

Supplementary Materials for

Gregarious suspension feeding in a modular Ediacaran organism

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The PDF file includes:

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Other Supplementary Material for this manuscript includes the following:

(available at advances.sciencemag.org/cgi/content/full/5/6/eaaw0260/DC1)

Movie S1 (.avi format). 2D FSI simulation of *Ernietta* in perpendicular orientation.
Movie S2 (.avi format). 3D FSI simulation of *Ernietta* in parallel orientation.

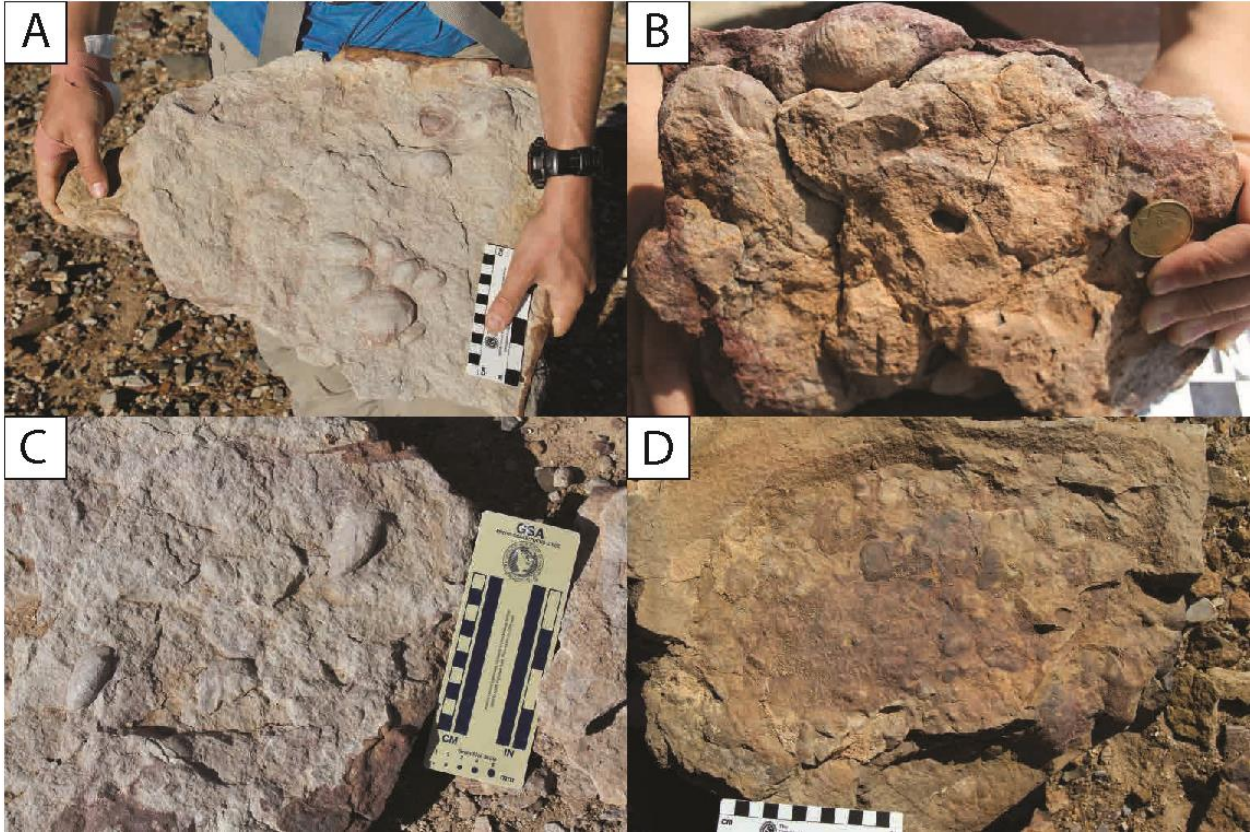


Fig. S1. Field photographs of *Ernieetta* aggregations likely representing bioherms. Photo credit A-D: Marc Laflamme, University of Toronto Mississauga

