

Supplement to paper by Jana *et al.*, published in *Palaeontology* 48

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Measurements (in mm) of *Eucycloceras opis* (J. de C. Sowerby).

b.c., body-chamber; e. ph., end-phragmocone; i.w., inner whorl; ph., phragmocone

Specimen		D	U	U/D	B	H	B/H	P	S
Microconchs									
var. A									
JUM 246	b.c.	72	–	–	22	29	0.76	–	–
JUM 253	b.c.	68	22.5	0.33	23	27	0.85	23	46
JUM 261	ph.	43 c.	11.5	0.27	13	18	0.72	–	–
	b.c.	77	25	0.32	23	30	0.76	–	–
	b.c.	83	28.5	0.34	24	–	–	–	–
JUM 371	b.c.	60	16	0.27	19.5	26	0.75	24	64
	b.c.	80	25	0.31	23	30	0.77	25	60
JUM 372	e.ph.	45	11.5	0.25	14.5	21	0.69	–	–
	b.c.	58	16	0.27	18	25	0.72	–	–
	b.c.	72.5	21.5	0.3	23	27.5	0.84	29	60
JUM 374	ph.	45	12	0.27	16	20.5	0.78	–	–
	b.c.	67	20	0.3	22 c.	28	0.79	–	47
JUM 375	e.ph.	54	13	0.24	–	24	–	–	–
	b.c.	72	23	0.32	? 19	29	0.66	26	64
JUM 376	b.c.	82.5	28	0.34	27	32	0.84	–	–
JUM 379	b.c.	74	21 c.	0.28	23	27.5	0.84	–	–
JUM 381	b.c.	65	16	0.25	21	31	0.68	–	–
	b.c.	82	25	0.3	25	31	0.81	–	–
JUM 382	b.c.	57	17	0.3	17.5	25	0.7	24	–
JUM 392	b.c.	61	16	0.26	20	26	0.77	–	–
	b.c.	81	24	0.3	25	32	0.78	27	68
JUM 408	b.c.	71	21	0.3	24	28	0.86	22	47
JUM 410	b.c.	75	23	0.31	25	29	0.86	–	–
JUM 413	b.c.	71	23	0.32	21.5	27.5	0.78	–	–
JUM 414	b.c.	47	12	0.26	18	24	0.75	–	–
	b.c.	67.5	18	0.27	21	27	0.78	28	56
JUM 417	b.c.	75	23	0.31	26	34	0.76	–	–
JUM 419	b.c.	81	24	0.3	25.5	33.5	0.76	21	51

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 432	b.c.	51	13	0.25	18	22	0.82	–	–
	b.c.	68.5	22	0.32	23.5	27	0.87	21	46
JUM 433	b.c.	77	? 20	0.26	24	32	0.75	–	–
JUM 434	b.c.	53.5	13	0.24	21	27	0.78	–	–
	b.c.	76	22.5	0.3	25	31.5	0.79	21	47
JUM 435	b.c.	72	21	0.29	24	29	0.83	–	57
	b.c.	81	23.5	0.29	26	? 33	0.78	24	59
JUM 530	b.c.	67	21	0.31	22	28	0.79	–	–
JUM 531	b.c.	71	19	0.27	20	28	0.71	22	51
JUM 554	b.c.	62	18 c.	0.29	21	25	0.84	–	–
JUM 556	ph.	10	2	0.2	4.5	4	1.1	–	–
	ph.	19	4.5	0.24	6	7	0.86	–	–
	ph.	29	7	0.24	9	14.5	0.62	–	–
	ph.	43.5	10	0.23	12.5	20	0.62	–	–
	b.c.	63	15.5	0.25	22	26.5	0.83	–	–
	b.c.	76	22 c.	0.29	25	31	0.81	–	47
JUM 577	b.c.	77	24.5 c.	0.32	25	29	0.86	–	–
JUM 578	ph.	35	8 c.	0.23	12	16	0.75	–	–
	ph.	39	9.5	0.24	14	18	0.78	–	–
	ph.	44	12	0.27	15	20	0.75	19	51
	e.ph.	54	15	0.28	19	23	0.83	–	–
	b.c.	65 c.	22	0.34	22	27.5	0.8	–	–
JUM 579	b.c.	70 c.	18 c.	0.26	22	30	0.73	–	–
JUM 580	b.c.	67	19	0.28	23	29	0.79	–	–
JUM 581	b.c.	66.5	21	0.32	26	27	0.96	21	–
JUM 592	b.c.	69	22	0.32	21.5	26	0.83	24	–
				<i>var. opis</i>					
JUM 245	b.c.	104	33	0.32	33	41	0.8	–	–
JUM 247	b.c.	102	32.5	0.32	30	36	0.83	26	58
JUM 256	b.c.	97 c.	–	–	28	36	0.78	–	–
JUM 257	i.w.	9	2	0.22	5	3.5	1.42	–	–
	ph.	18 c.	–	–	9	7	1.29	–	–
