

7 Appendix

7.1 Supplementary data

Table 7.1. Mean annual temperature and precipitation data of selected stations in southwest Africa (gathered from climatograms presented by Walter et al., 1975). The code refers to numbers used in Fig. 1.6, page 13, Fig. 1.7, page 16, and Fig. 3.8, page 90)

Code	Station	Country	Latitude/ longitude	Mean annual temperature (°C)	Mean annual precipitation (mm)
1	Mbandaka	Dem. Rep. Congo	0.1°N/17.1°E	24.1	2066
2	Kikwit	Dem. Rep. Congo	5.1°S/18.9°E	24.7	1923
3	Vila Luzo	Angola	11.8°S/19.9°E	20.8	1116
4	Mongu	Zambia	15.3°S/23.1°E	22.5	954
5	Livingstone	Zambia	17.9°S/25.9°E	22.2	671
6	Windhoek	Namibia	22.6°S/17.1°E	18.2	362
7	Tsabong	Botswana	26.1°S/22.5°E	19.7	295
8	Mafeking	South Africa	25.9°S/25.7°E	18.3	542
9	Keetmanshoop	Namibia	26.5°S/18.1°E	20.8	133
10	Pofadder	South Africa	29.1°S/19.4°E	18.5	95

Table 7.2. *n*-Alkane data of sediment samples studied: Location, depth, age, MIS, individual *n*-alkane mass accumulation rates in $\mu\text{g cm}^{-2} \text{kyr}^{-1}$ and TCOC₂₇₋₃₅ values in $\mu\text{g cm}^{-2} \text{kyr}^{-1}$.

Location	Depth (cmcd ^a)	Age (ka)	MIS ^b	<i>n</i> -Alkane mass accumulation rate ^c ($\mu\text{g cm}^{-2} \text{kyr}^{-1}$)											TCOC ₂₇₋₃₅ ^d
				26	27	28	29	30	31	32	33	34	35	36	
ODP 1075A	55	5	1	0.20	0.53	0.26	1.31	0.25	1.06	0.33	0.57	0.06	0.28	-	3.8
	355	23	2	0.54	1.83	0.82	5.67	1.05	4.67	0.76	2.32	0.17	0.57	-	81.8
	1879	126	5e	0.21	0.44	0.27	1.14	0.30	1.14	0.19	0.53	0.11	0.31	-	3.5
	1905	131	6a	0.37	0.99	0.48	2.49	0.50	2.39	0.44	1.45	0.13	0.39	-	7.7
GeoB 1008-3	13	2	1	0.22	0.66	0.33	2.23	0.39	1.69	0.26	0.70	0.08	0.25	0.04	5.5
	220	19	2	1.14	3.76	1.73	11.82	2.16	9.42	1.32	4.95	0.48	1.71	0.20	31.7
	820	123	5e	0.19	0.56	0.27	1.65	0.30	1.39	0.28	0.56	0.09	0.20	0.05	4.4
	881	135	6a	0.66	2.09	1.01	6.02	1.15	4.61	0.70	2.44	0.29	0.75	0.11	15.9
GeoB 1016 -3	4	1	1	0.14	0.29	0.17	0.64	0.14	0.60	0.09	0.34	0.04	0.11	0.02	2.0
	112	18	2	0.16	0.51	0.25	1.43	0.26	1.52	0.19	0.77	0.05	0.20	0.03	4.4
	603	122	5e	0.09	0.32	0.14	0.88	0.16	1.02	0.15	0.60	0.05	0.21	0.01	3.0
	643	136	6a	0.13	0.47	0.20	1.13	0.28	1.70	0.27	1.20	0.10	0.45	0.03	49
ODP 1079A	77	3	1	0.71	2.86	1.21	10.19	2.16	10.23	1.64	5.51	0.72	2.11	-	30.9
	757	19	2	0.73	3.05	1.18	8.42	1.58	11.43	1.40	8.71	0.59	3.23	-	34.8
	2943	127	5e	0.74	2.80	1.13	9.92	1.36	11.75	1.60	7.19	0.47	3.21	-	34.9
	3223	137	6a	1.26	6.13	2.33	26.14	2.85	22.82	2.49	13.82	0.89	5.00	-	73.9
GeoB 1028-5	20	4	1	0.03	0.05	0.03	0.12	0.03	0.21	0.03	0.11	0.01	0.03	-	0.5
	95	20	2	0.03	0.06	0.03	0.11	0.04	0.25	0.04	0.13	0.02	0.04	0.01	0.6
	394	121	5e	0.05	0.08	0.07	0.14	0.06	0.25	0.04	0.12	0.04	0.07	0.01	0.7
	454	136	6a	0.02	0.03	0.02	0.05	0.03	0.09	0.02	0.05	0.01	0.01	-	0.2