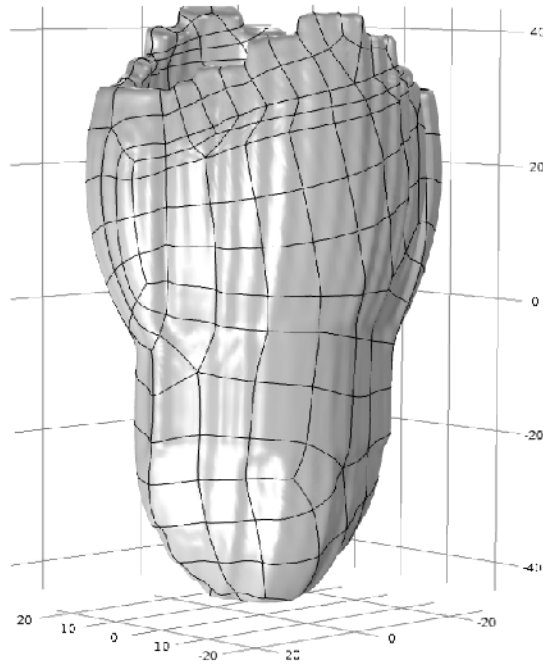


Fig. S2. *Ernieetta* model construction for CFD analyses. Three-dimensional digital model of the Ediacaran organism *Ernieetta* was created in COMSOL Multiphysics version 5.3a by iteratively adding and modifying cylindrical elements. The dimensions of the model (45 mm long, 45 mm wide, and 10 mm high) were derived from Ivantsov et al.'s (2016) complete specimen (NESM-F722- 4) and the average dimensions of specimens recorded from original field work in Kuibis Farm (26°37'35.00"S, 16°41'07.00"E) and Hansburg, Namibia (26°17'52.00"S, 16°54'13.00"E). Specimens from Kuibis Farm only preserved the lower-most portions of the organisms, but were consistent among the samples for overall ventral morphology. Following construction of the model in COMSOL, smoothing and removal of overlapping elements was carried out in VG Studio Max version 2.2.

Table S1. Size measurements of *Ernietta* from Farm Hansburg and Farm Kuibis in Namibia, collected summer 2016.

Location	MajorSite	Site	Specimen	GPS	GPS	Estimated Size (cm)	L	W	H	Volume (cm ³)	ellipsoid	elliptic cylinder	ellipsoid	elliptic cylinder	ellipsoid	elliptic cylinder	Tube Width	
											Volume (cm ³)	SA (cm ²)	SA (cm ²)	SA:V	SA:V	Min		Max
HB	HB1	HB1A	HB1A-01	26 17 23.4	16 52 55.6	10	11.72	6.85	2.29	96.26	144.39	145.68	192.91	1.51	1.34	0.28	0.33	15
HB	HB1	HB1A	HB1A-02	26 17 23.4	16 52 55.6	6-7	7.99	5.18	2.76	59.81	89.72	85.98	122.11	1.44	1.36	0.11	0.15	17
HB	HB1	HB1A	HB1A-03	26 17 23.4	16 52 55.6	5	5.89	5.1	1.14	17.93	26.90	52.20	66.87	2.91	2.49	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-04	26 17 23.4	16 52 55.6	6	8.17	5.09	2.08	45.29	67.93	79.35	108.65	1.75	1.60	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-05	26 17 23.4	16 52 55.6	8-9	9.86	6.4	1.96	64.76	97.14	113.32	149.18	1.75	1.54	0.18	0.22	20
HB	HB1	HB1A	HB1A-06	26 17 23.4	16 52 55.6	10	10.62	9.56	2.52	133.96	200.94	181.63	239.36	1.36	1.19	0.21	0.26	10
HB	HB1	HB1A	HB1A-07	26 17 23.4	16 52 55.6	5-6	8.46	6.4	2.88	81.65	122.47	108.31	152.27	1.33	1.24	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-08	26 17 23.4	16 52 55.6	4-5	3.95	3.25	2.25	15.12	22.69	30.93	45.61	2.04	2.01	0.19	0.22	10
