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Supplement of

How dry was the Younger Dryas? Evidence from a coupled $\delta^2\text{H}$ – $\delta^{18}\text{O}$ biomarker paleohygrometer applied to the Gemündener Maar sediments, Western Eifel, Germany

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Tab. S1: Weighted mean $\delta^2\text{H}$ values of leaf wax-derived n -alkanes (n - C_{27} and n - C_{29}) and $\delta^{18}\text{O}$ values of hemicellulose-derived sugar (arabinose). The reported standard errors represent the analytical uncertainties. Also calculated/reconstructed $\delta^2\text{H}/\delta^{18}\text{O}_{\text{leaf-water}}$, d-excess of leaf water, mean daytime vegetation period relative humidities (RH_{dv}), and $\delta^2\text{H}/\delta^{18}\text{O}_{\text{source-water}}$ values are displayed. The reported uncertainties of d-excess and RH represent expanded uncertainties calculated using the uncertainty propagation law.

Depth [cm]	Age [a BP]	Measured				Calculated/Reconstructed				
		$\delta^2\text{H}_{n\text{-alkane}}$ [‰]	$\delta^{18}\text{O}_{\text{sugar}}$ [‰]	$\delta^2\text{H}_{\text{leaf-water}}$ [‰]	$\delta^{18}\text{O}_{\text{leaf-water}}$ [‰]	d-excess of leaf water [‰]	RH_{dv} [%]	$\delta^2\text{H}_{\text{source-water}}$ [‰]	$\delta^{18}\text{O}_{\text{source-water}}$ [‰]	
607.5	10139	-163.7 ± 3.3	36.1 ± 0.9	-4.4	8.9	-73 ± 25	59 ± 13	-49	-7	
608.5	10180	-156.8 ± 2.7	36.6 ± 1.2	3.9	9.3	-68 ± 21	61 ± 11	-38	-6	
609.5	10222	-159.0 ± 0.5	37.8 ± 0.7	1.2	10.5	-80 ± 4	55 ± 2	-48	-7	
611.5	10305	-205.3 ± 1.8	30.7 ± 0.5	-53.9	3.6	-81 ± 14	54 ± 7	-104	-14	
612.5	10346	-205.4 ± 1.9	36.4 ± 0.1	-54.1	9.2	-125 ± 15	32 ± 8	-129	-17	
615.5	10470	-146.0 ± 1.4	38.8 ± 0.3	16.6	11.5	-72 ± 11	59 ± 6	-28	-4	
617.5	10553	-170.9 ± 0.9	38.2 ± 0.9	-13.0	10.9	-97 ± 7	46 ± 4	-72	-10	
619.5	10636	-159.2 ± 1.2	37.3 ± 0.2	0.9	10.0	-77 ± 9	57 ± 5	-46	-7	
620.5	10678	-173.7 ± 1.4	40.6 ± 0.5	-16.3	13.2	-118 ± 11	35 ± 6	-87	-12	
622.5	10761	-200.1 ± 0.0	35.3 ± 0.2	-47.7	8.1	-110 ± 0	39 ± 0	-114	-15	
623.5	10802	-194.9 ± 2.1	37.9 ± 1.0	-41.5	10.7	-124 ± 16	32 ± 9	-115	-16	
624.5	10844	-202.8 ± 1.7	36.8 ± 0.4	-50.9	9.5	-125 ± 13	32 ± 7	-125	-17	
625.5	10885	-166.8 ± 1.8	37.1 ± 0.4	-8.0	9.8	-84 ± 14	53 ± 7	-59	-8	
626.5	10927	-174.6 ± 2.4	37.4 ± 0.5	-17.4	10.1	-96 ± 19	47 ± 10	-75	-10	
627.5	10968	-179.2 ± 2.2	36.7 ± 1.0	-22.9	9.5	-96 ± 17	47 ± 9	-81	-11	
628.5	11010	-171.6 ± 0.6	36.6 ± 1.0	-13.8	9.4	-86 ± 5	52 ± 2	-66	-9	
629.5	11051	-170.4 ± 0.2	32.4 ± 2.7	-12.4	5.3	-53 ± 3	69 ± 2	-46	-7	
630.5	11092	-173.0 ± 1.3	32.5 ± 0.6	-15.4	5.3	-57 ± 10	68 ± 5	-51	-7	
631.5	11134	-170.2 ± 1.1	34.1 ± 0.4	-12.1	6.9	-65 ± 9	63 ± 5	-52	-7	
632.5	11175	-169.0 ± 2.7	34.1 ± 0.2	-10.7	6.9	-64 ± 21	64 ± 11	-50	-7	
633.5	11217	-174.8 ± 2.2	28.6 ± 0.6	-17.7	1.6	-30 ± 17	82 ± 9	-38	-6	
634.5	11258	-169.2 ± 0.8	34.2 ± 0.6	-11.0	7.0	-65 ± 6	63 ± 3	-51	-7	