	ph.	28	–	–	14 c.	15	0.93	–	–
	ph.	40	9.5	0.24	16	18	0.89	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 271	i.w.	6.5	1.3	0.2	4.5	3	1.5	–	–
	ph.	12.5	3	0.24	6	5	1.2	–	–
	ph.	19	4	0.24	7.5	7.5	1	–	–
	ph.	29.5	7	0.24	11	15	0.73	–	–
	ph.	42.5	10	0.24	14.5	19.5	0.74	–	–
	ph.	63.5	16	0.25	21.5	28.5	0.75	–	–
	b.c.	86	27	0.31	27	33.5	0.81	–	–
JUM 273	ph.	22 c.	5 c.	0.23	9	10.5	0.86	–	–
	ph.	33 c.	8	0.24	–	–	–	–	–
	e.ph.	–	–	–	24	33	0.73	–	–
	b.c.	–	–	–	27	35	0.77	–	–
JUM 282	b.c.	97	32.5 c.	0.33	33	37	0.89	–	–
JUM 370	b.c.	95	31 c.	0.33	32	36	0.89	–	–
JUM 378	b.c.	73.5	23	0.31	–	28	–	29	–
	b.c.	98	33	0.34	28	35	0.8	22	–
JUM 380	b.c.	91	25	0.27	? 27	37	0.73	26	60
JUM 383	b.c.	65	16	0.25	21	29	0.72	–	–
JUM 388	b.c.	100	31	0.31	32.5	37	0.88	29	65
JUM 389	ph.	57	14	0.25	–	–	–	–	–
	b.c.	103	33	0.32	31	39	0.79	21	–
JUM 390	phc.	45	9	0.2	16	23	0.7	–	–
	e.ph.	67	18	0.27	21	29	0.72	22	–
	b.c.	92.5	31.5	0.34	28	33.5	0.84	–	–
JUM 394	b.c.	100	34	0.34	34	–	–	–	–
JUM 396	b.c.	82	27	0.33	27	31	0.87	26	58
JUM 397	b.c.	95	–	–	? 35	37	0.94	–	–
JUM 398	b.c.	86	27.5	0.32	27	33.5	0.81	–	–
JUM 399	ph.	45	11	0.24	14 c.	19	0.74	–	–
	e.ph.	67	18	0.27	21	29	0.72	–	–
	b.c.	92	30	0.33	27	32.5	0.83	27	–
JUM 400	e.ph.	65	16	0.25	20	28	0.71	–	–
	b.c.	86	25.5	0.3	27	33	0.82	26	60
JUM 404	b.c.	102	35 c.	0.34	28	36	0.78	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 405	phc.	22.5 c.	5.5	0.24	8	10	0.8	–	–
	phc.	49	10	0.22	15.5	22	0.7	–	–
	phc.	71	18	0.25	20	29	0.69	–	–
	b.c.	76	21	0.28	24	33	0.73	–	–
	b.c.	111	35	0.32	31.5	36.5	0.86	22	–
JUM 406		21 c.	5 c.	0.24	11	12	0.92	–	–
JUM 411	b.c.	79	23	0.29	24.5	32	0.77	–	–
	b.c.	113	40	0.35	31.5	41	0.77	29	60
JUM 412	b.c.	108	38	0.35	32	36	0.89	–	–
JUM 416	b.c.	88	25	0.28	28 c.	36	0.78	21 c.	60
JUM 418	b.c.	92	26 c.	0.28	30	36	0.83	21 c.	54 c.
JUM 436	ph.	33 c.	8	0.24	12.5	17	0.74	–	–
	b.c.	75 c.	21	0.28	24.5	30	0.82	23	–
	b.c.	86	26 c.	0.3	27 c.	32 c.	0.84	21	52
JUM 437	b.c.	87	27	0.31	26	34	0.76	25	52
JUM 438	ph.	47.5	12.5	0.26	14 c.	21	0.67	–	–
	b.c.	91 c.	32	0.35	28	34	0.82	–	–
JUM 439	ph.	45	11	0.24	15	21	0.71	–	–
	b.c.	82 c.	28	0.34	27	33	0.82	–	–
JUM 520	ph.	32	6.5	0.2	12	16	0.75	–	60
	ph.	43.5	9	0.21	17	21	0.81	20	66
JUM 525	b.c.	98	27	0.28	32	39	0.82	–	–
JUM 539	e.ph.	68	17	0.25	–	30	–	–	–
	b.c.	86 c.	29 c.	0.34	28	32	0.87	21	–
JUM 540	b.c.	–	27 c.	–	27	34	0.79	–	–
JUM 541	b.c.	95 c.	26	0.27	31.5	38	0.83	16	–
JUM 542	b.c.	88	26	0.3	27	34	0.79	21	57
	b.c.	110	37	0.34	33	40	0.82	22	56
JUM 551	ph.	21	5	0.24	9	10	0.9	–	–
	ph.	38.5 c.	10	0.26	13.5 c.	17.5	0.77	–	–
	b.c.	–	–	–	23.5	26.5	0.89	–	–
JUM 553	b.c.	67	17	0.25	22	28	0.79	–	–
JUM 555	b.c.	102	32.5 c.	0.32	34 c.	40	0.85	20	49
JUM 568	ph.	32	8	0.25	13	16	0.81	–	–