HB	HB1	HB1A	HB1A-09	26 17 23.4	16 52 55.6	4-5	5.2	3.75	1.69	17.26	25.88	38.81	54.39	2.25	2.10	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-10	26 17 23.4	16 52 55.6	8	2.93	2.75	2.6	10.97	16.45	23.92	35.85	2.18	2.18	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-11	26 17 23.4	16 52 55.6	5	5.82	3.73	2.2	25.01	37.51	46.77	67.10	1.87	1.79	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-12	26 17 23.4	16 52 55.6	5	5.18	3.92	2.78	29.56	44.34	48.68	71.63	1.65	1.62	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-13	26 17 23.4	16 52 55.6	5	5.84	3.48	2.27	24.16	36.23	45.18	65.16	1.87	1.80	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-14	26 17 23.4	16 52 55.6	6	6.43	2.95	2.79	27.71	41.56	48.78	70.90	1.76	1.71	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-15	26 17 23.4	16 52 55.6	7	7.21	4.4	1.73	28.74	43.10	59.84	81.38	2.08	1.89	0.18	0.21	14
HB	HB1	HB1A	HB1A-16	26 17 23.4	16 52 55.6	4	4.44	2.38	1.92	10.62	15.93	25.53	37.17	2.40	2.33	0.17	0.21	16
HB	HB1	HB1A	HB1A-17	26 17 23.4	16 52 55.6	3-4	4.29	3.08	1.44	9.96	14.94	26.59	37.43	2.67	2.50	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-18	26 17 23.4	16 52 55.6	3-4	4.52	3.37	0.66	5.26	7.90	25.85	32.11	4.91	4.07	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-19	26 17 23.4	16 52 55.6	3-4	4.17	2.07	2.04	9.22	13.83	22.94	33.55	2.49	2.43	0.17	0.2	5
HB	HB1	HB1A	HB1A-20	26 17 23.4	16 52 55.6	5	5.03	3.65	0.86	8.27	12.40	31.82	40.56	3.85	3.27	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-21	26 17 23.4	16 52 55.6	2	2.71	2.64	2.09	7.83	11.74	19.28	28.80	2.46	2.45	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-22	26 17 23.4	16 52 55.6	3	3.83	2.92	0.95	5.56	8.34	20.56	27.64	3.70	3.31	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-23	26 17 23.4	16 52 55.6	1	3.03	2.97	0.58	2.73	4.10	15.48	19.60	5.66	4.78	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-24	26 17 23.4	16 52 55.6	2-3	2.79	1.92	0.93	2.61	3.91	10.85	15.30	4.16	3.91	0.2	0.19	9
HB	HB1	HB1A	HB1A-25	26 17 23.4	16 52 55.6	3-4	4.21	3.62	1.34	10.69	16.04	29.26	40.42	2.74	2.52	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-26	26 17 23.4	16 52 55.6	3	3.54	3.51	1.93	12.56	18.83	28.00	40.89	2.23	2.17	0.17	0.15	5

