



12 **Table S1. Characteristics of the West African sites from which fossil pollen assemblages have been extracted (African Pollen Database)**

Site ID	Site Name	Latitude (°N)	Longitude (°E)	Elevation (m asl)	Country	Time range (yr BP)	References
1	AMEKNI	22.7850	5.5183	1000	Algeria	7663	(Guinet and Planque 1969)
2	TAESSA	23.1667	5.5167	2150	Algeria	4919 - 5661	(Ballouche <i>et al.</i> 1995; Thinon <i>et al.</i> 1996)
3	BILGOY [Enneri Dirennao]	21.5183	17.1717	1135	Chad	8381	(Schulz 1973; Schulz 1980)
4	KAMALA	14.0333	16.3167	420	Chad	11784	(Maley 1981)
5	KOUKA	13.1000	15.6333	283	Chad	11002	(Maley 1981)
6	MANDI	13.3833	14.7500	276	Chad	11352	(Maley 1981)
7	MOUSKORBE	21.5833	18.8833	2600	Chad	7473 - 9443	(Maley 1981)
8	KA26	22.7333	16.6217	N/A	Chad	1780	(Schulz 1980)
9	TARSO YEGA	20.6667	17.5833	2200	Chad	7718	(Maley 1981)
10	TJERI	13.7333	16.5000	275	Chad	565 - 10094	(Maley 1981; Maley 2004)
11	TJOLUMI	21.5167	18.1333	1115	Chad	6647	(Schulz 1973; Schulz 1980)
12	TROU AU NATRON	21.0500	16.7500	1850	Chad	18188	(Maley 1981)
13	Baie de Saint Jean	19.4707	-16.3012	0	Mauritania	1778 - 3635	Lézine, A.M. unpub. data
14	Chemchane 1	20.9333	-12.2167	256	Mauritania	7590 - 9131	(Lézine 1987; Lézine 1993; Lézine <i>et al.</i> 1990)
15	SEGUEDINE	20.1667	12.7833	412	Niger	8777	(Baumhauer and Schulz 1984)
16	TERMIT	16.2000	11.0667	450	Niger	9981	(Schulz <i>et al.</i> 1995)
17	ARI KOUKOURI	13.9167	13.1000	270	Niger	5488 - 9617	(Schulz <i>et al.</i> 1995)
18	ARI KOUKOURI 85	13.9167	13.1000	270	Niger	7250	(Schulz <i>et al.</i> 1995)
19	Nebenwadi - Enneri Achelouma	22.3500	12.7000	650	Niger	7806	(Schulz 1980)

	[Profil XII]						
20	SETTAFET	25.3500	11.4333	1100	Libyan Arab Jamahiriya	4710	(Schulz 1980)
21	Uan Afuda Cave	24.8678	10.5003	922	Libyan Arab Jamahiriya	8836 - 9835	(Mercuri 1999)
22	Uan Muhuggiag	24.8387	10.5078	915	Libyan Arab Jamahiriya	4496 - 7758	(Mercuri <i>et al.</i> 1998)
23	Uan Tabu	24.8558	10.5237	915	Libyan Arab Jamahiriya	4218 - 9933	(Mercuri and Trevisan Grandi 2001)
24	Shati	27.5000	13.8333	305	Libyan Arab Jamahiriya	6350	(Delibrias <i>et al.</i> 1982)
25	BAL	13.3042	10.9430	300	Nigeria	341 - 11905	(Salzmann 1999; Salzmann and Waller 1998)
26	KAIGAMA	13.2510	11.5675	330	Nigeria	3567 - 11112	(Salzmann 1996; Salzmann and Waller 1998)
27	KAJEMARUM	13.3030	11.0240	300	Nigeria	2845 - 11027	(Salzmann and Waller 1998)
28	KULUWU	13.2170	11.5505	330	Nigeria	4703 - 11406	(Salzmann and Waller 1998)
29	TILLA	10.3907	12.1245	690	Nigeria	248 - 13064	(Salzmann 2000; Salzmann <i>et al.</i> 2002)
30	DIOGO 1	15.2667	-16.8000	8	Senegal	9990	(Lézine 1987)
31	DIOGO 2	15.2667	-16.8000	8	Senegal	450 - 11412	(Lézine 1988a)
32	GUIERS 02	16.1167	-15.9167	0	Senegal	162 - 6703	(Lézine 1988b)
33	GUIERS 03	16.2833	-15.8333	1	Senegal	1121 - 6764	(Lézine 1988b)
34	LOMPOUL	15.4167	-16.7167	3	Senegal	2008 - 10309	(Lézine 1987; Lézine 1988a; Lézine and Chateauneuf 1991)

