Meresa et al., Pre-Aksumite and Aksumite agricultural economy at Ona Adi,

SI3. Ona Adi Single-Celled Phytoliths Raw Data; for abbreviations of the identified

Field	Square	Locus	Pail	Context	Ceramic phasing	Sample
D	1	16	30	fill	Late Pre-Aksumite	1163
D	2	26	57	fill	Late Pre-Aksumite	1187
D	2	27	60	fill	Late Pre-Aksumite	1197
D	2	23	49	fill	PAA transition	1468
D	1	13	22	fill	PAA Transition	797
D	1	13	23	fill	PAA transition	1127
D	1	14	24	fill	PAA Transition	1131
D	1	14	25	fill	PAA Transition	1135
D	1	14	27	fill	PAA Transition	1145
D	1	15	29	fill	PAA Transition	1157
D	1	13	26	fill	PAA transition	1339
D	2	19	44	fill	PAA transition	1437
D	2	25	56	floor	PAA transition	1499
D	1	9	14	fill	Early Aksumite	818
D	1	9	16	floor	Early Aksumite	835
D	1	10	17	fill	Early Aksumite	843
C	1	18	70	fill	Early Aksumite	961
C	1	19	80	fill	Early Aksumite	1019
C	1	20	82	fill	Early Aksumite	1026
D	1	10	18	fill	Early Aksumite	1106
D	1	10	19	fill	Early Aksumite	1110
D	1	10	20	fill	Early Aksumite	1118
D	2	13	29	fill	Early Aksumite	1348
D	2	14	32	fill	Early Aksumite	1369
C	1	3	12	ash accumulation	Middle Aksumite	228
B	1	9	18	ash accumulation	Middle Aksumite	307
B	1	12	28	floor	Middle Aksumite	335
B	1	12	27	fill	Middle Aksumite	350
C	1	8	23	ash accumulation	Middle Aksumite	433
D	1	7	10	fill	Middle Aksumite	741
D	1	7	12	fill	Middle Aksumite	806
D	2	8	19	ash accumulation	Middle Aksumite	1325
C	1	2	5	ash accumulation	Late Aksumite	125
B	1	6	13	fill	Late Aksumite	172
B	1	7	14	midden	Late Aksumite	180
B	1	7	15	midden	Late Aksumite	191
B	1	7	16	midden	Late Aksumite	195
B	1	10	19	midden	Late Aksumite	311
D	1	3	5	floor	Late Aksumite	711
D	1	6	6	fill	Late Aksumite	717
D	2	5	15	midden	Late Aksumite	1267
D	4	19	39	floor	Late Aksumite	1621
D	4	8	11	fill	Late Aksumite	2023
D	4	7	19	fill	Late Aksumite	2046

D	4	15	37	fill	Late Aksumite	2190
D	5	15	32	floor	Late Aksumite	2285
D	4	20	44	floor	Late Aksumite	2509

Tigrai (Ethiopia): first look at a 1000-year history.

phytolith morphotypes see SI 2.

Sediment (g)	AlF(g)	Silicates (g)	On slide (g)	Fields counted
6.6727	2.9565	0.14	0.0007	31
7.2365	3.5167	0.1599	0.001	21
7.0361	2.8853	0.1651	0.00089	27
6.7958	1.9073	0.0997	0.00109	13
6.791	2.4051	0.1306	0.00092	25
7.3314	2.23	0.075	0.00097	19
6.746	2.2791	0.0871	0.00086	14
6.6965	2.8276	0.1242	0.00069	19
6.1888	2.5924	0.0871	0.00098	28
6.7344	2.7998	0.1137	0.00091	21
6.2872	2.2471	0.0766	0.00076	16
7.7809	3.3871	0.1259	0.00063	19
7.5117	2.7967	0.1091	0.00092	24
6.7557	2.5356	0.275	0.00098	16
6.5326	2.8436	0.1699	0.00083	23
6.4326	2.8277	0.0531	0.00087	18
6.3184	2.2515	0.1008	0.00092	23
6.5124	3.2203	0.0729	0.00111	25
6.5621	3.0493	0.0963	0.00113	26
6.6378	2.5251	0.0928	0.0007	19
6.6778	2.2121	0.0846	0.00098	20
6.6579	2.2882	0.0687	0.00058	29
6.8024	2.3805	0.0563	0.00057	19
6.9665	2.2201	0.0544	0.00043	18
6.7621	2.2971	0.0271	0.00057	33
6.7024	2.1023	0.0569	0.00091	18
6.4366	2.8781	0.0423	0.00053	19
6.7981	2.1826	0.0334	0.00039	24
6.8292	2.7017	0.0946	0.00077	40
6.8989	2.892	0.0929	0.00061	21
6.7553	3.0091	0.0697	0.00066	19
6.5993	1.4324	0.0244	0.00082	21
6.7871	2.9807	0.2479	0.00099	11
6.9228	1.449	0.046	0.00123	26
6.4784	2.3707	0.0632	0.00079	15
6.5291	2.4238	0.1186	0.00106	17
6.8063	2.6081	0.0625	0.00063	13
6.6091	2.1109	0.1416	0.00127	17
6.5716	2.1078	0.1481	0.00091	19
6.4526	2.5055	0.1172	0.00062	21
7.0079	2.7818	0.1087	0.00079	36
6.8357	3.0561	0.0384	0.00051	15
6.6629	2.2072	0.0896	0.00086	16
6.389	2.2736	0.079	0.00073	19