HB	HB1	HB1A	HB1A-27	26 17 23.4	16 52 55.6	5-6	6.92	6.7	2.48	60.20	90.31	90.36	125.89	1.50	1.39	0.17	0.23	9
HB	HB1	HB1A	HB1A-28	26 17 23.4	16 52 55.6	5-6	6.25	3.29	1.35	14.53	21.80	38.79	52.53	2.67	2.41	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-29	26 17 23.4	16 52 55.6	4-5	5.5	4.89	0.9	12.67	19.01	45.69	56.94	3.61	2.99	0.16	0.2	10
HB	HB1	HB1A	HB1A-30	26 17 23.4	16 52 55.6	6-7	7.03	6.1	2.73	61.30	91.95	87.23	123.67	1.42	1.34	0.19	0.23	9
HB	HB1	HB1A	HB1A-31	26 17 23.4	16 52 55.6	3-4	4.64	3.42	1.91	15.87	23.80	34.12	49.11	2.15	2.06	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-32	26 17 23.4	16 52 55.6	4-5	5.19	3.98	3.15	34.07	51.10	52.51	77.82	1.54	1.52	N/A	N/A	N/A
HB	HB1	HB1A	HB1A-33	26 17 23.4	16 52 55.6	4-5	5.45	3.04	2.5	21.69	32.53	40.63	59.37	1.87	1.82	0.2	0.23	16
HB	HB1	HB1B	HB1B-01	26 17 23.2	16 52 58.9	6	7.18	4.37	3.89	63.91	95.86	81.32	119.86	1.27	1.25	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-02	26 17 23.2	16 52 58.9	3	4.29	2.46	1.96	10.83	16.25	25.58	37.36	2.36	2.30	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-03	26 17 23.2	16 52 58.9	3	5.65	2.3	2.14	14.56	21.84	32.69	47.14	2.25	2.16	0.18	0.21	11
HB	HB1	HB1B	HB1B-04	26 17 23.2	16 52 58.9	2-3	3.68	2.55	2.35	11.55	17.32	25.41	37.74	2.20	2.18	0.17	0.22	15
HB	HB1	HB1B	HB1B-05	26 17 23.2	16 52 58.9	3-4	4.43	2.22	0.87	4.48	6.72	18.30	24.54	4.08	3.65	0.13	0.15	13
HB	HB1	HB1B	HB1B-06	26 17 23.2	16 52 58.9	4-5	5.47	2.63	1.98	14.91	22.37	33.20	47.79	2.23	2.14	0.21	0.24	15
HB	HB1	HB1B	HB1B-07	26 17 23.2	16 52 58.9	3-4	4.07	2.03	2.09	9.04	13.56	22.53	33.00	2.49	2.43	0.19	0.22	14
HB	HB1	HB1B	HB1B-08	26 17 23.2	16 52 58.9	3	3.75	2.16	1.44	6.11	9.16	18.10	26.09	2.96	2.85	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-09	26 17 23.2	16 52 58.9	2-3	3.37	2.77	1.52	7.43	11.14	20.28	29.32	2.73	2.63	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-10	26 17 23.2	16 52 58.9	4-5	4.73	2.18	1.77	9.56	14.33	24.54	35.41	2.57	2.47	0.17	0.22	14
HB	HB1	HB1B	HB1B-11	26 17 23.2	16 52 58.9	3-4	3.72	2.84	2.04	11.28	16.93	25.53	37.62	2.26	2.22	0.16	0.21	14
HB	HB1	HB1B	HB1B-12	26 17 23.2	16 52 58.9	3-4	4.11	2.44	1.72	9.03	13.55	23.05	33.45	2.55	2.47	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-13	26 17 23.2	16 52 58.9	3-4	3.73	1.57	2.31	7.08	10.62	19.60	28.43	2.77	2.68	0.16	0.23	9
HB	HB1	HB1B	HB1B-14	26 17 23.2	16 52 58.9	2-3	2.94	1.6	1.41	3.47	5.21	11.91	17.44	3.43	3.35	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-15	26 17 23.2	16 52 58.9	3-4	4.05	2.47	1.71	8.96	13.44	22.89	33.23	2.56	2.47	0.11	0.2	17
HB	HB1	HB1B	HB1B-16	26 17 23.2	16 52 58.9	3-4	4.4	2.34	1.36	7.33	11.00	21.60	30.57	2.95	2.78	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-17	26 17 23.2	16 52 58.9	4-5	4.14	3.31	0.72	5.17	7.75	23.62	29.95	4.57	3.87	0.17	0.18	11
HB	HB1	HB1B	HB1B-18	26 17 23.2	16 52 58.9	1-2	2.74	1.97	1.77	5.00	7.50	14.52	21.57	2.90	2.88	0.18	0.22	8
HB	HB1	HB1B	HB1B-19	26 17 23.2	16 52 58.9	2-3	3.47	2.42	1.03	4.53	6.79	16.37	22.72	3.61	3.34	0.17	0.22	7
HB	HB1	HB1B	HB1B-20	26 17 23.2	16 52 58.9	5-6	4.96	3.56	2.95	27.27	40.91	45.38	67.22	1.66	1.64	0.19	0.22	12
HB	HB1	HB1B	HB1B-21	26 17 23.2	16 52 58.9	3-4	3.62	2.97	0.69	3.88	5.83	18.72	24.03	4.82	4.12	0.13	0.18	11
HB	HB1	HB1B	HB1B-21 Rock	26 17 23.2	16 52 58.9	1-2	0.9	0.6	0.15	0.04	0.06	0.94	1.20	22.16	18.89	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-22	26 17 23.2	16 52 58.9	5	3.46	2.79	0.59	2.98	4.47	16.59	20.96	5.56	4.68	0.25	0.3	9
HB	HB1	HB1B	HB1B-23	26 17 23.2	16 52 58.9	3-4	3.88	2.69	1.68	9.18	13.77	23.27	33.73	2.53	2.45	0.22	0.25	13
HB	HB1	HB1B	HB1B-24	26 17 23.2	16 52 58.9	1-2	1.82	1.61	0.66	1.01	1.52	5.81	8.16	5.74	5.37	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-25	26 17 23.2	16 52 58.9	3-4	5	2.87	1.89	14.20	21.30	31.88	45.91	2.25	2.16	0.18	0.23	9