cont. Table 7.2. *n*-Alkane data of sediment samples studied.

Site	Depth (cmcd ^a)	Age (ka)	MIS ^b	<i>n</i> -Alkane mass accumulation rate ^c ($\mu\text{g cm}^{-2} \text{ kyr}^{-1}$)											TCOC ₂₇₋₃₅ ^d
				26	27	28	29	30	31	32	33	34	35	36	
ODP 1082A	37	4	1	0.15	0.43	0.25	0.94	0.28	1.91	0.32	1.10	0.09	0.28	-	4.7
	237	21	2	0.27	0.64	0.37	1.35	0.38	3.56	0.66	1.89	0.15	0.45	0.07	7.9
	1286	127	5e	0.33	0.77	0.62	1.45	0.44	3.10	0.45	1.60	0.13	0.47	-	7.4
	1376	136	6a	1.39	2.78	4.31	6.85	5.83	8.02	4.00	3.39	0.52	0.91	0.17	21.9
GeoB 1710-3	3	1	1	0.07	0.11	0.06	0.18	0.06	0.39	0.06	0.20	0.03	0.05	0.01	0.9
	95	18	2	0.13	0.25	0.12	0.61	0.22	1.29	0.12	0.63	0.07	0.14	-	2.9
	609	122	5e	0.11	0.15	0.10	0.23	0.10	0.43	0.07	0.19	0.04	0.08	-	1.1
	669	136	6a	0.12	0.16	0.11	0.35	0.12	0.70	0.13	0.33	0.09	0.14	-	1.7
ODP 1084A	55	5	1	0.31	0.71	0.35	1.59	0.37	4.45	0.66	2.24	0.14	0.53	0.07	9.5
	455	26	2	5.03	9.40	14.88	21.81	17.14	22.11	9.59	8.30	1.02	1.36	0.27	63.0
	2633	124	5e	1.10	2.59	2.46	5.69	3.23	12.29	3.00	5.60	0.41	1.32	0.12	27.5
	2949	139	6a	1.85	3.23	2.17	6.09	3.42	11.65	3.76	5.09	1.57	-	-	26.1
GeoB 1722-1	8	7	1	0.02	0.03	0.02	0.05	0.02	0.12	0.01	0.04	-	0.01	-	0.3
	24	17	2	0.06	0.09	0.06	0.15	0.08	0.20	0.05	0.10	0.05	0.03	-	0.6
	189	123	5e	0.03	0.04	0.03	0.04	0.02	0.07	0.02	0.03	0.01	0.02	-	0.2
	210	1378	6a	0.05	0.06	0.04	0.09	0.04	0.14	0.02	0.06	0.03	0.03	-	0.4

^acmcd: Centimetres composite depth

^bMIS: Marine isotopic stage

^cNumbers according to individual *n*-alkane carbon numbers

^dTCOC₂₇₋₃₅: Total content of odd-carbon-numbered *n*-C₂₇ to *n*-C₃₅ alkanes in $\mu\text{g cm}^{-2} \text{ kyr}^{-1}$

Table 7.3. *n*-Alkanol data of sediment samples studied: Location, depth, age, MIS, individual *n*-alkanol mass accumulation rates in $\mu\text{g cm}^{-2} \text{ kyr}^{-1}$ and TCEC₂₂₋₃₂ values in $\mu\text{g cm}^{-2} \text{ kyr}^{-1}$.

