

Appendix 3

Indosphinctes n. sp.

Locality	Stratigraphy	Specimen no	Ontogeny	D	U	W	H	P	U/D	W/H
Jumara	Middle Callovian	JUM/I/1	Adult body chamber	290	147	54	86		0.51	0.63
Jumara	Middle Callovian	JUM/I/1	Adult phragmocone	232	117	46	70	19	0.5	0.66
Jumara	Middle Callovian	JUM/I/1	Phragmocone	132	57	37	47	16	0.43	0.79
Jumara	Middle Callovian	JUM/I/1	Innerwhorl	66	27	22	24	13	0.41	0.92
Keera	Middle Callovian	JUM/I/2	Adult body chamber	215	111	44	68		0.52	0.65
Keera	Middle Callovian	JUM/I/2	Phragmocone	100	53	37	44	15	0.53	0.84
Jumara	Middle Callovian	JUM/I/3	Body chamber	188	89	38	56		0.47	0.68
Jumara	Middle Callovian	JUM/I/3	Phragmocone	105	42	32	39	15	0.4	0.82
Jumara	Middle Callovian	JUM/I/4	Adult body chamber	265	144	50	70		0.54	0.71
Jumara	Middle Callovian	JUM/I/5	Body chamber	186	101	40	63		0.54	0.63
Jumara	Middle Callovian	JUM/I/5	Phragmocone	126	67	32	41	16	0.53	0.78
Jumara	Middle Callovian	JUM/I/5	Phragmocone	72	38	25	30	15	0.53	0.83
Jumara	Middle Callovian	JUM/I/5	Innerwhorl	37	17	15	15	15	0.46	1
Unknown	Unknown	JUM/I/6	Adult body chamber	181	69	39	56		0.38	0.69
Unknown	Unknown	JUM/I/6	Adult phragmocone	165	57	38	55		0.35	0.69
Jumara	Middle Callovian	JUM/I/7	Phragmocone	195	67	34	68	13	0.34	0.5
Unknown	Unknown	JUM/I/8	Phragmocone	163	95	40	57		0.58	0.7
Unknown	Unknown	JUM/I/8	Innerwhorl	95	51	31	41	10	0.54	0.76
Unknown	Unknown	JUM/I/8	Innerwhorl	51	25	19	18	11	0.49	1.05
Jara	Middle Callovian	JUM/I/9	Phragmocone	206	97	47	61	17	0.47	0.77
Jara	Middle Callovian	JUM/I/9	Phragmocone	124	48	30	46	20	0.39	0.65
Unknown	Unknown	JUM/I/10	Phragmocone	155	80	41	49	19	0.52	0.84
Keera	Middle Callovian	JUM/I/11	Phragmocone	165	83	38	57		0.5	0.67
Jumara	Middle Callovian	JUM/I/12	Adult phragmocone	220	99	40	55		0.45	0.73

Choffatia cobra

Locality	Stratigraphy	Specimen no	Ontogeny	D	U	W	H	P	U/D	W/H
Jumara	Lower Callovian	JUM/J/CC/33	Adult body chamber	162.5	97.85	36.68	32.59	12	0.6	1.12
Jumara	Lower Callovian	JUM/J/CC/33	Innerwhorl	136.32	82.24	28.87	27.88	12	0.6	1.03
Keera	Middle Callovian	JUM/J/CC/34	Adult body chamber	203.53	101.53	49.93	45.63	12	0.49	1.09
Keera	Middle Callovian	JUM/J/CC/34	Phragmocone	123.86	56.28	26.94	27.03	13	0.45	0.99
Jumara	Middle Callovian	JUM/J/CC/35	Phragmocone	121.29	63.38	35.25	33.97	12	0.52	1.03
Jumara	Middle Callovian	JUM/J/CC/35	Innerwhorl	104.04	47.59	31.65	32.73	14	0.45	0.96
Keera	Lower Callovian	JUM/J/CC/36	Body chamber	156.54	78.86	39.8	36.53	14	0.5	1.08
Keera	Lower Callovian	JUM/J/CC/36	Innerwhorl	89.36	48.75	26.01	23.2	18	0.54	1.12
Keera	Lower Callovian	JUM/J/CC/36	Innerwhorl	54.87	25.84	17.44	14.47	20	0.47	1.2
Keera	Lower Callovian	JUM/J/CC/37	Body chamber	127.4	64.03	37.4	35.17	16	0.5	1.06
Keera	Lower Callovian	JUM/J/CC/37	Innerwhorl	77.87	35.77	23.3	20.19	14	0.45	1.15
Keera	Lower Callovian	JUM/J/CC/37	Innerwhorl	57.51	28.78	24.51	18.33	10	0.5	1.33