JUM 569	b.c.	82 c.	26	0.32	27	31.5	0.86	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 387	b.c.	–	–	–	30	36	0.83	–	–
JUM 393	b.c.	–	–	–	? 32	43.5	0.74	–	–
JUM 395	b.c.	–	–	–	? 29	41	0.71	–	–
JUM 401	ph.	58 c.	14	0.24	15	20	0.75	–	–
	ph.	80	24	0.3	26	34	0.76	–	–
	b.c.	115	40	0.35	38	41	0.93	–	–
JUM 402	ph.	60 c.	16	0.27	20	24	0.83	–	–
	e.ph.	82	27	0.33	27	31.5	0.86	–	–
	b.c.	112	41	0.37	36	39	0.92	–	–
JUM 407	b.c.	–	39	–	28.5	35.5	0.8	–	–
JUM 409	b.c.	–	–	–	32	39	0.82	–	–
JUM 426	b.c.	–	–	–	34	43	0.79	–	–
JUM 427	b.c.	–	–	–	37	47	0.79	–	–
JUM 538	ph.	64.5	16 c.	0.25	22	28.5	0.77	22	53
JUM 543	b.c.	116	43	0.37	35	39	0.9	–	–
JUM 544	b.c.	98	35	0.36	33	36	0.92	17	44
JUM 545	b.c.	110	39	0.35	34	40	0.85	20	42
JUM 546	b.c.	–	–	–	33	36 c.	0.92	–	–
JUM 547	b.c.	–	–	–	29	33	0.88	–	–
JUM 549	b.c.	128	47	0.37	36	42.5	0.85	18	51
JUM 550	ph.	51	15	0.29	19	23	0.83	19	45
JUM 567	b.c.	–	–	–	39	40	0.97	–	–
JUM 576	b.c.	–	–	–	32	38	0.84	–	–
JUM 586	ph.	50	12	0.24	20	22	0.91	–	–
	b.c.	–	–	–	36	40	0.9	–	–
<i>var. discoidea</i>									
GSI 16030	b.c.	–	–	–	22	31	0.71	–	–
GSI 16033	ph.	69	21	0.3	20 c.	28	0.71	18	–
	ph.	70	22	0.31	–	29	–	–	–
	b.c.	90	30	0.33	25	31	0.81	17	–
JUM 252	ph.	52	13	0.25	17	23	0.74	–	47
	b.c.	73	23	0.32	23	28.5	0.81	–	45
JUM 391	ph.	51 c.	13	0.25	18	24	0.75	–	–
	b.c.	72	21	0.29	23.5	30	0.78	18	41

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 403	ph.	50	12	0.24	? 17	24	0.71	18	40
	b.c.	68	19	0.28	24	27	0.89	18	36
JUM 415	b.c.	60	16	0.27	19	26	0.73	18	—
	b.c.	77	24	0.31	21	28	0.75	17	—
JUM 552	ph.	62.5	16	0.26	21	25	0.84	18	—
	ph.	69	18	0.26	24	27.5	0.87	18	—
	b.c.	79	24	0.3	27.5	32	0.86	16	—
	b.c.	97	34	0.35				18	—
<i>var. eucyclum</i>									
JUM 420	b.c.	83 c.	26	0.31	26	33 c.	0.79	18	54
JUM 421	ph.	45 c.	10.5	0.23	17	24	0.71	—	—
	b.c.	70	16.5	0.24	25	34	0.74	—	—
	b.c.	91	25	0.27	30	40	0.75	15	—
JUM 423	b.c.	78	19	0.24	27.5	36	0.76	—	—
	b.c.	100	29	0.29	? 30.5	39	0.78	17	—
JUM 424	b.c.	112	30 c.	0.27	37.5	44	0.85	16	—
JUM 429	b.c.	105 c.	32 c.	0.3	? 38	41 c.	0.93	—	—
JUM 514	b.c.	—	—	—	34	39 c.	0.87	—	—
JUM 515	b.c.	94	25 c.	0.27	31	40	0.77	—	—
JUM 517	b.c.	107	28	0.26	31.5	44	0.72	14	—
JUM 519	b.c.	—	—	—	35	41	0.85	—	—
JUM 522	b.c.	97	31	0.32	31	37	0.84	—	—
JUM 523	b.c.	111	33	0.3	34.5	45	0.77	—	—
JUM 524	b.c.	115 c.	? 24	0.21	40	50	0.8	—	—
JUM 532	b.c.	94	22	0.23	32	41	0.78	—	—
JUM 533	b.c.	95 c.	30 c.	0.32	34	41	0.83	—	—
JUM 534	b.c.	110	33 c.	0.3	38 c.	44 c.	0.86	—	—
JUM 535	b.c.	107	28.5	0.27	32	41	0.78	14	—
JUM 536	b.c.	87	25 c.	0.29	? 22	36	0.61	17	—
JUM 537	b.c.	85	23.5	0.28	29	35	0.83	20	—
Macroconchs									
*GSI 2020	e.ph.	102	25	0.25	38	44.5	0.85	? 16	—
	b.c.	131	42	0.32	49	50	0.98	14	—