35	POTOU	15.1667	-16.8667	11	Senegal	193 - 11399	(Lézine 1987; Lézine 1988a; Lézine and Chateauneuf 1991)
36	TIGUENT	17.25	-16.0166	N/A	Mauritania	3342	(Medus and Barbey 1979)
37	KISSI (BS6)	14.6183	-0.1367	280	Burkina Faso	567	(Ballouche 1998)
38	OURSI	14.6528	-0.4860	290	Burkina Faso	52 - 3265	(Ballouche and Neumann 1995)
39	BIR ATRUN	18.1667	26.6500	600	Sudan	6469 - 10229	(Ritchie 1987; Ritchie and Haynes 1987)
40	EL ATRUN	18.0167	27.1500	600	Sudan	10334	(Jahns 1995)
41	OYO	19.2560	26.1747	510	Sudan	5187 - 10363	(Ritchie 1994; Ritchie <i>et al.</i> 1985)
42	SELIMA	21.3667	29.3060	270	Sudan	7643 - 11021	(Haynes <i>et al.</i> 1989; Ritchie and Haynes 1987)
43	THIAYE	14.9167	-17.5000	1	Senegal	5593 - 6371	(Lézine 1987; Lézine <i>et al.</i> 1985)
44	GABRONG [Enneri Direnao] (GABR)	21.5000	17.1167	1115	Chad	8945	(Schulz 1980)
45	TARSO YEGA GAVRILOVIC (GAVR 1)	20.6667	17.5000	2000	Chad	8930	(Schulz 1980)
46	Enneri Bardague [JAMT36]	21.4167	16.9167	N/A	Chad	9294	(Schulz 1980)
47	YEBBI [GRA]	20.8667	18.0383	1440	Chad	9136	(Schulz 1980)
48	YOA	19.05	20.5166	380	Chad	0 - 6034	(Kröpelin <i>et al.</i> 2008; Lézine 2009)

13 **Table S2. Classification of pollen taxa into Saharan Sahelian, Sudanian, and/or Guineo-**  
 14 **Congolian groups according to the ecological affinities of the species they represent. A**  
 15 **pollen taxon is considered as exclusive to a given group when it presents ecological**  
 16 **affinities with only this group. The taxa nomenclature is from the African Pollen Database**  
 17 **(Vincens *et al.* 2007) and respects the original determination provided by authors.**

18

Taxon Name [APD]	Guineo-Congolian	Sudanian	Sahelian	Saharan
Acanthus-type	x			
Afraegle-type paniculata	x			
Ammannia-type	x			
Anthocleista	x			
Anthostema-type	x			
Anthostema-type senegalense	x			
Brachystegia	x			
Caesalpinia-type	x			
Chrysobalanus icaco/Parinari	x			
Connaraceae undiff.	x			
Dodonaea	x			
Dodonaea viscosa-type	x			
Dombeya-type buettneri	x			
Dombeya-type quinqueseta	x			
Elaeis guineensis	x			
Eremospatha	x			
Erythrococca-type africana	x			
Garcinia	x			
Harungana	x			
Harungana madagascariensis-type	x			
Hewittia-type scandens	x			
Landolphia-type	x			
Lophira alata-type	x			
Mallotus-type	x			
Meliaceae undiff.	x			
Millettia-type	x			
Myrianthus-type	x			
Myrianthus-type serratus	x			
Naucleae undiff.	x			
Nauclea-type	x			
Pancovia-type	x			
Pancovia-type bijuga	x			
Sorindeia-type juglandifolia	x			
Thunbergia	x			
Treculia	x			