Keera	Lower Callovian	JUM/J/CC/37	Innerwhorl	40.87	22.05	16.41	13.92	...	0.53	1.17
South of Bhuj	Middle Callovian	GSI 2056	Body chamber	122	76	28	26	12	0.62	1.07
South of Bhuj	Middle Callovian	GSI 2056	Innerwhorl	95	48	26	23	13	0.53	1.13

Reineckia anceps

Locality	Stratigraphy	Specimen no	Ontogeny	D	U	W	H	P	U/D	W/H
Keera	Middle Callovian	JUM/R/40	Adult phragmocone	220	114	65	66	8	0.51	0.98
Keera	Middle Callovian	JUM/R/40	Phragmocone	183	110	60	48		0.6	1.25
Keera	Middle Callovian	JUM/R/40	Phragmocone	132	78	50	33		0.59	1.51
Keera	Middle Callovian	JUM/R/40	Inner whorl	101	61	40	29		0.6	1.37
Keera	Middle Callovian	JUM/R/40	Inner whorl	76	45	30	21		0.59	1.42
Jumara	Middle Callovian	JUM/R/1	Adult phragmocone	183	91	54.4	54.9		0.49	0.99
Jumara	Middle Callovian	JUM/R/1	Phragmocone	111.4	57.4	39.54	30.8		0.51	1.28
Jumara	Middle Callovian	JUM/R/1	Inner whorl	80.94	42.62	31.29	24.17		0.52	1.29
Jumara	Middle Callovian	JUM/R/1	Inner whorl	57.45	28.02	25.3	17.25		0.48	1.46
Jumara	Middle Callovian	JUM/R/1	Inner whorl	41.9	19.3	16	8.5		0.46	1.88
Jumara	Middle Callovian	JUM/R/1	Inner whorl	27.5	11.91	14.65	7.99		0.43	1.83
Jumara	Lower Callovian	JUM/R/2	Phragmocone	142.5	77.5	45.13	39.5		0.54	1.14
Jumara	Middle Callovian	JUM/R/2	Inner whorl	103.13	68	37.7	27.19		0.53	1.39
Unknown	Unknown	JUM/R/33	End phragmocone	59.04	30.2	22.55	19.2		0.43	1.26
Unknown	Unknown	JUM/R/33	Inner whorl	28.7	13.5	10	10.2		0.51	1.17
Unknown	Unknown	JUM/R/17	Body chamber	153.4	76.29	50.71	47.82		0.49	1.06
Jumara	Lower Callovian	JUM/R/4	Phragmocone	87.03	59.5	38.4	28.7		0.68	1.33
Jumara	Lower Callovian	JUM/R/4	Inner whorl	79.57	45.2	28.41	21.7		0.56	1.3
Unknown	Unknown	JUM/R/5	Body chamber	116.6	59.8	35.4	27		0.51	1.31
Unknown	Unknown	JUM/R/5	End phragmocone	59.8	32.9	23.9	16.8		0.55	1.42
Jumara	Middle Callovian	JUM/R/9	Body chamber	106.4	53	35.12	32.5		0.49	1.08
Jumara	Middle Callovian	JUM/R/10	Body chamber	157.4	78.6	50.4	36.7		0.49	1.37
Jumara	Middle Callovian	JUM/R/10	Phragmocone	78.6	40.1	28.7	22.1		0.51	1.29
Jumara	Middle Callovian	JUM/R/10	Inner whorl	57.8	30.7	24.1	19.7		0.53	1.22
Jumara	Middle Callovian	JUM/R/3	Adult body chamber	215	129	61.56	51.4		0.6	1.19
Keera	Middle Callovian	JUM/R/90	Phragmocone	144.4	77.28	43.75	44.47		0.53	0.98
Keera	Middle Callovian	JUM/R/90	Inner whorl	86.2	43.1	32.9	26.3		0.5	1.25
Keera	Middle Callovian	JUM/R/90	Inner whorl	68	36	23.4	18.8		0.53	1.24
Keera	Middle Callovian	JUM/R/90	Inner whorl	48.3	21	20.6	16.25		0.43	1.26
Keera	Middle Callovian	JUM/R/90	Inner whorl	36.5	19	15.6	12.81		0.52	1.21
Unknown	Unknown	JUM/R/7	Body chamber	107.7	58	33.5	30.29		0.53	1.1
Unknown	Unknown	JUM/R/31	Body chamber	109.2	48.4	32.1	29.4		0.44	1.09
Unknown	Unknown	JUM/R/31	Phragmocone	67.34	32.7	25.65	20.63		0.48	1.24
Unknown	Unknown	JUM/R/21	Phragmocone	176.2	94.5	50.9	52.9		0.53	0.96
Unknown	Unknown	JUM/R/21	Inner whorl	94.5	47	29.9	26.13		0.49	1.14
Unknown	Unknown	JUM/R/21	Inner whorl	70.3	35.8	22.6	19.28		0.5	1.17
Unknown	Unknown	JUM/R/21	Inner whorl	53.1	26.5	20.1	15.86		0.49	1.26

