

**SUPPLEMENTARY DATA**—Data used in literature compilation including locations, references, and proportion of skeletal carbonates.

Age of Bin	Meters	% skel	Member/Formation	References
S3-FU Camb	24.4	8.2	March Point	(Pruss, field notes, this study; James and Stevens, 1982; Cowan and James, 1993)
S3-FU Camb	7	0	Cape Ann	Pruss, field notes, this study; James and Stevens, 1982; Cowan and James, 1993)
S3-FU Camb	88.1	0	Campbell	Pruss, field notes, this study; James and Stevens, 1982; Cowan and James, 1993)
S3-FU Camb	3.1	0	Big Cove	Pruss, field notes, this study; James and Stevens, 1982; Cowan and James, 1993)
S3-FU Camb	53.4	0	Felix	Pruss, field notes, this study; James and Stevens, 1982; Cowan and James, 1993)
S3-FU Camb	16.5	0	Man o' War	Pruss, field notes, this study; James and Stevens, 1982; Cowan and James, 1993)
S3-FU Camb	62.6	1.9	Pilgrim 1	(Sepkoski, 1977)
S3-FU Camb	38.4	3.4	Pilgrim 2	(Sepkoski, 1977)
S3-FU Camb	72.05	7.6	Pilgrim 3	(Sepkoski, 1977)
S3-FU Camb	58.8	21.7	Pilgrim 4	(Sepkoski, 1977)
S3-FU Camb	63	49.4	Pilgrim 5	(Sepkoski, 1977)
S3-FU Camb	84	1.7	Pilgrim 6	(Sepkoski, 1977)
S3-FU Camb	129.5	2.9	Pilgrim 7	(Sepkoski, 1977)
S3-FU	68.9	1	Pilgrim 8	(Sepkoski, 1977)

Camb				
S3-FU Camb	67.9	17.1	Pilgrim 9	(Sepkoski, 1977)
S3-FU Camb	108.9	7.9	Pilgrim 10	(Sepkoski, 1977)
S3-FU Camb	93.6	8.8	Pilgrim 11	(Sepkoski, 1977)
S3-FU Camb	84.3	5.9	Pilgrim 12	(Sepkoski, 1977)
S3-FU Camb	62.5	0	Pilgrim 13	(Sepkoski, 1977)
S3-FU Camb	10.25	0	Elbrook 1	(Koerschner and Read, 1989)
S3-FU Camb	8.75	14.3	Elbrook 2	(Koerschner and Read, 1989)
S3-FU Camb	18.75	0	Conococheague 1	(Koerschner and Read, 1989)
S3-FU Camb	19.25	1.3	Conococheague 2	(Koerschner and Read, 1989)
S3-FU Camb	25	5	Conococheague 3	(Koerschner and Read, 1989)
S3-FU Camb	22.25	0	Conococheague 4	(Koerschner and Read, 1989)
S3-FU Camb	14	0	Conococheague 5	(Koerschner and Read, 1989)
S3-FU Camb	207.5	2.7	Striped Ridge	Pruss, field notes, this study; Howley, 2002)
S3-FU Camb	130	8.8	Meadow Valley	Pruss, field notes, this study; Howley, 2002)
S3-FU Camb	75.5	0	M7	Pruss, field notes, this study; Howley, 2002)
S3-FU Camb	96	6.3	M8	Pruss, field notes, this study; Howley, 2002)
S3-FU Camb	236.5	1.2	M9	Pruss, field notes, this study; Howley, 2002)
S3-FU Camb	21	9.5	M10	Pruss, field notes, this study; Howley, 2002)
S3-FU Camb	9	72.2	Rock River	(Hersi et al., 2002)
S3-FU Camb	161	5.6	Strites Pond	(Hersi et al., 2002)
S3-FU Camb	7.7216	22.7	Swasey Limestone	(Li, 1998)
S3-FU Camb	33.2232	81.2	Orr Formation: Big Horse LS	(Li, 1998)