HB	HB1	HB1B	HB1B-26	26 17 23.2	16 52 58.9	3-4	4.13	2.63	1.8	10.24	15.36	24.88	36.18	2.43	2.36	0.14	0.19	8
HB	HB1	HB1B	HB1B-27	26 17 23.2	16 52 58.9	3-4	4.01	2.66	1.78	9.94	14.91	24.34	35.40	2.45	2.37	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-28	26 17 23.2	16 52 58.9	3-4	3.36	3.09	1.73	9.40	14.11	23.21	33.84	2.47	2.40	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-29	26 17 23.2	16 52 58.9	2-3	2.54	1.68	1.56	3.49	5.23	11.50	17.04	3.30	3.26	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-30	26 17 23.2	16 52 58.9	2-3	1.86	1.09	0.94	1.00	1.50	5.13	7.54	5.14	5.04	0.19	0.25	7
HB	HB1	HB1B	HB1B-31	26 17 23.2	16 52 58.9	4-5	4.45	1.76	1.12	4.59	6.89	16.58	23.23	3.61	3.37	0.12	0.19	11
HB	HB1	HB1B	HB1B-32	26 17 23.2	16 52 58.9	2-3	2.14	1.99	1.71	3.81	5.72	11.89	17.78	3.12	3.11	0.16	0.18	8
HB	HB1	HB1B	HB1B-33	26 17 23.2	16 52 58.9	1-2	1.37	1.29	1.7	1.57	2.36	6.61	9.88	4.20	4.19	0.15	0.18	6
HB	HB1	HB1B	HB1B-34	26 17 23.2	16 52 58.9	1-2	2.33	1.18	0.4	0.58	0.86	4.96	6.52	8.62	7.55	0.19	0.24	8
HB	HB1	HB1B	HB1B-35	26 17 23.2	16 52 58.9	3-4	3.2	1.95	0.83	2.71	4.07	12.01	16.52	4.43	4.06	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-36	26 17 23.2	16 52 58.9	3-4	3.13	2.63	1.05	4.53	6.79	16.09	22.43	3.56	3.30	0.14	0.17	9
HB	HB1	HB1B	HB1B-37	26 17 23.2	16 52 58.9	5-6	4.09	2.28	0.44	2.15	3.22	15.65	19.05	7.28	5.91	0.19	0.23	8
HB	HB1	HB1B	HB1B-38	26 17 23.2	16 52 58.9	4-5	4.62	2.58	0.78	4.87	7.30	21.18	27.54	4.35	3.77	0.2	0.25	9
HB	HB1	HB1B	HB1B-39	26 17 23.2	16 52 58.9	3-4	2.89	1.66	1.49	3.74	5.61	12.37	18.18	3.31	3.24	0.14	0.21	6
HB	HB1	HB1B	HB1B-40	26 17 23.2	16 52 58.9	3-4	3.44	2.28	1.29	5.30	7.95	16.70	23.91	3.15	3.01	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-41	26 17 23.2	16 52 58.9	2-3	2.14	2.13	1.33	3.17	4.76	10.90	16.08	3.43	3.38	0.13	0.18	11
HB	HB1	HB1B	HB1B-42	26 17 23.2	16 52 58.9	3-4	3.54	3.18	2.42	14.26	21.40	29.05	43.23	2.04	2.02	0.16	0.2	9
HB	HB1	HB1B	HB1B-43	26 17 23.2	16 52 58.9	3-4	2.54	1.57	2.62	5.47	8.21	15.73	23.18	2.88	2.82	0.23	0.27	7