Treulia africana-type	x			
Trema-type orientalis	x			
Vitellaria-type paradoxa	x			
Vitex-type	x			
Acalypha	x	x		
Adansonia digitata	x	x		
Azelia africana-type	x	x		
Alchornea	x	x		
Alchornea cordifolia-type	x	x		
Anacardiaceae undiff.	x	x		
Annonaceae undiff.	x	x		
Antidesma-type	x	x		
Antidesma-type venosum	x	x		
Aphania-type senegalensis	x	x		
Araliaceae undiff.	x	x		
Blighia	x	x		
Blighia sapida-type	x	x		
Bombax	x	x		
Bridelia ferruginea-type	x	x		
Bridelia micrantha-type	x	x		
Bridelia-type	x	x		
Bridelia-type scleroneura	x	x		
Burkea africana	x	x		
Caperonia	x	x		
Caperonia serrata-type	x	x		
Cardiospermum halicacabum-type	x	x		
Catunaregam-type nilotica	x	x		
Ceiba pentandra	x	x		
Cissampelos-type	x	x		
Clusiaceae undiff.	x	x		
Cochlospermum	x	x		
Cola cordifolia-type	x	x		
Combretaceae undiff.	x	x		
Cordia africana-type	x	x		
Cynometra-type	x	x		
Desmodium	x	x		
Detarium	x	x		
Dialium	x	x		
Dialium guineense-type	x	x		
Diospyros	x	x		
Dombeya-type	x	x		

Erythrococca-type	x	x		
Eugenia-type	x	x		
Gardenia-type	x	x		
Gardenia-type imperialis	x	x		
Haematostaphis-type barteri	x	x		
Hallea-type	x	x		
Hallea-type stipulosa	x	x		
Irvingiaceae undiff.	x	x		
Ixora-type	x	x		
Ixora-type brachypoda	x	x		
Jasminum	x	x		
Khaya-type	x	x		
Lophira	x	x		
Macaranga-type	x	x		
Manilkara-type	x	x		
Monechma-type ciliatum	x	x		
Monotes kerstingii-type	x	x		
Mussaenda	x	x		
Ormocarpum-type	x	x		
Parinari-type	x	x		
Parkia	x	x		
Paullinia pinnata	x	x		
Pseudospondias-type microcarpa	x	x		
Raphia	x	x		
Salacia senegalensis-type	x	x		
Schrebera arborea-type	x	x		
Stereospermum-type	x	x		
Syzygium-type	x	x		
Syzygium-type guineense	x	x		
Tabernaemontana	x	x		
Teclea-type	x	x		
Tetracera	x	x		
Tetracera alnifolia-type	x	x		
Uapaca	x	x		
Verbenaceae undiff.	x	x		
Vitex-type doniana	x	x		
Ximenia	x	x		
Ximenia americana-type	x	x		
Zanthoxylum-type	x	x		
Zanthoxylum-type zanthoxyloides	x	x		
Albizia-type	x	x	x	