Location	Depth (cmcd ^a)	Age (ka)	MIS ^b	<i>n</i> -Alkanol mass accumulation rate ^c ($\mu\text{g cm}^{-2} \text{ kyr}^{-1}$)														TCEC ₂₂₋₃₂ ^d
				21	22	23	24	25	26	27	28	29	30	31	32	33		
ODP 1075A	55	5	1	0.18	1.89	0.69	3.28	0.78	2.50	0.48	2.19	0.38	1.48	0.41	2.17	0.55	13.5	
	355	23	2	0.14	2.31	0.90	5.99	1.32	5.69	1.16	5.20	1.05	3.79	0.79	4.22	0.41	27.2	
	1879	126	5e	0.05	0.69	0.19	1.17	0.29	1.09	0.28	1.39	0.29	1.25	0.20	1.15	0.15	6.7	
	1905	131	6a	0.08	1.15	0.42	2.56	0.73	2.89	0.70	3.22	0.63	2.34	0.52	2.99	0.35	15.1	
GeoB 1008-3	13	2	1	0.10	1.36	0.43	2.62	0.56	2.78	0.49	2.60	0.43	1.77	0.34	1.54	0.23	12.7	
	220	19	2	0.19	3.85	1.18	8.18	1.78	9.46	1.59	8.66	1.49	6.89	1.44	8.41	0.65	45.5	
	820	123	5e	0.08	1.54	0.52	3.28	0.67	3.13	0.51	3.03	0.45	1.95	0.29	1.18	0.21	14.1	
	881	135	6a	0.12	1.75	0.81	5.83	1.19	5.75	0.93	4.72	0.71	3.02	0.53	2.84	0.22	23.9	
GeoB 1016 -3	4	1	1	0.03	0.19	0.15	0.21	0.05	0.28	0.06	0.46	0.09	0.53	0.14	0.82	0.20	2.5	
	112	18	2	0.12	1.22	0.45	1.88	0.50	2.22	0.46	2.50	0.46	2.06	0.43	3.17	0.26	13.0	
	603	122	5e	0.02	0.37	0.08	0.44	0.11	0.56	0.09	0.60	0.12	0.60	0.08	0.51	0.06	3.1	
	643	136	6a	0.08	1.00	0.32	1.26	0.33	1.53	0.32	2.11	0.36	1.60	0.35	3.29	0.24	10.8	
ODP 1079A	77	3	1	0.47	6.74	1.72	11.07	2.32	14.87	2.47	22.22	2.98	19.00	2.45	19.08	1.21	93.0	
	757	19	2	0.26	3.56	1.25	7.89	2.35	12.31	2.37	18.23	2.44	15.18	1.98	23.57	1.50	80.7	
	2943	127	5e	0.50	8.96	2.46	22.37	4.23	31.06	4.36	36.07	5.04	29.56	3.89	28.98	2.17	157.0	
	3223	137	6a	0.60	13.30	3.52	26.09	6.10	36.99	6.48	44.13	7.36	38.88	5.37	51.25	1.72	210.6	
GeoB 1028-5	20	4	1	0.02	0.11	0.05	0.13	0.02	0.13	0.02	0.20	0.08	0.22	0.04	0.18	0.02	1.0	
	95	20	2	0.01	0.08	0.04	0.17	0.04	0.26	0.03	0.23	0.03	0.18	0.04	0.17	0.03	1.1	
	394	121	5e	0.05	0.06	0.05	0.06	0.02	0.08	0.02	0.09	0.01	0.07	0.01	0.09	0.03	0.5	
	454	136	6a	0.01	0.03	0.01	0.02	0.01	0.04	0.02	0.05	0.02	0.06	0.01	0.04	0.01	0.2	

cont. Table 7.3. *n*-Alkanol data of sediment samples studied.