Unknown	Unknown	JUM/R/21	Inner whorl	37.3	18.72	15.54	11.67	0.5	1.33
Jumara	Middle Callovian	JUM/R/12	Phragmocone	82.4	42.4	31	26.9	0.51	1.15
Unknown	Unknown	JUM/R/39	Body chamber	122.2	63.3	30.5	26	0.51	1.17
Unknown	Unknown	JUM/R/39	End phragmocone	63.3	31.7	17.7	15.4	0.5	1.14
Unknown	Unknown	JUM/R/39	Inner whorl	31.7	14.6	9.75	9.21	0.46	1.05
Jumara	Middle Callovian	JUM/R/14	Body chamber	198.3	114.2	60.5	60.5	0.57	1
Unknown	Unknown	JUM/R/8	End phragmocone	81.63	34.29	25.61	23.82	0.42	1.07
Unknown	Unknown	JUM/R/8	Inner whorl	26.9	16.63	11.33	10.78	0.61	1.05
Unknown	Unknown	JUM/R/8	Inner whorl	14.2	6.93	8.53	7.63	0.48	1.11
Unknown	Unknown	JUM/R/91	Phragmocone	24.74	11.11	12.02	8.86	0.4	1.36

Idiocycloceras perisphinctoid

Locality	Stratigraphy	Specimen no	Ontogeny	D	U	W	H	P	U/D	W/H
Keera	Unknown	GSI 2092	Phragmocone	125	47	43	45	14	0.38	0.95
Keera	Unknown	GSI 2092	End-phragmocone	152	57	52	56	16	0.37	0.93
Keera	Unknown	GSI 2092	Adult body chamber	165	64	60	58	14	0.39	1.03
Habo	Lower Callovian	GSI 16036	Phragmocone	72	29	27	23		0.4	1.17
Habo	Lower Callovian	GSI 16036	Body chamber	93	41	33.5	32	17	0.44	1.05
Ler-Hamundra	Lower Callovian	GSI 16037	Adult body chamber	212	93	65	69	16	0.44	0.94
Ler-Hamundra	Lower Callovian	GSI 16038	Phragmocone	84	30	26	30		0.36	0.87
Ler-Hamundra	Lower Callovian	GSI 16038	Phragmocone	154	64	46	51	18	0.42	0.9
Keera	Middle Callovian	JUM 266	Body chamber	176	74	57	56		0.42	1.02
Keera	Middle Callovian	JUM 267	Phragmocone	115	39	46	42		0.34	1.1
Jura	Middle Callovian	JUM 277	Phragmocone	85	36	37	24	14	0.42	1.54
Jura	Middle Callovian	JUM 277	Phragmocone	110	47	42	34	15	0.43	1.24
Jura	Middle Callovian	JUM 290	Phragmocone	42	11.5	22.5	18		0.27	1.25
Jura	Middle Callovian	JUM 290	Phragmocone	64	17	29	27		0.27	1.07
Jura	Middle Callovian	JUM 290	Phragmocone	82	28	38	33		0.34	1.15
Jura	Middle Callovian	JUM 292	Phragmocone	61	17	28.5	26	16	0.28	1.1
Jura	Middle Callovian	JUM 293	Phragmocone	40	10	18	? 18		0.25	1
Jumara	Middle Callovian	JUM 295	Phragmocone	75	22.5	32	29.5		0.3	1.08
Jumara	Middle Callovian	JUM 295	Phragmocone	107	48	51	46		0.45	1.11
Jumara	Middle Callovian	JUM 297	Phragmocone	27	9	13.5	10		0.33	1.35
Jumara	Middle Callovian	JUM 297	Phragmocone	41	19	24	19		0.46	1.26
Jumara	Middle Callovian	JUM 302	Body chamber	146	58	53	52		0.4	1.02
Jumara	Middle Callovian	JUM 305	Phragmocone	69	18.5	28	28.5		0.27	0.98
Jumara	Middle Callovian	JUM 316	Adult body chamber	223	83	64	62		0.37	1.03
Jumara	Middle Callovian	JUM 317	Phragmocone	53	15	24	18		0.28	1.33
Jumara	Middle Callovian	JUM 317	Phragmocone	97	36	41.5	33		0.37	1.26
Jumara	Middle Callovian	JUM 318	Phragmocone	72	23	35	? 30.5		0.32	1.15
Jumara	Middle Callovian	JUM 325	Phragmocone	56.5	21.5	22	21.5		0.38	1.02
Jumara	Middle Callovian	JUM 325	Phragmocone	99	40	42.5	37		0.4	1.15
Unknown	Unknown	JUM 329	Body chamber	120	49.5	38.5	41		0.41	0.94