Allophylus	x	x	x	
Allophylus africanus-type	x	x	x	
Celtis	x	x	x	
Combretum-type	x	x	x	
Dalechampia	x	x	x	
Dichrostachys	x	x	x	
Gnidia-type	x	x	x	
Hemizygia bracteosa-type	x	x	x	
Hymenocardia	x	x	x	
Hymenocardia acida-type	x	x	x	
Mitragyna-type inermis	x	x	x	
Morelia senegalensis	x	x	x	
Musanga-type	x	x	x	
Piliostigma reticulatum-type	x	x	x	
Pseudocedrela kotschyi	x	x	x	
Pterocarpus-type	x	x	x	
Sapindaceae undiff.	x	x	x	
Tapinanthus-type	x	x	x	
Acanthaceae undiff.	x	x	x	x
Apocynaceae undiff.	x	x	x	x
Asteraceae undiff.	x	x	x	x
Caesalpiniaceae undiff.	x	x	x	x
Campanulaceae undiff.	x	x	x	x
Euphorbiaceae undiff.	x	x	x	x
Farsetia	x	x	x	x
Lippia-type	x	x	x	x
Mimosaceae undiff.	x	x	x	x
Moraceae undiff.	x	x	x	x
Myrtaceae undiff.	x	x	x	x
Phoenix	x	x	x	x
Phoenix reclinata-type	x	x	x	x
Rubiaceae undiff.	x	x	x	x
Rutaceae undiff.	x	x	x	x
Sapotaceae undiff.	x	x	x	x
Acalypha ciliata-type		x		
Acalypha crenata-type		x		
Adansonia		x		
Alysicarpus		x		
Basilicum-type polystachyon		x		
Borassus/Hyphaene		x		
Capparis tomentosa-type		x		

Cayratia-type		x		
Cissus		x		
Clerodendrum		x		
Combretum-type molle		x		
Crossopteryx febrifuga		x		
Cussonia		x		
Entada/Prosopis		x		
Entada-type		x		
Eriosema-type		x		
Flueggea virosa-type		x		
Hygrophila		x		
Isoberlinia-type		x		
Kedrostis		x		
Lannea/Sclerocarya		x		
Maytenus		x		
Micrococca-type mercurialis		x		
Oxalis		x		
Pavetta		x		
Pentodon-type pentandrus		x		
Rhus-type longipes		x		
Salacia		x		
Sida		x		
Sopubia-type parviflora		x		
Spondias monbin-type		x		
Sterculia-type		x		
Sterculia-type setigera		x		
Strychnos		x		
Tacazzea-type apiculata		x		
Tacca leontopetaloides		x		
Vernonia perrottetii-type		x		
Vernonia-type galamensis		x		
Vigna-type		x		
Zornia		x		
Acacia ehrenbergiana-type		x	x	
Acacia gummifera-type		x	x	
Acacia nilotica-type		x	x	
Acacia polyacantha-type		x	x	
Acacia senegal-type		x	x	
Acacia tortilis-type		x	x	
Adenium obesum-type		x	x	
Aeschynomene		x	x	

Asystasia gangetica-type		x	x	
Bauhinia		x	x	
Bauhinia rufescens-type		x	x	
Boscia-type angustifolia		x	x	
Boscia-type senegalensis		x	x	
Boswellia-type		x	x	
Capparis fascicularis-type		x	x	
Capparis sepiaria-type		x	x	
Carissa edulis-type		x	x	
Cassia-type occidentalis		x	x	
Celosia argentea-type		x	x	
Celosia-type		x	x	
Celosia-type trigyna		x	x	
Celtis toka-type		x	x	
Centaurea-type perrottetii		x	x	
Cissampelos-type mucronata		x	x	
Combretaceae/Melastomataceae undiff.		x	x	
Combretum-type aculeatum		x	x	
Combretum-type glutinosum		x	x	
Combretum-type paniculatum		x	x	
Commiphora		x	x	
Commiphora africana-type		x	x	
Cordia		x	x	
Cynoglossum-type		x	x	
Dichrostachys cinerea-type		x	x	
Erythrina		x	x	
Flueggea		x	x	
Gomphrena		x	x	
Indeterminable		x	x	
Justicia striata-type		x	x	
Justicia-type flava		x	x	
Lansea-type		x	x	
Lansea-type acida		x	x	
Lobelia		x	x	
Maytenus senegalensis-type		x	x	
Mitracarpus villosus		x	x	
Ocimum-type		x	x	
Phyllanthus-type		x	x	
Phyllanthus-type amarus		x	x	
Phyllanthus-type fraternus		x	x	
Phyllanthus-type maderaspatensis		x	x	