6.8684	3.3955	0.0721	0.00078	15
6.6087	3.0422	0.0488	0.00059	18
6.6747	2.5981	0.0851	0.00069	32

n morphotypes	Phytolith Concentration	ELO_ENT	ELO_DET	ELO_DEN
37	1.37E+06	18	23	7
37	1.36E+06	23	14	6
43	1.50E+06	22	16	2
38	2.31E+06	32	26	5
40	1.49E+06	37	14	3
35	1.16E+06	19	16	1
27	2.03E+06	21	22	1
36	2.16E+06	19	28	1
33	7.63E+05	21	13	4
38	1.37E+06	23	21	6
33	1.77E+06	21	22	2
37	2.05E+06	22	22	7
41	1.14E+06	30	30	12
32	4.47E+06	19	24	2
35	2.04E+06	17	26	7
36	7.52E+05	20	31	4
32	1.32E+06	16	30	8
36	5.18E+05	13	33	5
36	6.79E+05	14	26	4
35	1.74E+06	23	29	2
31	1.31E+06	20	16	0
34	1.11E+06	22	29	5
37	1.41E+06	22	23	5
36	2.14E+06	22	26	4
27	3.89E+05	38	12	3
28	1.04E+06	32	14	2
29	9.23E+05	30	21	8
42	1.07E+06	21	27	6
37	7.18E+05	35	30	6
38	1.61E+06	32	26	1
35	1.16E+06	26	16	5
41	6.21E+05	19	21	6
35	4.86E+06	23	20	1
37	6.35E+05	27	16	7
28	1.45E+06	44	16	4
38	1.72E+06	39	11	15
28	1.87E+06	36	14	3
39	2.02E+06	22	35	6
35	2.60E+06	23	22	4
36	2.37E+06	32	25	4
39	8.63E+05	24	8	0
30	1.18E+06	33	24	3
32	1.09E+06	34	22	5
30	1.83E+06	40	19	3

28	1.67E+06	32	14	1
32	9.56E+05	27	20	3
31	9.28E+05	25	21	0

ELO_SIN_WAV	ELO_SIN_REG	ELO_SIN_IRR	ELO_SIN_CAS	ELO_SIN_COL
0	1	2	1	0
0	0	6	0	0
1	1	1	1	0
0	0	2	0	1
0	0	5	0	0
0	2	2	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	2	4	1	0
0	1	0	1	0
0	0	5	0	0
1	0	2	0	0
0	2	3	0	0
0	0	3	0	0
0	1	3	0	0
0	0	3	0	1
0	0	2	1	1
0	0	2	0	0
0	2	1	0	0
1	3	0	0	0
0	0	3	0	0
0	2	0	0	0
0	2	5	0	1
0	0	2	0	0
0	0	0	0	0
0	1	3	0	0
0	0	2	0	1
0	0	2	0	0
0	1	2	0	0
0	1	2	1	0
0	0	3	1	0
0	2	3	1	0
0	0	6	1	1
0	0	0	0	1
0	2	5	0	1
0	0	0	0	0
0	0	2	0	0
0	1	4	1	2
0	1	2	0	0
0	0	5	1	0
0	0	2	0	0
0	1	0	3	0
0	0	2	0	0