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 248	ph.	77	20	0.26	28	32	0.87	20	–
	ph.	–	–	–	41	45	0.91	–	–
JUM 369	ph.	65	13	0.2	27	33	0.82	–	–
JUM 422	ph.	91	23	0.25	30	38	0.79	16	49
	b.c.	104	27	0.26	35	44	0.79	17 c.	–
JUM 425	e.ph.	135 c.	42 c.	0.31	53	56	0.94	–	–
	b.c.	190	60	0.32	? 54	75	0.72	14	–
JUM 428	ph.	43	9	0.21	–	20	–	19	46
	ph.	121	37	0.31	33	44	0.75	–	–
JUM 430	ph.	82 c.	–	–	29	–	–	–	–
JUM 431	b.c.	193	71 c.	0.37	77 c.	69	0.89	14	–
JUM 459	b.c.	165	60	0.36	54	60	0.91	14	–
JUM 505	b.c.	169.5	58.5	0.34	53	60	0.88	17	–
	b.c.	178	63	0.35	62.5	64.5	0.97	14	–
	b.c.	200	84	0.42	–	65	–	14	–
JUM 506	b.c.	107	–	–	40	43	0.93	–	–
	b.c.	140	50	0.36	49.5	52.5	0.94	14	–
JUM 507	ph.	73	20	0.27	25	31	0.81	20	62
	ph.	91	26	0.29	32	36	0.89	21	58
JUM 508	ph.	77	18 c.	0.23	26 c.	34.5	0.75	–	56
	ph.	95	25	0.26	31	40	0.77	19	55
JUM 509	ph.	77.5	18 c.	0.23	28	34	0.82	17	57
	ph.	94	23	0.24	33	39	0.85	16	58
JUM 510	ph.	79	20	0.25	? 22	34	0.65	18	–
	ph.	92	24	0.26	? 24	41	0.59	–	–
JUM 511	ph.	115	32	0.28	42.5	47	0.9	16	51
JUM 512	ph.	37	8	0.22	14.5	16.5	0.88	–	–
	ph.	46	10	0.22	17	21	0.81	–	–
JUM 513	ph.	51 c.	11 c.	0.22	? 14	26	0.54	–	–
JUM 516	b.c.	155 c.	48 c.	0.31	50	62	0.81	–	–
JUM 518	ph.	–	–	–	30	33	0.91	–	–
JUM 521	ph.	75	? 15	0.2	27 c.	35	0.77	–	–
	ph.	90	20	0.22	32 c.	42	0.76	–	–
JUM 527	b.c.	127	39	0.31	37	55	0.67	–	–
JUM 528	b.c.	131	41	0.31	? 34	50	0.68	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 529	ph.	68	15	0.22	? 15	32	0.47	–	–
*JUM 548	b.c.	138	57	0.41	39	45	0.87	16	39
JUM 557	ph.	41	9	0.22	18	20	0.9	–	–
	ph.	53	12.5	0.24	21	25	0.84	–	–
JUM 560	b.c.	116	35	0.3	–	42	–	13	–
JUM 561	ph.	128 c.	42	0.33	43	47.5	0.91	–	–
JUM 562	ph.	67	15	0.22	25	29	0.86	–	–
JUM 563	ph.	77	19	0.25	29	33	0.88	–	–
JUM 564	ph.	86 c.	20 c.	0.23	30 c.	40	0.75	–	–
JUM 565	ph.	93	26	0.28	30 c.	38	0.79	18	–
JUM 566	ph.	85	21	0.25	34	40	0.85	–	–
	b.c.	144	54	0.37	50	52	0.96	–	–

Measurements (in mm) of *Idiocycloceras perisphinctoides* Spath. Abbreviations as above.

Specimen		D	U	U/D	B	H	B/H	P	S
Macroconchs									
*GSI 2092	ph.	125	47	0.38	43	45	0.95	14	–
	e.ph.	152	57	0.37	52	56	0.93	16	38
	b.c.	165 c.	64	0.39	60	58 c.	1.03	14	–
*GSI 16035	e.ph.	–	–	–	52.5	65.5	0.8	–	–
	b.c.	–	–	–	53	69	0.77	–	–
*GSI 16036	ph.	72	29	0.4	27	23	1.17	–	–
	b.c.	93	41	0.44	33.5	32	1.05	17	32
*GSI 16037	b.c.	212	93	0.44	65	69	0.94	16	–
*GSI 16038	ph.	84	30 c.	0.36	26	30	0.87	–	–
	ph.	154	64 c.	0.42	46 c.	51	0.9	18 c.	–
JUM 241	ph.	–	–	–	33.5	29	1.16	–	–
	ph.	–	–	–	49	53	0.92	–	–
JUM 242	e.ph.	–	–	–	33	34	0.97	–	–
JUM 243	ph.	–	–	–	20	20	1	–	–
JUM 250	b.c.	–	–	–	75.5	73	1.03	–	–
JUM 255	e.ph.	–	–	–	36	39	0.92	–	–
	b.c.	–	–	–	41.5	48	0.86	–	–