HB	HB1	HB1B	HB1B-44	26 17 23.2	16 52 58.9	3-4	4.06	2.68	1	5.70	8.55	20.39	27.68	3.58	3.24	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-45	26 17 23.2	16 52 58.9	3-4	3.4	3.12	1.33	7.39	11.08	21.41	30.28	2.90	2.73	0.23	0.27	9
HB	HB1	HB1B	HB1B-46	26 17 23.2	16 52 58.9	1-2	0.8	0.67	1.21	0.34	0.51	2.46	3.64	7.25	7.14	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-47A	26 17 23.2	16 52 58.9	3-4	2.82	1.9	1.42	3.98	5.98	12.91	18.94	3.24	3.17	0.15	0.18	12
HB	HB1	HB1B	HB1B-47B	26 17 23.2	16 52 58.9	1-2	1.83	0.66	0.41	0.26	0.39	2.52	3.50	9.72	9.00	0.26	0.32	3
HB	HB1	HB1B	HB1B-48	26 17 23.2	16 52 58.9	2-3	2.5	1.1	1.35	1.94	2.92	8.20	11.95	4.22	4.10	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-49	26 17 23.2	16 52 58.9	3-4	2.99	2.36	2.14	7.91	11.86	19.49	29.07	2.46	2.45	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-50	26 17 23.2	16 52 58.9	3-4	2.62	1.84	1.9	4.80	7.19	14.02	20.88	2.92	2.90	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-51	26 17 23.2	16 52 58.9	2-3	2.95	1.46	2.02	4.56	6.83	14.16	20.76	3.11	3.04	N/A	N/A	N/A
HB	HB1	HB1B	HB1B-52	26 17 23.2	16 52 58.9	3-4	3.84	2.37	0.93	4.43	6.65	17.17	23.37	3.88	3.52	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-01	26 17 23.4	16 52 59.9	1-2	2.31	1.58	1.32	2.52	3.78	9.33	13.80	3.70	3.65	0.07	0.09	14
HB	HB1	HB1C	HB1C-02	26 17 23.4	16 52 59.9	1-2	2.64	1.51	0.96	2.00	3.01	8.73	12.52	4.35	4.17	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-03	26 17 23.4	16 52 59.9	4-5	4.57	2.43	1.58	9.19	13.78	24.33	34.82	2.65	2.53	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-04	26 17 23.4	16 52 59.9	2-3	3.26	2.11	1.1	3.96	5.94	14.18	20.08	3.58	3.38	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-05	26 17 23.4	16 52 59.9	1-2	2.8	1.55	0.76	1.73	2.59	8.63	12.01	5.00	4.64	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-06	26 17 23.4	16 52 59.9	1-2	2.15	1.31	0.75	1.11	1.66	5.96	8.50	5.39	5.12	0.08	0.13	11
HB	HB1	HB1C	HB1C-07	26 17 23.4	16 52 59.9	1-2	2.08	1.32	1.18	1.70	2.54	7.19	10.61	4.24	4.17	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-08	26 17 23.4	16 52 59.9	1-2	1.99	1.42	0.75	1.11	1.66	5.92	8.46	5.34	5.08	0.06	0.09	9