0	0	4	0	0
0	0	0	0	0
0	1	3	0	0

BIL_VLL_VLS	BIL_LL_LS	BIL_ML_LS	BIL_ML_SS	BIL_ML_CON	BIL_SL_CON
0	4	1	2	0	1
0	3	3	3	0	2
0	1	2	7	0	2
0	5	0	3	2	0
0	3	2	3	1	2
0	0	0	10	0	0
0	0	0	0	1	0
0	1	1	6	2	1
0	2	0	0	0	0
0	0	0	1	1	0
0	0	2	5	1	2
1	0	4	5	0	3
0	2	3	5	1	3
0	0	0	3	0	0
0	3	2	7	0	2
1	6	2	6	2	1
0	0	0	1	1	0
0	1	0	4	0	0
0	0	3	3	2	2
0	0	0	6	1	0
0	3	1	2	1	0
0	1	1	3	0	1
0	1	1	9	2	0
0	2	2	8	0	0
0	1	0	3	0	0
0	0	3	1	0	3
0	0	1	5	4	1
0	1	3	6	2	3
0	0	2	2	1	2
0	1	0	4	1	0
0	6	0	7	0	0
0	3	2	3	1	2
0	2	4	9	1	4
0	2	2	1	2	2
0	0	1	9	1	1
0	2	1	1	4	0
0	1	6	4	2	6
0	2	2	8	2	0
0	0	3	0	1	1
0	0	0	7	4	0
0	2	2	9	0	1
0	2	0	2	0	0
0	2	1	6	1	1
0	1	1	8	3	1

0	2	0	17	2	0
0	1	0	6	0	0
0	1	0	5	1	0

BIL_PLA	POL_NOD	POL_TRI	POL_MUL	CRO_TAB	CRO_TRA	CRO_CAR
0	0	0	0	2	5	0
3	0	6	0	6	14	2
4	1	2	0	6	8	3
1	0	0	0	8	9	0
1	0	0	0	4	4	0
0	1	0	1	7	9	0
0	1	0	0	2	4	0
3	0	1	1	7	0	0
0	0	0	0	3	1	0
2	0	0	0	5	5	0
0	1	1	0	4	5	0
1	0	1	0	4	11	3
2	0	0	0	8	8	1
0	1	0	1	6	16	0
0	0	0	0	4	2	0
0	1	0	0	9	4	0
0	0	0	0	0	3	0
0	0	0	1	1	12	0
2	0	1	0	3	5	0
3	0	0	0	9	8	0
0	0	0	0	3	6	0
1	1	1	0	5	3	0
5	0	0	1	2	10	1
0	2	1	1	17	7	2
0	0	0	0	2	6	0
0	0	1	0	7	10	0
0	0	0	0	9	10	0
3	1	0	0	5	11	2
3	0	0	1	4	8	1
3	2	0	0	6	12	0
0	0	0	0	8	12	0
5	0	3	1	10	6	1
3	2	6	1	8	13	0
0	0	0	0	7	12	0
0	0	2	0	7	12	0
2	1	0	0	4	14	1
0	0	0	0	6	10	0
3	1	0	2	1	17	1
4	0	2	0	4	8	0
0	0	1	0	6	4	0
3	2	0	2	7	7	0
2	0	0	0	3	6	0
0	1	0	1	4	14	0
0	0	0	0	7	12	0

0	0	0	1	4	16	0
0	0	0	0	4	5	0
0	0	0	0	7	7	1

CRO_TRI	SAD_TAB_SYM	SAD_TAB_LON	SAD_TAB_SHO	SAD_TRA_PLA
0	16	5	2	5
0	8	12	4	8
0	13	10	7	8
0	8	17	2	17
0	8	11	5	14
0	26	13	2	3
0	23	7	1	0
0	25	9	3	9
0	20	6	0	3
0	18	7	2	5
0	40	10	0	2
0	6	6	3	13
0	5	5	1	10
0	27	5	3	9
1	26	7	2	8
0	15	3	1	9
0	11	4	0	1
0	18	5	3	5
0	27	3	3	4
0	15	4	6	8
0	24	4	0	2
0	26	7	5	4
0	12	10	2	11
0	13	8	0	5
0	7	0	0	3
0	20	4	4	2
0	18	4	0	5
0	10	5	3	16
0	15	0	0	0
0	19	9	0	7
0	19	7	0	7
0	10	3	1	8
0	22	11	2	13
0	5	3	3	11
0	17	2	0	2
0	13	7	1	4
0	22	5	3	4
0	9	11	7	16
0	32	2	1	3
0	9	7	2	3
0	19	11	2	7
0	9	3	1	1
0	10	6	2	2
0	15	3	0	1