Site	Depth (cmcd ^a)	Age (ka)	MIS ^b	<i>n</i> -Alkanol mass accumulation rate ^c (µg cm ⁻² kyr ⁻¹)													TCEC ₂₂₋₃₂ ^d
				21	22	23	24	25	26	27	28	29	30	31	32	33	
ODP 1082A	37	4	1	0.12	1.11	0.26	1.48	0.29	2.34	0.32	3.02	0.34	2.49	0.26	1.94	0.20	12.4
	237	21	2	0.10	1.20	0.30	2.65	0.41	2.96	0.33	2.71	0.37	1.50	0.17	1.38	0.07	12.4
	1286	127	5e	0.14	1.49	0.42	2.31	0.53	2.70	0.32	2.47	0.25	1.49	0.10	1.08	0.34	11.5
	1376	136	6a	0.18	2.08	0.47	3.38	0.52	3.00	0.31	2.23	0.39	1.14	0.11	1.22	0.47	13.0
GeoB 1710-3	3	1	1	0.01	0.09	0.05	0.20	0.04	0.23	0.02	0.11	0.01	0.11	0.01	0.22	0.01	1.0
	95	18	2	0.06	0.54	0.15	1.17	0.19	1.22	0.14	1.17	0.15	0.71	0.11	0.87	0.17	5.7
	609	122	5e	0.01	0.11	0.04	0.12	0.03	0.17	0.03	0.20	0.03	0.21	0.02	0.17	0.01	1.0
	669	136	6a	0.02	0.22	0.08	0.52	0.09	0.67	0.08	0.63	0.09	0.41	0.06	0.42	0.02	2.9
ODP 1084A	55	5	1	0.30	3.38	0.86	5.29	0.69	5.59	0.57	5.20	0.63	4.07	0.59	3.78	0.33	27.3
	455	26	2	0.34	5.12	1.16	10.65	1.71	8.88	0.87	7.17	0.89	4.61	0.33	2.15	0.56	38.6
	2633	124	5e	1.74	11.20	1.74	8.09	1.13	7.77	0.96	5.69	0.91	2.61	0.31	2.77	0.73	38.1
	2949	139	6a	0.91	11.21	1.98	14.82	2.33	14.81	2.00	12.03	2.66	7.92	0.93	8.65	0.39	69.4
GeoB 1722-1	8	7	1	0.01	0.02	0.01	0.02	0.01	0.05	0.01	0.06	0.01	0.04	0.01	0.07	0.01	0.3
	24	17	2	0.01	0.02	0.01	0.03	0.01	0.02	0.01	0.03	0.01	0.04	0.01	0.01	-	0.1
	189	123	5e	0.01	0.01	0.01	0.02	-	0.02	-	0.01	-	0.01	-	0.02	-	0.1
	210	1378	6a	0.01	0.03	0.01	0.04	0.01	0.10	0.01	0.11	0.01	0.08	0.02	0.10	0.02	0.5

^acmcd: Centimetres composite depth

^bMIS: Marine isotopic stage

^cNumbers according to individual *n*-alkanol carbon numbers

^dTCEC₂₂₋₃₂: Total content of odd-carbon-numbered *n*-C₂₇ to *n*-C₃₅ alkanols in µg cm⁻² kyr⁻¹

7.2 Photographs



Figure 7.1. Woody terrace of the Cunene River. [photo: Paul de Wilt, Namibia, April 2005]



Figure 7.2. Savanna/dry forest at the Baobab corner in Kaokoland (18°29'S 13°46'E). (left) Eugene Marais, National Museum of Namibia, and (right) Lydie Dupont, Geosciences, University of Bremen, Germany. [photo: Paul de Wilt, Namibia, April 2005]



Figure 7.3. Savanna at Omatjenni (20°25'S 16°19'E). [photo: Paul de Wilt, Namibia, April 2005]



Figure 7.4. Kori Bustard in the mopane savanna of the Etosha National Park (18°45'S 16°56'E). [photo: Paul de Wilt, Namibia, April 2005]



Figure 7.5. Dunes with *Stipagrostis sabulicola* (C₄ grass). Namib Desert near Sesriem (24°29'S 15°48'E). [photo: Paul de Wilt, Namibia, April 2005]



Figure 7.6. *Welwitschia mirabilis* in the Welwitschia Plain, Namib Desert (22°42'S 14°57'E). [photo: Paul de Wilt, Namibia, April 2005]



Figure 7.7. Namib Desert near Mirrabib (approx. 23°S 15°E). [photo: Paul de Wilt, Namibia, April 2005]



Figure 7.8. One of the very productive “Transect Crew” meetings at the Hanse-Wissenschaftskolleg in Delmenhorst (Germany; 29th April 2004). From left to right: Geoffrey Eglinton, Lydie Dupont, Jürgen Rullkötter and Florian Rommerskirchen.