Phyllanthus-type reticulatus		x	x	
Piliostigma		x	x	
Pluchea		x	x	
Prosopis-type africana		x	x	
Spermacoce-type		x	x	
Spermacoce-type chaetocephala		x	x	
Spermacoce-type radiata		x	x	
Triumfetta-type		x	x	
Waltheria		x	x	
Acacia		x	x	x
Acacia seyal-type		x	x	x
Achyranthes-type aspera		x	x	x
Amaranthaceae undiff.		x	x	x
Amaranthaceae/Chenopodiaceae undiff.		x	x	x
Apiaceae undiff.		x	x	x
Asclepiadaceae undiff.		x	x	x
Asparagus		x	x	x
Balanites		x	x	x
Balanites aegyptiaca-type		x	x	x
Barleria		x	x	x
Blepharis-type		x	x	x
Boerhavia-type		x	x	x
Boscia-type		x	x	x
Boscia-type salicifolia		x	x	x
Cadaba-type		x	x	x
Cadaba-type farinosa		x	x	x
Cadaba-type glandulosa		x	x	x
Capparidaceae undiff.		x	x	x
Capparis		x	x	x
Capparis decidua-type		x	x	x
Caryophyllaceae undiff.		x	x	x
Cassia-type		x	x	x
Celastraceae undiff.		x	x	x
Chenopodiaceae undiff.		x	x	x
Chenopodium-type		x	x	x
Chrozophora		x	x	x
Citrullus		x	x	x
Clematis-type		x	x	x
Clematis-type hirsuta		x	x	x
Cleome brachycarpa-type		x	x	x
Cleome-type		x	x	x

Cleome-type gynandra		x	x	x
Clutia		x	x	x
Coccinia		x	x	x
Cocculus		x	x	x
Cocculus pendulus-type		x	x	x
Commelinaceae undiff.		x	x	x
Commelina-type		x	x	x
Commelina-type benghalensis		x	x	x
Convolvulaceae undiff.		x	x	x
Convolvulus-type		x	x	x
Corchorus-type		x	x	x
Cotula-type anthemoides		x	x	x
Crassula		x	x	x
Crateva adansonii		x	x	x
Crotalaria		x	x	x
Croton/Jatropha		x	x	x
Croton-type		x	x	x
Cucumis		x	x	x
Cuscuta-type		x	x	x
Euphorbia-type		x	x	x
Faidherbia albida		x	x	x
Ficus		x	x	x
Gentianaceae undiff.		x	x	x
Geraniaceae undiff.		x	x	x
Grewia-type		x	x	x
Heliotropium		x	x	x
Heliotropium strigosum-type		x	x	x
Hibiscus		x	x	x
Hypericum		x	x	x
Hyphaene-type		x	x	x
Indigofera		x	x	x
Kohautia		x	x	x
Lamiaceae undiff.		x	x	x
Lotus arabicus-type		x	x	x
Maerua/Ritchiea		x	x	x
Maerua-type		x	x	x
Maerua-type crassifolia		x	x	x
Malvaceae undiff.		x	x	x
Menispermaceae undiff.		x	x	x
Mentha-type		x	x	x
Merremia-type		x	x	x

Monsonia		x	x	x
Nyctaginaceae undiff.		x	x	x
Oldenlandia-type		x	x	x
Palmae undiff.		x	x	x
Pavonia		x	x	x
Peristrophe-type		x	x	x
Poaceae undiff.		x	x	x
Polycarpaea-type		x	x	x
Polycarpon-type		x	x	x
Polycarpon-type prostratum		x	x	x
Ranunculaceae undiff.		x	x	x
Rhamnaceae undiff.		x	x	x
Rhus-type		x	x	x
Rhynchosia-type		x	x	x
Ricinus communis		x	x	x
Ruellia		x	x	x
Rumex		x	x	x
Salix		x	x	x
Salvadora		x	x	x
Salvadora persica-type		x	x	x
Salvadoraceae undiff.		x	x	x
Sesbania		x	x	x
Solanaceae undiff.		x	x	x
Solanum-type		x	x	x
Tamarindus-type indica		x	x	x
Tephrosia		x	x	x
Thymelaeaceae undiff.		x	x	x
Tiliaceae undiff.		x	x	x
Tinospora bakis-type		x	x	x
Trichodesma		x	x	x
Trichodesma africanum-type		x	x	x
Vahlia		x	x	x
Zygophyllaceae undiff.		x	x	x
Cayratia-type ibuensis			x	
Guiera senegalensis			x	
Lamiaceae type 6 (exine type Leucas)			x	
Saxifraga hederifolia			x	
Abutilon			x	x
Aerva-type javanica			x	x
Aerva-type lanata			x	x
Aizoaceae undiff.			x	x