0	16	5	1	0
0	29	2	3	4
0	4	1	1	1

SAD_TRA_BIL	SAD_COL	RON_TAB_PSI	RON_TAB_COR	RON_TRA_PSI
1	2	1	0	9
3	0	0	0	10
3	0	3	1	12
3	1	1	0	11
5	1	0	0	9
0	0	1	0	27
0	0	0	0	17
3	3	0	0	25
3	0	3	0	13
7	0	1	0	7
2	0	0	0	27
5	0	1	2	14
5	0	0	0	9
4	1	0	0	22
4	1	2	0	14
4	0	0	1	22
0	1	2	0	30
1	0	0	0	18
4	0	4	0	15
2	1	1	0	22
1	0	0	0	18
4	0	0	0	16
3	0	0	0	16
7	0	2	0	13
0	0	0	0	7
0	1	0	0	18
0	0	0	0	25
8	4	1	1	16
5	0	3	3	19
2	2	2	2	16
4	2	0	0	18
4	0	1	0	11
5	0	2	0	15
4	0	0	0	11
0	0	0	0	17
1	0	1	0	12
0	0	0	0	26
1	5	4	4	14
2	0	1	0	23
1	0	1	0	10
0	0	1	1	17
0	0	0	0	12
1	0	0	0	14
1	0	0	0	11

0	3	0	0	14
2	1	0	0	13
0	0	1	0	6

RON_TRA_COR	RON_CAR	RON_C3	TRA	CRE_SIN	CRE_CRE	PAP	ACU_BUL
0	1	0	15	4	4	3	41
6	1	1	9	4	2	1	42
0	2	1	12	9	2	5	32
6	3	1	7	4	2	4	29
6	1	0	13	7	4	5	26
2	3	1	15	9	2	7	33
0	2	0	28	13	2	9	34
0	3	0	15	9	2	6	21
0	6	3	19	3	3	7	36
1	1	1	10	11	9	9	30
0	6	0	29	15	3	4	21
3	4	1	17	8	4	5	29
8	3	0	13	8	1	2	26
6	0	0	14	2	0	7	27
2	2	0	21	7	3	6	33
0	2	0	22	7	3	11	19
3	3	1	17	8	2	12	31
5	5	0	15	4	2	4	36
4	3	0	13	7	2	1	48
2	4	0	31	5	3	10	25
0	3	0	23	8	2	7	44
0	2	0	17	8	2	8	35
4	6	1	14	5	3	4	25
4	0	1	13	8	2	5	34
0	0	0	32	4	2	2	36
0	1	0	17	3	1	3	50
1	0	0	29	8	1	0	31
6	3	3	11	7	0	2	26
2	3	0	13	13	5	2	31
2	2	0	19	5	0	9	26
1	2	0	22	11	2	5	35
2	3	0	14	6	5	1	45
1	3	0	8	7	0	5	22
2	2	3	16	10	4	1	42
0	0	0	18	6	4	1	48
1	2	0	7	11	4	2	32
2	2	0	17	7	3	0	32
8	7	0	8	5	1	1	23
4	0	0	19	7	5	11	34
3	6	0	25	5	6	11	28
0	4	1	16	6	5	7	26
0	2	0	21	10	1	4	50
2	0	0	14	11	5	4	46
0	2	0	23	7	4	3	43

0	0	0	21	9	2	0	45
2	0	0	21	4	3	5	35
1	0	0	13	6	2	0	44

ACU_FUS	SPH_PSI	SPH_ECH_ZIN	SPH_ECH_ARE	SPH_ORN_PLI
2	2	0	0	0
0	2	1	2	0
1	4	1	2	0
1	3	1	3	0
2	3	1	3	1
2	1	0	1	0
1	5	1	3	0
3	4	1	2	0
2	1	2	9	0
3	1	1	4	0
2	0	0	1	0
0	5	0	9	0
1	14	1	2	0
0	6	0	9	0
1	2	0	5	0
1	1	0	0	0
2	4	0	12	0
1	5	4	11	0
0	3	2	5	0
0	4	1	2	0
0	4	0	1	0
1	3	0	0	0
2	7	1	3	0
0	6	0	0	0
2	1	1	2	0
1	5	0	0	0
2	1	1	3	0
0	0	1	3	0
0	6	2	6	0
1	5	1	2	0
1	3	1	4	0
2	4	1	2	0
0	2	0	0	0
1	1	1	4	0
2	2	0	0	0
1	4	0	0	0
1	4	0	0	0
0	3	0	1	0
0	2	1	4	0
1	2	2	5	0
1	4	1	2	0
2	1	1	2	0
1	0	0	0	0
2	3	0	0	0