S3-FU Camb	94.6912	17.9	Big Horse LS (cont.)	(Li, 1998)
S3-FU Camb	27.3812	38.5	Big Horse LS 2	(Li, 1998)
S3-FU Camb	2.4638	41.2	Big Horse LS 3	(Li, 1998)
S3-FU Camb	1.8542	0	Notch Peak: Hellnmaria	(Li, 1998)
S3-FU Camb	14.5796	21	Red Tops	(Li, 1998)
S3-FU Camb	4.953	22	Red Tops 2	(Li, 1998)
S3-FU Camb	80.4672	36	Upper Whipple Cave Formation	(Li, 1998)
S3-FU Camb	10.6934	48	Upper Whipple Cave Formation 2	(Li, 1998)
S3-FU Camb	14.351	24.1	Windfall Formation	(Li, 1998)
S3-FU Camb	8.128	4.4	Pole Canyon Limestone	(Li, 1998)
S3-FU Camb	4.8768	12.5	Emigrant Spring: Member A	(Li, 1998)
S3-FU Camb	15.3162	39.5	Emigrant Spring: Upper Member B	(Li, 1998)
LO Ord	254.25	5.1	Watts Bight	Pruss, field notes, this study, Knight and James, 1987)
LO Ord	157	13.1	Boat Harbour 1	Pruss, field notes, this study, Knight and James, 1987)
LO Ord	90	54.4	Boat Harbour 2	Pruss, field notes, this study, Knight and James, 1987)
LO Ord	106	17.5	Catoche 1	(Knight and James, 1987)
LO Ord	89	40.4	Catoche 2	(Knight and James, 1987)
LO Ord	53	20.8	Aguathuna	(Knight and James, 1987)
LO Ord	97.7646	6.0	Filmore 1	(Li, 1998)

LO Ord	1.9558	45	Filmore 2	(Li, 1998)
LO Ord	78.9432	56	Wah Wah	(Li, 1998)
LO Ord	44.8056	54	Juab	(Li, 1998)
LO Ord	9	0	Oneonta Fmtion 1	(Smith et al., 1993)
LO Ord	9	0	Oneonta Fmtion 2	(Smith et al., 1993)
LO Ord	19	0	Oneonta Fmtion 3	(Smith et al., 1993)
LO Ord	17.5	0	Oneonta Fmtion 4	(Smith et al., 1993)
LO Ord	7.5	0	Oneonta Fmtion 5	(Smith et al., 1993)
LO Ord	9.5	0	Oneonta Fmtion 6	(Smith et al., 1993)
LO Ord	12	0	Shakopee Fmtion 1	(Smith et al., 1993)
LO Ord	5	0	Shakopee Fmtion 2	(Smith et al., 1993)
LO Ord	9	0	Shakopee Fmtion 3	(Smith et al., 1993)
LO Ord	9	0	Shakopee Fmtion 4	(Smith et al., 1993)
LO Ord	72.5	15.2	Shakopee Fmtion 5	(Smith et al., 1993)
LO Ord	107.3	0	Goodwin Limestone	(Ross, 1995)
LO Ord	45	35.6	Shingle Pass LS	S. Finnegan, field notes, this study
MU Ord	25.4	88.2	Kanosh	(Boyer and Droser, 2003)
MU Ord	40.9	47.9	Lehman	(Boyer and Droser, 2003)
MU Ord	54.2544	48	Lehman	(Li, 1998)
MU Ord	36.322	42	Kanosh 1	(Li, 1998)
MU Ord	12.192	0	Kanosh 2	(Li, 1998)
MU Ord	40.5892	48	Kanosh 3	(Li, 1998)
MU Ord	6.29	53.3	Decorah 1	(Emerson, 2002)
MU Ord	8.54	49.8	Decorah 2	(Emerson, 2002)
MU Ord	7.81	44.8	Decorah 3	(Emerson, 2002)
MU Ord	2.12	42.5	Decorah 4	(Emerson, 2002)
MU Ord	122	12.3	Platteville 1	(Fanton, 2004)
MU Ord	115	39.1	Platteville 2	(Fanton, 2004)
MU Ord	120	75	Galena 1	(Fanton, 2004)
MU Ord	130	100	Galena 2	(Fanton, 2004)
MU Ord	63	16.3	Shingle Pass	S. Finnegan, field notes, this study
MU Ord	128.63	18.5	Antelope Valley	(Ross, 1995)
MU Ord	45.45	90.7	Hull Formation 1	(Kiernan, 1999)
MU Ord	52.7	82.2	Hull Formation 2	(Kiernan, 1999)
MU Ord	55.25	79.8	Verulam Formation 1	(Kiernan, 1999)
MU Ord	35	85.7	Verulam Formation 2	(Kiernan, 1999)
MU Ord	89.5	46.9	Black River/Trenton	(Brett et al., 2004)
MU Ord	72	59	Tyrone/Lexington	(Brett et al., 2004)
MU Ord	195	86.2	Ely Springs	(Droser and Sheehan, 1995)