JUM 259	ph.	–	–	–	25	25	1	–	–
	ph.	–	–	–	39	47	0.83	–	–
JUM 263	b.c.	–	–	–	49	54	0.91	–	–
JUM 264	e.ph.	–	–	–	56	59	0.95	–	–
	b.c.	–	–	–	63	73	0.86	–	–
JUM 265	e.ph.	–	–	–	42.5	53	0.8	–	–
	b.c.	–	–	–	56	51	1.1	–	–
JUM 266	b.c.	–	–	–	47.5	52	0.91	–	–
	b.c.	176 c.	74 c.	0.42	57	56	1.02	–	–
JUM 267	ph.	115 c.	39	0.34	46	42	1.1	–	–
JUM 268	b.c.	–	–	–	47	60	0.78	–	–
JUM 269	ph.	–	–	–	36	42	0.86	–	–
JUM 275	e.ph.	–	–	–	45	51	1.1	–	–
JUM 276	b.c.	–	–	–	69	64	1.08	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 277	ph.	85	36	0.42	37	24	1.54	14	28
	ph.	110	47	0.43	42	34	1.24	15	–
JUM 278	b.c.	–	–	–	48	53	0.91	–	–
JUM 279	b.c.	–	–	–	56	64	0.87	–	–
JUM 280	b.c.	–	–	–	56	70	0.8	–	–
JUM 281	ph.	–	–	–	56	61	0.92	–	–
JUM 283	ph.	–	–	–	52	50	1.04	–	–
JUM 284	b.c.	–	–	–	51	53	0.96	–	–
JUM 285	e.ph.	–	–	–	64	81	0.79	–	–
JUM 287	e.ph.	–	–	–	36	39	0.92	–	–
JUM 288	ph.	–	–	–	53	48	1.1	–	–
JUM 289	ph.	–	–	–	32	30	1.07	–	–
JUM 290	ph.	42 c.	11.5 c.	0.27	22.5	18	1.25	–	–
	ph.	64	17	0.27	29	27	1.07	–	–
	ph.	82 c.	28	0.34	38	33	1.15	–	–
JUM 291	ph.	–	–	–	45	50	0.9	–	–
JUM 292	ph.	61	17	0.28	28.5	26	1.1	16	–
	ph.	–	–	–	55	50	1.1	–	–
JUM 293	ph.	40 c.	10	0.25	18 c.	? 18	1	–	–
	ph.	–	–	–	54	52	1.04	–	–
JUM 295	ph.	75	22.5	0.3	32	29.5	1.08	–	–
	ph.	107	48	0.45	51	46	1.11	–	–
JUM 297	i.w..	13.5	–	–	7	4.5	1.5	–	–
	ph.	27	9	0.33	13.5	10	1.35	–	–
	ph.	41	19	0.46	24	19	1.26	–	–
	ph.	–	–	–	36	33	1.09	–	–
	ph.	–	–	–	59.5	52	1.14	–	–
JUM 298	ph.	–	–	–	29	30.5	0.95	–	–
	b.c.	–	–	–	46	52	0.88	–	–
JUM 299	b.c.	–	–	–	70	71	0.99	–	–
JUM 300	e.ph.	–	–	–	44	39	1.13	–	–
	b.c.	–	–	–	47	48	0.98	–	–
JUM 301	b.c.	–	–	–	40	43	0.93	–	–
JUM 302	b.c.	146 c.	58 c.	0.4	53	52	1.02	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 303	b.c.	–	–	–	51.5	59	0.87	–	–
	b.c.	–	–	–	60	57	1.05	–	–
JUM 304	ph.	–	–	–	40	44	0.91	–	–
JUM 305	ph.	69	18.5	0.27	28	28.5	0.98	–	–
	e.ph.	–	–	–	39.5	41	0.96	–	–
	b.c.	–	–	–	46.5	50.5	0.91	–	–
JUM 307	e.ph.	–	–	–	64 c.	? 61	1.05	–	–
JUM 308	e.ph.	–	–	–	43	53.5	0.8	–	–
	b.c.	–	–	–	49	60	0.82	–	–
JUM 311	ph.	–	–	–	35	33	1.06	–	–
JUM 312	b.c.	–	–	–	33.5	38	0.88	–	–
JUM 313	ph.	–	–	–	36	25	1.44	–	–
	b.c.	160	–	–	59	51	1.16	–	–
JUM 315	b.c.	–	–	–	66	57	1.16	–	–
	b.c.	–	–	–	71	68	1.04	–	–
JUM 316	e.ph.	–	–	–	47.5	55	0.86	–	–
	b.c.	223	83	0.37	64	62	1.03	–	–
JUM 317	ph.	53 c.	15 c.	0.28	24	18 c.	1.33	–	–
	ph.	97 c.	36 c.	0.37	41.5	33	1.26	–	–
	ph.	–	–	–	52	51	1.02	–	–
JUM 318	ph.	72	23	0.32	35	? 30.5	1.15	–	–
	ph.	–	–	–	56	46	1.22	–	–
JUM 319	b.c.	–	–	–	64	70	0.91	–	–
JUM 320	b.c.	–	–	–	50 c.	61	0.82	–	–
JUM 321	ph.	–	–	–	46.5	52.5	0.89	–	–
JUM 322	ph.	–	–	–	17.5	28	0.62	–	–
	b.c.	–	–	–	44	45	0.98	–	–
JUM 324	ph.	–	–	–	14	14	1	–	–
	ph.	–	–	–	33.5	? 22	1.52	–	–