HB	HB1	HB1C	HB1C-09	26 17 23.4	16 52 59.9	2-3	2.51	1.48	1.82	3.54	5.31	11.65	17.24	3.29	3.25	0.06	0.09	13
HB	HB1	HB1C	HB1C-10	26 17 23.4	16 52 59.9	1-2	1.84	1.53	1.93	2.84	4.27	9.79	14.64	3.44	3.43	0.06	0.1	11
HB	HB1	HB1C	HB1C-11	26 17 23.4	16 52 59.9	1-2	2.23	1.17	1.09	1.49	2.23	6.77	9.92	4.55	4.44	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-12	26 17 23.4	16 52 59.9	1-2	2.26	1.47	1.15	2.00	3.00	8.14	11.96	4.07	3.98	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-13	26 17 23.4	16 52 59.9	4-5 (1-2)	1.64	0.92	0.72	0.57	0.85	3.61	5.27	6.35	6.17	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-14	26 17 23.4	16 52 59.9	1-2	2.06	1.33	1.26	1.81	2.71	7.43	11.01	4.11	4.06	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-15	26 17 23.4	16 52 59.9	1	1.82	1.51	1.11	1.60	2.40	6.84	10.12	4.28	4.23	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-16	26 17 23.4	16 52 59.9	2-3	2.38	1.88	1.72	4.03	6.04	12.42	18.54	3.08	3.07	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-17	26 17 23.4	16 52 59.9	1	2.11	1	1.03	1.14	1.71	5.71	8.35	5.02	4.89	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-18	26 17 23.4	16 52 59.9	2-3	3.43	1.59	0.62	1.77	2.66	10.09	13.46	5.70	5.07	0.08	0.12	13
HB	HB1	HB1C	HB1C-19	26 17 23.4	16 52 59.9	1-2	1.63	1.44	0.86	1.06	1.59	5.35	7.83	5.07	4.94	0.07	0.11	11
HB	HB1	HB1C	HB1C-20	26 17 23.4	16 52 59.9	2-3	2.17	1.46	1.26	2.09	3.14	8.22	12.16	3.93	3.88	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-21	26 17 23.4	16 52 59.9	2-3	2.34	1.6	1.04	2.04	3.06	8.47	12.32	4.16	4.03	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-22	26 17 23.4	16 52 59.9	3-4	4.24	2.47	2.58	14.15	21.22	29.53	43.64	2.09	2.06	0.14	0.17	14
HB	HB1	HB1C	HB1C-23	26 17 23.4	16 52 59.9	1-2	2.37	1.77	1.09	2.39	3.59	9.41	13.68	3.93	3.81	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-24	26 17 23.4	16 52 59.9	1-2	2.07	1.51	1.43	2.34	3.51	8.70	12.95	3.72	3.69	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-25 A	26 17 23.4	16 52 59.9	2-3	2.68	1.48	0.72	1.50	2.24	7.87	10.94	5.26	4.88	0.09	0.13	8
HB	HB1	HB1C	HB1C-25B	27 17 23.4	17 52 59.9	2-3	2.38	1.17	0.72	1.05	1.57	5.92	8.39	5.64	5.33	0.1	0.14	13
HB	HB1	HB1C	HB1C-26	26 17 23.4	16 52 59.9	1-2	1.51	1.13	0.83	0.74	1.11	4.15	6.12	5.60	5.50	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-27	26 17 23.4	16 52 59.9	1-2	1.82	1.01	0.75	0.72	1.08	4.29	6.22	5.94	5.75	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-28	26 17 23.4	16 52 59.9	1-2	1.69	0.93	0.99	0.81	1.22	4.44	6.54	5.45	5.35	0.9	0.13	10
HB	HB1	HB1C	HB1C-29	26 17 23.4	16 52 59.9	2-3	3.52	2.66	0.86	4.22	6.32	17.18	23.06	4.08	3.65	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-30	26 17 23.4	16 52 59.9	2-3	2.14	1.33	1.8	2.68	4.02	9.64	14.28	3.59	3.55	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-31	26 17 23.4	16 52 59.9	2-3	1.9	1.31	1.1	1.43	2.15	6.39	9.46	4.46	4.40	0.12	0.17	9
HB	HB1	HB1C	HB1C-32	26 17 23.4	16 52 59.9	2-3	2.41	1.56	1.07	2.11	3.16	8.64	12.58	4.10	3.98	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-33	26 17 23.4	16 52 59.9	1-2	1.58	1.33	1.71	1.88	2.82	7.44	11.12	3.95	3.94	0.09	0.14	11
HB	HB1	HB1C	HB1C-34	26 17 23.4	16 52 59.9	1-2	2.15	1.58	0.98	1.74	2.61	7.62	11.08	4.37	4.24	0.1	0.12	13
HB	HB1	HB1C	HB1C-35	26 17 23.4	16 52 59.9	2-3	2.3	1.75	1.11	2.34	3.51	9.17	13.38	3.92	3.81	0.9	0.13	7
HB	HB1	HB1C	HB1C-36	26 17 23.4	16 52 59.9	1-2	1.98	1.51	2.06	3.22	4.84	10.72	15.99	3.33	3.31	0.13	0.18	8
HB	HB1	HB1C	HB1C-37	26 17 23.4	16 52 59.9	2-3	2.21	1.62	0.79	1.48	2.22	7.32	10.38	4.94	4.67	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-38	26 17 23.4	16 52 59.9	2-3	2.1	1.94	1.67	3.56	5.34	11.36	17.00	3.19	3.18	0.12	0.16	8
HB	HB1	HB1C	HB1C-39	26 17 23.4	16 52 59.9	1-2	1.75	1.02	1.1	1.03	1.54	5.13	7.59	4.99	4.92	N/A	N/A	N/A
HB	HB1	HB1C	HB1C-40	26 17 23.4	16 52 59.9	1-2	2.37	1.92	0.43	1.02	1.54	7.88	10.05	7.69	6.54	N/A	N/A	N/A
HB	HB1	HB1D	HB1D-01	26 17 23.3	16 53 01.2	5-6	5.4	3.27	1.01	9.34	14.01	31.63	41.49	3.39	2.96	N/A	N/A	N/A
HB	HB1	HB1D	HB1D-02	26 17 23.3	16 53 01.2	6-7	5.78	4.27	0.94	12.15	18.22	42.43	53.61	3.49	2.94	N/A	N/A	N/A
HB	HB1	HB1D	HB1D-03	26 17 23.3	16 53 01.2	7-8	7.67	5.52	1.58	35.03	52.54	75.60	99.24	2.16	1.89	N/A	N/A	N/A