Alternanthera			X	X
Ambrosia-type maritima			X	X
Arnebia hispidissima-type			X	X
Brassicaceae undiff.			X	X
Cassia-type italica			X	X
Centaurea-type senegalensis			X	X
Chascanum			X	X
Cichorieae undiff.			X	X
Cirsium			X	X
Cleome-type arabica			X	X
Cleome-type monophylla			X	X
Cleome-type scaposa			X	X
Commicarpus-type			X	X
Cynareae undiff.			X	X
Euphorbia-type hirta			X	X
Galium-type			X	X
Helichrysum-type			X	X
Hyphaene-type thebaïca			X	X
Ipomoea-type			X	X
Lactuceae undiff.			X	X
Lathyrus/Vicia			X	X
Leucas-type			X	X
Limeum			X	X
Luffa-type			X	X
Lythraceae undiff.			X	X
Nucularia perrini			X	X
Phyla-type nodiflora			X	X
Plantago lanceolata-type			X	X
Polygala-type			X	X
Psilotrichum-type			X	X
Psoralea			X	X
Pulicaria			X	X
Resedaceae undiff.			X	X
Suaeda			X	X
Tamarix			X	X
Tamarix senegalensis-type			X	X
Tribulus			X	X
Tribulus terrestris-type			X	X
Veronica			X	X
Zygophyllum			X	X
Aerva-type				X

Aizoon canariense-type				x
Allium				x
Amaranthus-type				x
Anchusa-type				x
Anthyllis-type				x
Armeria-type				x
Artemisia				x
Asphodelus				x
Asphodelus-type tenuifolius				x
Astragalus-type				x
Atractylis-type				x
Boraginaceae undiff.				x
Calligonum polygonoides				x
Campanula-type				x
Carduus-type				x
Caylusea-type				x
Centaurea-type				x
Chrozophora brocchiana-type				x
Cistaceae undiff.				x
Cistanche				x
Cistus				x
Cleome-type brachycarpa				x
Cleome-type chrysantha				x
Cleome-type parvipetala				x
Commelina-type forskalaei				x
Corchorus-type fascicularis				x
Cornulaca monacantha-type				x
Cornulaca/Aerva				x
Cotula-type				x
Cressa-type cretica				x
Cucumis dispaceus-type				x
Cucurbitaceae undiff.				x
Cupressaceae undiff.				x
Cupressus-type				x
Cynomorium coccineum				x
Daucus-type				x
Echium				x
Echium plantagineum-type				x
Ephedra				x
Ephedra alata-type				x
Ephedra distachya-type				x