1	1	0	0	0
2	2	1	4	0
3	1	0	0	0

SPH_ORN_VER	SPH_ORN_NOD	COM_CON_CYA	COM_CON_COM	COM_PRI
0	0	1	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	1	0
2	0	0	2	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	0
0	0	0	1	0
1	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	4	0
0	0	0	1	1
0	0	0	2	0
0	0	0	0	0
0	0	0	0	0
0	0	0	2	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	0
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	1	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	1	0	0	0
0	0	0	0	0

CYP_CON	STO	MES	TRC	TAB_POL	TAB_AMO	BLO	BUL_FLA	SMA_SCL
0	5	0	2	10	4	29	26	1
0	0	0	2	7	1	26	14	3
0	3	0	0	11	1	27	11	2
0	0	0	0	5	1	20	7	0
0	1	0	0	11	4	25	9	2
0	2	0	1	5	4	19	11	1
0	0	0	0	5	2	36	15	2
0	0	0	0	4	6	29	2	3
0	2	0	2	7	4	39	16	2
0	4	0	1	4	8	28	16	1
0	0	0	0	4	4	17	3	5
0	0	0	1	13	3	21	3	0
0	1	1	1	8	3	18	8	2
0	2	0	2	4	3	21	11	2
0	0	0	0	6	3	18	10	7
0	0	0	0	6	2	29	6	2
0	1	0	0	6	4	22	10	4
0	1	1	0	5	1	17	13	1
0	1	0	0	3	1	21	19	1
0	0	0	1	10	1	12	4	1
0	2	0	2	4	1	39	16	3
0	2	0	0	4	2	21	11	2
0	3	0	0	10	4	23	5	0
0	1	0	3	10	4	22	6	0
0	0	0	1	13	4	54	22	1
0	0	0	1	8	1	38	15	0
0	1	0	0	9	4	23	3	0
0	0	1	1	3	1	20	6	2
1	0	0	1	4	0	15	8	6
0	2	0	2	7	2	17	6	0
0	1	0	1	7	1	11	7	1
0	0	0	4	3	4	19	14	1
0	0	0	0	12	0	22	7	0
0	0	0	0	8	2	35	8	1
0	0	0	0	8	4	24	10	1
0	0	0	2	0	1	39	12	3
0	0	0	0	8	3	31	9	2
0	0	0	0	5	1	19	6	1
0	0	1	0	5	1	14	4	3
0	1	0	0	1	3	27	11	5
0	2	0	2	9	1	24	15	2
0	0	0	1	10	4	36	15	3
0	0	0	0	5	3	25	13	0
0	1	0	0	7	4	38	7	0

0	0	0	3	7	3	32	12	1
0	0	0	2	13	4	31	6	1
0	1	0	1	19	8	59	11	4

Irregular	Total identified	Unidentified	Half Bilobate	Total general
6	264	2	3	267.5
3	263	4	5	269.5
2	265	3	3	269.5
7	260	5	6	268
6	266	2	5	270.5
3	262	5	10	272
2	260	9	8	273
6	265	7	7	275.5
3	260	4	5	266.5
5	266	6	6	275
1	265	2	7	270.5
0	266	13	6	282
4	269	6	4	277
1	265	3	16	276
6	270	5	7	278.5
4	262	4	4	268
6	260	5	3	266.5
5	260	9	5	271.5
2	263	5	4	270
1	260	4	10	269
5	269	16	5	287.5
5	261	4	4	267
4	262	10	9	276.5
6	275	10	9	289.5
1	262	1	4	265
0	266	1	6	270
0	262	3	11	270.5
5	263	14	5	279.5
1	263	4	6	270
4	264	7	8	275
2	259	3	12	268
7	262	6	1	268.5
0	264	6	4	272
5	269	3	3	273.5
1	265	2	17	275.5
2	266	5	1	271.5
0	269	2	5	273.5
3	268	6	7	277.5
3	263	8	5	273.5
5	267	10	11	282.5
5	264	3	3	268.5
0	266	9	15	282.5
1	261	2	5	265.5
1	273	2	19	284.5

1	270	3	10	278
2	259	8	7	270.5
1	260	6	3	267.5