635.5	11300	-189.2 ± 2.5	36.3 ± 1.6	-34.8	9.1	-105 ± 19	42 ± 10	-98	-13	
636.5	11341	-177.5 ± 2.0	35.6 ± 0.4	-20.9	8.4	-86 ± 15	52 ± 8	-73	-10	
637.5	11383	-170.1 ± 3.9	38.0 ± 1.5	-12.0	10.7	-95 ± 30	47 ± 16	-69	-10	
639.5	11466	-172.5 ± 1.9	40.1 ± 1.4	-14.8	12.8	-113 ± 15	38 ± 8	-83	-11	
640.5	11507	-165.1 ± 4.2	36.6 ± 0.3	-6.0	9.3	-78 ± 32	56 ± 17	-54	-8	
641.5	11549	-181.7 ± 1.2	33.1 ± 0.7	-25.8	5.9	-72 ± 9	60 ± 5	-70	-10	
643.5	11630	-202.3 ± 2.0	32.1 ± 0.2	-50.4	4.9	-88 ± 15	51 ± 8	-104	-14	
644.5	11669	-181.1 ± 1.6	34.4 ± 0.3	-25.1	7.2	-81 ± 12	55 ± 6	-74	-10	
645.5	11709	-199.1 ± 0.9	33.4 ± 0.4	-46.6	6.2	-94 ± 7	48 ± 4	-104	-14	
647.5	11788	-200.4 ± 3.3	35.7 ± 0.5	-48.1	8.5	-114 ± 25	37 ± 13	-116	-16	
648.5	11828	-193.5 ± 0.8	34.2 ± 0.2	-39.9	7.0	-94 ± 6	48 ± 3	-97	-13	
649.5	11867	-212.3 ± 2.6	34.6 ± 0.3	-62.3	7.4	-119 ± 20	35 ± 10	-134	-18	
651.5	11947	-186.7 ± 1.8	33.0 ± 0.2	-31.8	5.8	-77 ± 14	57 ± 7	-79	-11	
652.5	11986	-188.8 ± 1.3	30.9 ± 0.4	-34.3	3.8	-64 ± 10	64 ± 5	-74	-10	
653.5	12026	-186.3 ± 1.4	32.5 ± 0.5	-31.3	5.4	-73 ± 11	59 ± 6	-76	-10	
656.5	12145	-196.4 ± 0.6	33.8 ± 0.7	-43.4	6.6	-95 ± 5	48 ± 2	-101	-14	
657.5	12185	-167.2 ± 5.8	34.3 ± 0.4	-8.6	7.1	-63 ± 44	64 ± 23	-48	-7	
659.5	12264	-201.2 ± 0.6	32.7 ± 0.7	-49.0	5.5	-92 ± 5	49 ± 3	-105	-14	
660.5	12303	-191.6 ± 1.1	28.1 ± 0.8	-37.6	1.0	-46 ± 8	73 ± 4	-67	-9	
661.5	12343	-210.7 ± 1.9	32.0 ± 0.7	-60.4	4.8	-98 ± 15	46 ± 8	-119	-16	
663.5	12422	-197.5 ± 0.7	33.0 ± 0.5	-44.6	5.9	-90 ± 6	50 ± 3	-99	-13	
664.5	12462	-189.2 ± 4.9	34.1 ± 0.7	-34.8	6.9	-88 ± 38	51 ± 20	-88	-12	
665.5	12502	-171.2 ± 4.6	33.2 ± 0.1	-13.3	6.0	-60 ± 35	66 ± 19	-50	-7	
667.5	12581	-185.8 ± 1.1	34.9 ± 0.4	-30.8	7.7	-90 ± 9	50 ± 5	-85	-12	
668.5	12621	-216.0 ± 2.9	33.6 ± 0.1	-66.6	6.4	-116 ± 22	36 ± 12	-136	-18	
669.5	12660	-173.6 ± 1.4	30.7 ± 0.0	-16.2	3.6	-44 ± 11	74 ± 6	-44	-6	
671.5	12766	-172.7 ± 1.5	33.1 ± 0.4	-15.1	6.0	-61 ± 11	65 ± 6	-53	-8	
672.5	12823	-192.5 ± 0.0	32.5 ± 0.8	-38.7	5.3	-80 ± 1	55 ± 0	-87	-12	
673.5	LST	n.d. ± n.d.	n.d. ± n.d.	n.d.	n.d.	n.d. ± n.d.	n.d. ± n.d.	n.d.	n.d.	
679.5	LST	n.d. ± n.d.	n.d. ± n.d.	n.d.	n.d.	n.d. ± n.d.	n.d. ± n.d.	n.d.	n.d.	
681.5	12919	-176.8 ± 1.8	35.7 ± 0.4	-20.0	8.5	-85 ± 14	52 ± 8	-72	-10	
682.5	12938	-175.0 ± 2.3	33.4 ± 0.4	-17.8	6.2	-66 ± 17	63 ± 9	-59	-8	
683.5	12957	-177.0 ± 2.4	34.8 ± 1.1	-20.2	7.6	-79 ± 18	56 ± 10	-68	-9	
685.5	12996	-179.6 ± 1.5	35.4 ± 0.1	-23.3	8.2	-86 ± 12	52 ± 6	-76	-10	
687.5	13035	-221.3 ± 2.3	33.2 ± 0.3	-73.0	6.0	-120 ± 18	34 ± 9	-144	-19	
688.5	13054	-184.3 ± 2.3	35.0 ± 0.5	-28.9	7.8	-89 ± 18	50 ± 9	-83	-11	
689.5	13074	-177.1 ± 3.4	29.5 ± 0.6	-20.3	2.4	-39 ± 26	77 ± 14	-46	-7	
692.5	13132	-182.3 ± 2.4	34.5 ± 0.6	-26.6	7.3	-83 ± 19	54 ± 10	-77	-11	
693.5	13151	-169.0 ± 3.0	35.9 ± 0.1	-10.7	8.6	-77 ± 23	57 ± 12	-58	-8	

n.d. = not determined; LST = Laacher See Tephra