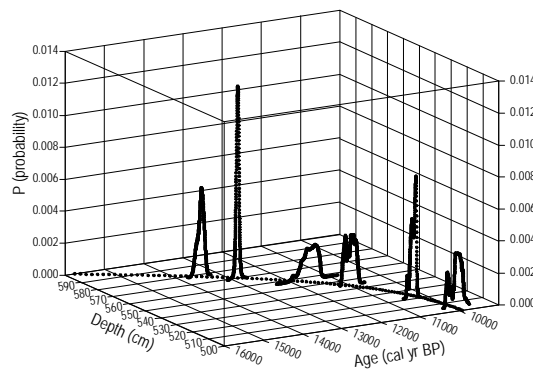## Additional file 2 - Radiocarbon dates and age-depth modeling of sediment core TDB-1, Taŭl dintre Brazi (1740 m a.s.l), Retezat Mountains, South Carpathians, Romania.

Radiocarbon dates from Taŭl dintre Brazi (TDB-1). AMS ^{14}C dates were obtained from the Poznań Radiocarbon Laboratory, Poland.

Core	Laboratory code	Dated material	Depth (cm)	[14]C age years BP	Calibrated range years BP (2σ)
TDB-1	Poz-26103	*Picea abies* needles	119	725 ± 30	652-723
TDB-1	Poz-26104	*Pinus mugo* cone scale	160	1735 ± 30	1562-1712
TDB-1	Poz-26106	*Pinus mugo* cone	238	3045 ± 30	3205-3356
TDB-1	Poz-26107	*Pinus* twig	315	5040 ± 40	5708-5902
TDB-1	Poz-26108	*Picea abies* needles	355	6320 ± 40	7163-7324
TDB-1	Poz-26110	*Picea abies* seed & needles	450	8240 ± 50	9072-9326
TDB-1	Poz-26111	*Picea abies* needles	505	8810 ± 50	9670-9966
TDB-1	Poz-31714	*Pinus mugo* needles	521	9150 ± 50	10223-10432
TDB-1	Poz-26112	*Picea abies* cone	545	9610 ± 50	10764-11165
TDB-1	Poz-31715	*Pinus mugo* needles	557	9980 ± 100	11216-11618
TDB-1	Poz-31716	charcoal	569	10870 ± 70	12598-12925
TDB-1	Poz-27305	*Pinus sp.* needles (2)	578	11590 ± 60	13287-13620

Non-linear weighted polynomial regression for modeling age-depth relationship in the lateglacial and early Holocene part of TDB-1. The 3D image displays the regression line and the posterior probability distributions of the ^{14}C dates.

Linear age-depth model for TDB-1 based on 12 ^{14}C dates, calibration using BCal and age-model production using linear interpolation in psimpoll. Thick gray horizontal lines indicate the posterior probability distribution of the radiocarbon dates and the middle vertical lines indicate the mode of posterior probability distribution; solid line indicates the psimpoll age model. Note that the final age-depth model used on Figures 5 and 6 combines the linear and non-linear weighted polynomial regression models. Below 10,000 cal yr BP the polynomial model is used, while above 10,000 cal yr BP the linear model is used. For further details see Magyari et al. [43]