	ph.	–	–	–	45	40	1.12	–	–
JUM 325	ph.	56.5	21.5 c.	0.38	22	21.5	1.02	–	–
	ph.	99 c.	40 c.	0.4	42.5	37	1.15	–	–
JUM 326	b.c.	–	–	–	41.5	45	0.92	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 328	ph.	–	–	–	6	? 4.50	1.33	–	–
	ph.	–	–	–	12.5	11.5	1.09	–	–
	ph.	–	–	–	24.5	24	1.02	–	–
	ph.	–	–	–	28	33	0.85	–	–
JUM 329	b.c.	120 c.	49.5 c.	0.41	38.5	41	0.94	–	–
JUM 330	ph.	117 c.	–	–	40	41	0.98	–	–
	b.c.	160	63.5	0.4	45	51.5	0.87	–	–
JUM 331	b.c.	168	67.5	0.4	61.5	53	1.16	17	36
JUM 332	ph.	56	16	0.29	30	23	1.3	–	–
	e.ph.	176 c.	70	0.4	70	75	0.93	–	–
	b.c.	247	91	0.37	94	87	1.08	15	–
JUM 333	ph.	–	–	–	23	22	1.05	–	–
	ph.	83.5	34	0.41	32	32	1	–	–
	e.ph.	–	–	–	54	58	0.93	–	–
	b.c.	230	93	0.4	70	67	1.04	18	–
JUM 334	b.c.	151	58	0.38	43	53	0.81	14	–
JUM 335	b.c.	–	–	–	57	62	0.92	–	–
JUM 336	b.c.	–	–	–	50	63	0.79	–	–
JUM 337	b.c.	–	–	–	50	56	0.89	–	–
	b.c.	–	–	–	60	54	1.11	–	–
JUM 338	ph.	50.5	17	0.34	21	20	1.05	–	–
	ph.	91.5	30 c.	0.33	40	39	1.03	–	–
	e.ph.	–	–	–	57	51	1.12	–	–
JUM 339	e.ph.	–	–	–	50	62	0.81	–	–
	b.c.	–	–	–	58.5	71	0.82	–	–
JUM 340	b.c.	175	74 c.	0.42	53	56	0.95	18	37
JUM 341	b.c.	–	–	–	52 c.	53 c.	0.98	–	–
JUM 342	e.ph.	139	–	–	53.5	55	0.97	–	–
	b.c.	187	68	0.36	75	68	1.1	15	30
JUM 344	b.c.	–	–	–	77	75	1.03	–	–
	b.c.	–	–	–	83	80	1.04	–	–
JUM 345	ph.	–	50 c.	–	39	31	1.26	–	–
	e.ph.	–	–	–	54	65	0.83	–	–
	b.c.	220 c.	85 c.	0.39	74	72	1.03	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 346	e.ph.	–	–	–	32	43	0.74	–	–
	b.c.	–	–	–	37	48	0.77	–	–
JUM 347	ph.	–	–	–	31	37.5	0.83	–	–
	b.c.	–	–	–	50	63	0.79	–	–
JUM 348	b.c.	–	–	–	52	49	1.06	–	–
	b.c.	–	–	–	60	53	1.13	–	–
JUM 349	ph.	–	–	–	39.5	42.5	0.93	–	–
JUM 350	e.ph.	–	–	–	46.5	48	0.97	–	–
	b.c.	–	–	–	56	58	0.97	–	–
JUM 351	ph.	–	–	–	59	62	0.95	–	–
JUM 353	ph.	–	–	–	40	31	1.29	–	–
JUM 355	b.c.	–	–	–	54	63	0.86	–	–
JUM 356	ph.	–	–	–	38	41	0.93	–	–
JUM 357	ph.	110 c.	34.5	0.31	–	34	–	–	–
JUM 358	ph.	–	–	–	45	42	1.07	–	–
	b.c.	–	–	–	71	71	1	–	–
	b.c.	–	–	–	85	71	1.2	–	–
JUM 359	e.ph.	152	–	–	53.5	58.5	0.91	–	–
	b.c.	203.5 c.	82 c.	0.4	72	65.5	1.1	13	26
JUM 360	e.ph.	–	–	–	36	42.5	0.85	–	–
JUM 361	b.c.	–	–	–	62 c.	67 c.	0.93	–	–
JUM 365	b.c.	–	–	–	41.5	45	0.92	–	–
JUM 440	ph.	49	20	0.41	24	17.5	1.37	15	–
	ph.	62 c.	28	0.45	32	21.5	1.49	16	–
	ph.	88.5	38	0.43	39	31	1.26	–	–
JUM 441	i.w.	17	? 5	0.29	11	6	1.83	–	–
	ph.	25	9	0.36	14	8	1.75	–	–
	ph.	35	11	0.31	17	13	1.31	–	–
	ph.	49	18	0.37	23	17	1.35	–	–
	ph.	103	38	0.37	37.5	33	1.14	16	33
	ph.	118	44	0.37	–	43	–	18	35
JUM 442	e.ph.	–	–	–	41	48	0.85	–	–
	b.c.	159 c.	66	0.42	63 c.	60 c.	1.05	–	–
JUM 443	ph.	106 c.	38 c.	0.36	36	41	0.88	–	–
JUM 444	ph.	93 c.	36 c.	0.39	33	37	0.89	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 445	ph.	107	36	0.34	42	42	1	–	–