Unknown	Unknown	JUM 330	Body chamber	160	63.5	45	51.5		0.4	0.87
Unknown	Unknown	JUM 331	Body chamber	168	67.5	61.5	53	17	0.4	1.16
Unknown	Unknown	JUM 332	Phragmocone	56	16	30	23		0.29	1.3
Unknown	Unknown	JUM 332	End-phragmocone	176	70	70	75		0.4	0.93
Unknown	Unknown	JUM 332	Adult body chamber	247	91	94	87	15	0.37	1.08
Unknown	Unknown	JUM 333	Phragmocone	83.5	34	32	32		0.41	1
Unknown	Unknown	JUM 333	Adult body chamber	230	93	70	67	18	0.4	1.04
Unknown	Unknown	JUM 334	Body chamber	151	58	43	53	14	0.38	0.81
Unknown	Unknown	JUM 338	Phragmocone	50.5	17	21	20		0.34	1.05
Unknown	Unknown	JUM 338	Phragmocone	91.5	30	40	39		0.33	1.03
Jumara	Middle Callovian	JUM 340	Body chamber	175	74	53	56	18	0.42	0.95
Jumara	Middle Callovian	JUM 342	Body chamber	187	68	75	68	15	0.36	1.1
Jumara	Middle Callovian	JUM 345	Adult body chamber	220	85	74	72		0.39	1.03
Jumara	Middle Callovian	JUM 359	Adult body chamber	203.5	82	72	65.5	13	0.4	1.1
Jara	Middle Callovian	JUM 440	Phragmocone	49	20	24	17.5	15	0.41	1.37
Jara	Middle Callovian	JUM 440	Phragmocone	62	28	32	21.5	16	0.45	1.49
Jara	Middle Callovian	JUM 440	Phragmocone	88.5	38	39	31		0.43	1.26
Jara	Middle Callovian	JUM 441	Inner whorl	17	? 5	11	6		0.29	1.83
Jara	Middle Callovian	JUM 441	Phragmocone	25	9	14	8		0.36	1.75
Jara	Middle Callovian	JUM 441	Phragmocone	35	11	17	13		0.31	1.31
Jara	Middle Callovian	JUM 441	Phragmocone	49	18	23	17		0.37	1.35
Jara	Middle Callovian	JUM 441	Phragmocone	103	38	37.5	33	16	0.37	1.14
Keera	Middle Callovian	JUM 442	Body chamber	159	66	63	60		0.42	1.05
Jara	Middle Callovian	JUM 443	Phragmocone	106	38	36	41		0.36	0.88
Jara	Middle Callovian	JUM 444	Phragmocone	93	36	33	37		0.39	0.89
Jara	Middle Callovian	JUM 445	Phragmocone	107	36	42	42		0.34	1
Jara	Middle Callovian	JUM 445	Body chamber	138	55	52	48		0.4	1.08
Jara	Middle Callovian	JUM 446	Phragmocone	82	? 31	39	33		0.38	1.18
Jara	Middle Callovian	JUM 446	Phragmocone	116	48	49	40		0.41	1.22
Jara	Middle Callovian	JUM 446	Phragmocone	145	61	54	47		0.42	1.15
Jara	Middle Callovian	JUM 447	Phragmocone	67	25	35	25		0.37	1.4
Jara	Middle Callovian	JUM 448	Inner whorl	23	8	12	11		0.35	1.09
Jara	Middle Callovian	JUM 448	Phragmocone	87	34	35	30		0.39	1.17
Jara	Middle Callovian	JUM 448	Phragmocone	115	48	? 44	44		0.42	1
Jura	Middle Callovian	JUM 450	End-phragmocone	192	78	54	62	19	0.41	0.87
Jura	Middle Callovian	JUM 450	Adult body chamber	228	94	63.5	80		0.41	0.79
Jura	Middle Callovian	JUM 451	Phragmocone	129	54	48	? 50		0.42	0.96
Jumara	Middle Callovian	JUM 454	Adult body chamber	206	85	72	69	18	0.41	1.04
Jura	Middle Callovian	JUM 458	Body chamber	170	70	59	57	14	0.41	1.04
Jura	Middle Callovian	JUM 460	End-phragmocone	135	58	50	46	19	0.43	1.09
Jura	Middle Callovian	JUM 460	Body chamber	175	71	60	60	18	0.41	1
Keera	Middle Callovian	JUM 461	Phragmocone	90	35	30	35		0.39	0.86
Jura	Middle Callovian	JUM 462	Phragmocone	53	12	22	22		0.23	1