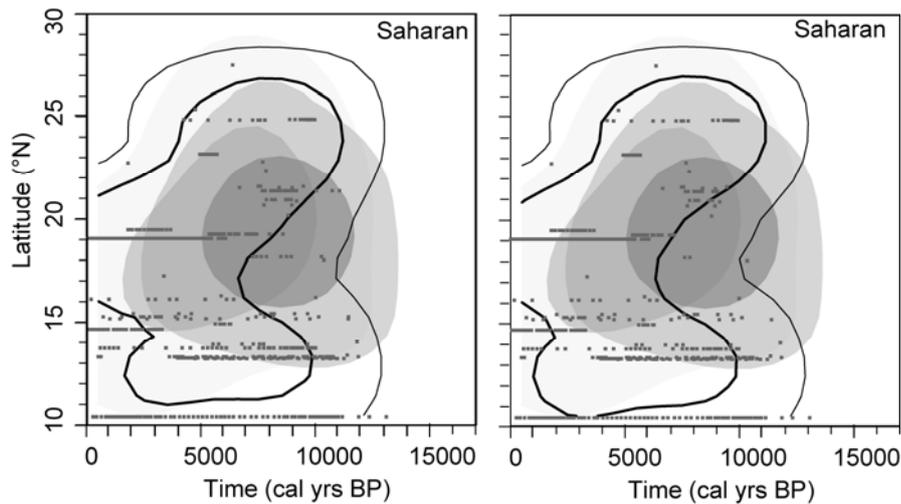
Ephedra fragilis-type				x
Ephedra major-type				x
Ericaceae undiff.				x
Erica-type				x
Erica-type arborea				x
Erodium				x
Fabaceae undiff.				x
Fagonia				x
Genista-type				x
Gisekia pharnacioides-type				x
Grewia-type villosa				x
Helianthemum				x
Hyosciamus muticus-type				x
Hyoscyamus				x
Hyoscyamus niger-type				x
Inula-type				x
Juncus				x
Knautia				x
Launaea-type taraxacifolia				x
Lavandula-type				x
Leguminosae undiff.				x
Limeum viscosum-type				x
Limonium-type				x
Limonium-type humile				x
Lotus				x
Medicago laciniata				x
Moltkiopsis ciliata				x
Myrtus-type				x
Myrtus-type nivellei				x
Nerium oleander				x
Neurada procumbens				x
Nitraria retusa				x
Olea				x
Olea europaea-type				x
Olea lapperrinei-type				x
Oleaceae undiff.				x
Ornithogalum-type				x
Orobanche aegyptiaca-type				x
Pancratium-type				x
Panicum				x
Paronychia				x

Peganum				X
Pentzia monodiana-type				X
Peristrophe-type paniculata				X
Pistacia				X
Pistacia atlantica-type				X
Plantago				X
Plantago afra-type				X
Plantago amplexicaulis-type				X
Plantago ciliata-type				X
Plumbaginaceae undiff.				X
Polygonaceae undiff.				X
Polygonum persicaria-type				X
Polygonum plebeium-type				X
Ranunculus-type				X
Rhamnus-type				X
Rhus-type tripartita				X
Rosaceae undiff.				X
Rumex vesicarius-type				X
Ruta montana-type				X
Salix ledermannii-type				X
Sclerocephalus arabicus				X
Scrophulariaceae undiff.				X
Scrophularia-type arguta				X
Silene-type				X
Silene-type lynesii				X
Solanum-type nigrum				X
Spergula-type				X
Teucrium				X
Urticaceae undiff.				X
Warionia-type				X
Zaleya-type pentandra				X
Zilla spinosa				X
Ziziphus-type				X
Ziziphus-type mauritiana				X

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24 **Figure S1. Spatio-temporal changes (in latitude and millenia) in pollen taxa presences**  
 25 **within the Saharan group during the Holocene** using probability density functions (Kühl *et*  
 26 *al.* 2002). As for Figure 1 in the main text, the left panel reports spatio-temporal distribution  
 27 based on non-exclusive taxa, while the right panel reports distributions computed with only  
 28 exclusive taxa. Bold line in each graph stands for the 0.5 isoprobability that delineates the  
 29 core zone in which 50% of the samples are the most concentrated (maximum presence).  
 30 Similarly, thin line is the 0.85 isoprobability line delineating the maximum extent zone in  
 31 which 85% of the samples are included (Lézine *et al.* 2011). Grey dots are representative of  
 32 pollen samples referenced in latitude and time. Grey probability density functions in the  
 33 background of each graph show the lacustrine (dark) and the palustrine (light) extent  
 34 through time ; the darker area reflecting the core zone (0.5 isoprobability computed on  
 35 paleohydrological data), while the lighter area refers to the maximum extent (0.85  
 36 isoprobability) (from Lézine *et al.* (Lézine *et al.* 2011)).

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