	b.c.	138	55	0.4	52 c.	48 c.	1.08	–	–
JUM 446	ph.	82 c.	? 31	0.38	39	33	1.18	–	–
	ph.	116	48	0.41	49	40	1.22	–	–
	ph.	145 c.	61	0.42	54	47 c.	1.15	–	–
JUM 447	ph.	67	25	0.37	35	25	1.4	–	31
JUM 448	i.w.	23 c.	8	0.35	12	11	1.09	–	–
	ph.	87	34 c.	0.39	35	30	1.17	–	–
	ph.	115	48	0.42	? 44	44	1	–	–
JUM 450	ph.	–	–	–	35	37	0.95	–	–
	e.ph.	192 c.	78	0.41	54	62	0.87	19	–
	b.c.	228	94	0.41	63.5	80	0.79	–	–
JUM 451	ph.	? 97	–	–	31	36	0.86	–	–
	ph.	129 c.	54 c.	0.42	48	? 50	0.96	–	–
JUM 452	b.c.	160 c.	–	–	55	60	0.92	–	–
JUM 453	ph.	–	–	–	30	33.5	0.9	–	–
	b.c.	–	–	–	46	55	0.84	–	–
JUM 454	e.ph.	–	–	–	5.51	56	0.92	–	–
	b.c.	206	85 c.	0.41	72	69	1.04	18	–
JUM 455	ph.	–	–	–	46	50	0.92	–	–
JUM 456	ph.	–	–	–	27	21	1.29	–	–
	ph.	–	–	–	42	30	1.4	–	–
	ph.	–	–	–	67	77	0.87	–	–
JUM 457	ph.	–	–	–	22	26	0.85	–	–
	ph.	–	–	–	40	47	0.85	–	–
JUM 458				–					–
	b.c.	170 c.	70 c.	0.41	59	57	1.04	? 14	–
JUM 460	e.ph.	135	58	0.43	50	46	1.09	19	–
	b.c.	175 c.	71	0.41	60	60 c.	1	18	–
JUM 461	ph.	63	–	–	24 c.	23	1.04	–	–
	ph.	90 c.	35 c.	0.39	30	35	0.86	–	–
JUM 462	ph.	53	12	0.23	22	22	1	–	–
JUM 463	i.w.	–	–	–	13	8	1.62	–	–
JUM 464	ph.	–	–	–	46	46	1	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 465	ph.	59	27	0.46	? 32	? 17	1.88	–	–
JUM 466	ph.	45	14	0.31	20	19	1.05	–	–
JUM 467	ph.	–	–	–	25	21	1.19	–	–
JUM 468	ph.	–	–	–	34	18.5	1.84	–	–
JUM 469	b.c.	–	–	–	38	46	0.83	–	–
JUM 470	b.c.	–	–	–	50	63	0.79	–	–
JUM 471	ph.	–	–	–	35	36	0.97	–	–
JUM 472	ph.	–	–	–	53	38	1.39	–	–
JUM 473	b.c.	–	–	–	65 c.	65	1	–	–
JUM 474	ph.	60	14.5	0.24	23	28	0.82	16	–
	ph.	83	27	0.33	32	33	0.97	17	–
	ph.	–	–	–	52	? 51	1.02	–	–
JUM 475	b.c.	–	–	–	56.5	55	1.03	–	–
JUM 476	b.c.	–	–	–	47	56.5	0.83	–	–
JUM 477	b.c.	–	–	–	43	51	0.84	–	–
JUM 478	b.c.	–	–	–	59	59	1	–	–
JUM 479	ph.	–	–	–	48	44	1.09	–	–
JUM 480	ph.	–	–	–	44	49	0.89	–	–
JUM 481	ph.	–	–	–	44 c.	47	0.94	–	–
JUM 482	ph.	120	48	0.4	45	43	1.05	–	–
	ph.	144 c.	63 c.	0.44	49.5	48	1.03	–	–
JUM 483	ph.	–	–	–	60	? 60	1	–	–
JUM 484	e.ph.	–	–	–	64	70	0.91	–	–
JUM 485	b.c.	–	–	–	45.5	54	0.84	–	–
	b.c.	–	–	–	56	60	0.93	–	–
JUM 486	b.c.	–	–	–	57	61	0.93	–	–
	b.c.	–	–	–	70 c.	67	1.04	–	–
JUM 487	ph.	95 c.	40 c.	0.42	42	43	0.98	–	–
	b.c.	160 c.	–	–	55	66	0.83	–	–
	b.c.	220 c.	–	–	70 c.	83	0.84	–	–
JUM 488	b.c.	–	–	–	64	67	0.96	–	–
	b.c.	220 c.	85 c.	0.39	85 c.	81	1.05	–	–
JUM 489	b.c.	270 c.	97 c.	0.36	86	88	0.98	–	–
JUM 490	b.c.	235	95 c.	0.4	68 c.	70 c.	0.97	–	–
JUM 491	ph.	100 c.	40 c.	0.4	37	34	1.09	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 492	b.c.	–	–	–	68	72	0.94	–	–
JUM 493	ph.	90 c.	30	0.33	36	36	1	–	–
	e.ph.	–	–	–	51	61	0.84	–	–
JUM 494	b.c.	–	–	–	44.5	50	0.89	–	–