Jura	Middle Callovian	JUM 465	Phragmocone	59	27	? 32	? 17		0.46	1.88
Jura	Middle Callovian	JUM 466	Phragmocone	45	14	20	19		0.31	1.05
Jura	Middle Callovian	JUM 474	Phragmocone	60	14.5	23	28	16	0.24	0.82
Jura	Middle Callovian	JUM 474	Phragmocone	83	27	32	33	17	0.33	0.97
Jumara	Middle Callovian	JUM 482	Phragmocone	120	48	45	43		0.4	1.05
Jumara	Middle Callovian	JUM 482	Phragmocone	144	63	49.5	48		0.44	1.03
Unknown	Unknown	JUM 487	Phragmocone	95	40	42	43		0.42	0.98
Jumara	Middle Callovian	JUM 488	Adult body chamber	220	85	85	81		0.39	1.05
Jumara	Middle Callovian	JUM 489	Adult body chamber	270	97	86	88		0.36	0.98
Keera	Middle Callovian	JUM 490	Adult body chamber	235	95	68	70		0.4	0.97
Jumara	Middle Callovian	JUM 491	Phragmocone	100	40	37	34		0.4	1.09
Jumara	Middle Callovian	JUM 493	Phragmocone	90	30	36	36		0.33	1
Jara	Middle Callovian	JUM 496	Phragmocone	70	26	32	27		0.37	1.19
Jura	Middle Callovian	JUM 500	Body chamber	150	55	43	50	19	0.37	0.86
Keera	Middle Callovian	JUM 501	Phragmocone	47	11	22	15	18	0.23	1.47
Keera	Middle Callovian	JUM 582	Phragmocone	54	13	20	24		0.24	0.83
Jumara	Middle Callovian	JUM 583	Phragmocone	73	27	36	28	16	0.37	1.29
Jumara	Middle Callovian	JUM 584	Phragmocone	68	19	27	31		0.28	0.87
Jumara	Middle Callovian	JUM 585	Phragmocone	81	22	33	33		0.27	1
Keera	Middle Callovian	JUM 589	Adult body chamber	200	79	67	69		0.39	0.97