JUM 495	e.ph.	–	–	–	57	70	0.81	–	–
JUM 496	ph.	70	26	0.37	32 c.	27	1.19	–	–
JUM 497	ph.	–	–	–	57	57	1	–	–
JUM 498	ph.	–	–	–	42	40	1.05	–	–
JUM 499	ph.	–	–	–	37	39	0.95	–	–
JUM 500	b.c.	150 c.	55 c.	0.37	43 c.	50 c.	0.86	19	–
JUM 501	ph.	47	11	0.23	22	15	1.47	18	–
	ph.	–	–	–	48	63	0.76	–	–
JUM 582	ph.	54	13	0.24	20 c.	24 c.	0.83	–	–
	ph.	–	–	–	33	37	0.89	–	–
JUM 583	i.w.	–	4	–	6	4	1.5	–	–
	ph.	–	8	–	11	8	1.37	16	–
	ph.	–	15	–	22	16	1.37	16	–
	ph.	73 c.	27	0.37	36 c.	28	1.29	16	–
JUM 584	ph.	68	19	0.28	27	31	0.87	–	–
JUM 585	ph.	81 c.	22	0.27	33	33	1	–	–
JUM 588	ph.	–	–	–	58	59	0.98	–	–
JUM 589	b.c.	200 c.	79 c.	0.39	67	69	0.97	–	–
JUM 590	b.c.	–	–	–	54	62	0.87	–	–
Microconchs									
JUM 244	b.c.	–	–	–	33	37	0.89	–	–
JUM 254	ph.	–	–	–	14	14	1	–	–
			–						–
	b.c.	77 c.	29 c.	0.38	28.5	31.5	0.9	18	–
JUM 258	ph.	30	8	0.27	12	14	0.86	20	–
	b.c.	65	22	0.34	21.5	24.5	0.88	–	–
JUM 260	b.c.	86.5	34	0.39	33.5	30	1.12	16	32
JUM 262	ph.	–	–	–	16	20	0.8	–	–
	b.c.	–	–	–	29	33	0.88	–	–

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 270	i.w.	–	–	–	11	8	1.37	–	–
	b.c.	90	39	0.43	36	33	1.09	18	–
JUM 272	b.c.	90	32	0.35	31.5	35.5	0.89	17	34
JUM 286	b.c.	89 c.	35 c.	0.39	27	33	0.82	17	36
JUM 294	b.c.	98	41	0.42	33 c.	35.5	0.93	20	38
JUM 296	b.c.	121.5	49 c.	0.4	43.5	41	1.06	24	47
	b.c.	131	57	0.44	45 c.	45	1	25	48
JUM 306	ph.	50 c.	15 c.	0.3	17	22	0.77	–	–
	b.c.	90	33	0.36	32	34	0.94	19 c.	–
JUM 314	b.c.	82 c.	–	–	34	33	1.03	–	–
JUM 323	b.c.	85 c.	27	0.32	30	35	0.86	–	–
JUM 327	ph.	38 c.	13	0.34	17 c.	15 c.	1.13	–	–
	b.c.	73 c.	28.5	0.39	32.5	27.5	1.18	–	–
JUM 343	b.c.	80	26	0.32	27	31	0.87	17	34
JUM 352	i.w.	–	–	–	11	7	1.57	–	–
	ph.	55	17	0.31	17	19	0.89	–	–
	ph.	–	–	–	29	29	1	–	–
	b.c.	–	–	–	34	33	1.03	–	–
JUM 354	ph.	48	11.5	0.24	–	–	–	18 c.	–
	b.c.	90 c.	33	0.36	32 c.	–	–	–	–
JUM 362	b.c.	71	27	0.38	26	26	1	16	35
	b.c.	88	36	0.41	31	31	1	17	36
JUM 363	b.c.	–	–	–	29	34	0.85	–	–
JUM 364	b.c.	–	–	–	25	28	0.89	–	–
JUM 449	b.c.	90	32 c.	0.36	35	35	1	–	–
	b.c.	116 c.	43	0.37	–	–	–	–	–
JUM 502	i.w.	8	2	0.25	5	4	1.25	–	–
	ph.	12	3	0.25	6	5.5	1.09	–	–
	ph.	18	4.5	0.25	8	8	1	–	–
	ph.	38 c.	10	0.26	15	18	0.83	–	–
	ph.	50	13	0.26	17.5	22	0.8	19	48
	b.c.	93 c.	31 c.	0.33	31	34	0.91	–	–
JUM 503	b.c.	102	33	0.32	33	41	0.8	18	37
JUM 504	b.c.	73 c.	28	0.38	30 c.	27 c.	1.11	16	28

Specimen		D	U	U/D	B	H	B/H	P	S
JUM 526	ph.	29	7	0.24	12	14	0.86	11	37
	ph.	37	9	0.24	16	18	0.89	13	40
JUM 558	ph.	36	9	0.25	13	16	0.81	20	–
	ph.	54 c.	16	0.3	–	23	–	–	–
	ph.	60 c.	22	0.37	23 c.	25	0.92	–	–
JUM 587	i.w.	8	1.5	0.19	4	3	1.33	–	–
	ph.	19	4.5	0.24	8.5	8.5	1	–	–
	ph.	42	11	0.26	16	17	0.94	–	–
	b.c.	59	19	0.32	21	21	1	–	–
	b.c.	80	30	0.37	27	29	0.93	–	–