HB	HB1	HB1D	HB1D-04	26 17 23.3	16 53 01.2	5-6	5.26	4.4	2.12	25.69	38.54	48.02	68.52	1.87	1.78	Split into 2		
HB	HB1	HB1D	HB1D-04A	27 17 23.3	17 53 01.2	4-5	5.35	2.16	2.03	12.28	18.42	29.20	42.10	2.38	2.28	0.16	0.21	7
HB	HB1	HB1D	HB1D-04B	28 17 23.3	18 53 01.2	4-5	4.77	2.15	1.78	9.56	14.34	24.58	35.46	2.57	2.47	0.16	0.2	18
HB	HB1	HB1D	HB1D-05	26 17 23.3	16 53 01.2	10	7.17	5.67	2.67	56.83	85.25	83.01	117.71	1.46	1.38	0.2	0.25	8
HB	HB1	HB1D	Sample and Rock	27 17 23.3	17 53 01.2	7-8	7.69	7.66	2.67	82.35	123.53	113.35	156.91	1.38	1.27	N/A	N/A	N/A
HB	HB1	HB1D	HB1D-06	26 17 23.3	16 53 01.2	10	3.8	3.29	2.03	13.29	19.93	28.82	42.25	2.17	2.12	N/A	N/A	N/A
HB	HB1	HB1D	Sample and Rock	27 17 23.3	17 53 01.2	8-9	8.69	4.6	0.81	16.95	25.43	66.49	79.70	3.92	3.13	N/A	N/A	N/A
HB	HB1	HB1E	HB1E-01	26 17 23.4	16 53 04.1	2-3	3.39	2.6	3.34	15.41	23.12	30.32	45.27	1.97	1.96	0.09	0.13	13
HB	HB5	HB5	HB5-01	26 17 3.94	16 54 21.1	4-5	3.74	2.33	1.11	5.06	7.60	17.37	24.27	3.43	3.19	0.1	0.16	17
HB	HB5	HB5	HB5-02	26 17 3.94	16 54 21.1	3-4	2.54	2.46	0.53	1.73	2.60	10.88	13.98	6.28	5.37	0.18	0.25	14
KB	KB	KB	KB-01	26 38 09.4	16 41 21.6	5-6	4.45	2.54	0.98	5.80	8.70	21.12	28.51	3.64	3.28	N/A	N/A	N/A
KB	KB	KB	Sample and Rock	27 38 09.4	17 41 21.6	7-8	10.05	9.08	1.65	78.84	118.26	154.94	192.92	1.97	1.63	N/A	N/A	N/A
KB	KB	KB	KB-02	26 38 09.4	16 41 21.6	4-5	7.82	4.93	1	20.19	30.28	65.25	80.59	3.23	2.66	N/A	N/A	N/A
KB	KB	KB	KB-03	26 38 09.4	16 41 21.6	2-3	2.36	1.94	0.81	1.94	2.91	9.04	12.66	4.66	4.35	0.08	0.12	8
KB	KB	KB	Sample and Rock	27 38 09.4	17 41 21.6	3-4	3.55	1.56	0.7	2.03	3.04	10.57	14.32	5.21	4.70	N/A	N/A	N/A
KB	KB	KB	KB-04	26 38 09.4	16 41 21.6	6-7	2.58	2.31	1.12	3.50	5.24	12.53	17.96	3.58	3.43	N/A	N/A	N/A
KB	KB	KB	KB-05	26 17 59.8	16 54 35.6	8-9	5.4	3.69	1.16	12.10	18.15	36.08	47.86	2.98	2.64	N/A	N/A	N/A
HB	HB4	HB4	HB4C-01	26 17 59.8	16 54 35.6	6-7	6.71	4.55	1.52	24.30	36.45	55.94	74.84	2.30	2.05	N/A	N/A	N/A
HB	HB4	HB4	HB4C-02	26 17 59.8	16 54 35.6	5-6	8.02	3.58	1.9	28.56	42.85	57.58	79.72	2.02	1.86	N/A	N/A	N/A
HB	HB4	HB4	HB4C-03	26 17 59.8	16 54 35.6	4-5	6.13	3.55	1.69	19.26	28.88	43.07	59.88	2.24	2.07	N/A	N/A	N/A
HB	HB4	HB4	HB4C-04	26 17 59.8	16 54 35.6	6	5.52	3.2	1.23	11.38	17.06	33.02	44.59	2.90	2.61	N/A	N/A	N/A
HB	HB4	HB4	HB4C-05	26 17 59.8	16 54 35.6	6-7	7.24	4.46	2.23	37.70	56.55	65.28	91.71	1.73	1.62	N/A	N/A	N/A
HB	HB4	HB4	HB4C-06	26 17 59.8	16 54 35.6	4-5	6.2	3.04	1.13	11.15	16.73	34.62	46.01	3.10	2.75	N/A	N/A	N/A
HB	HB4	HB4	HB4C-07	26 17 59.8	16 54 35.6	8-9	5.25	1.81	2.1	10.45	15.67	26.63	38.22	2.55	2.44	N/A	N/A	N/A
HB	HB4	HB4	HB4C-08	26 17 59.8	16 54 35.6	6-7	8.88	4.46	1.72	35.67	53.50	73.42	98.25	2.06	1.84	N/A	N/A	N/A
HB	HB4	HB4	HB4C-09	26 17 59.8	16 54 35.6	8-9	7.64	4.14	1.42	23.52	35.28	57.44	75.96	2.44	2.15	N/A	N/A	N/A
HB	HB4	HB4	HB4C-10	26 17 59.8	16 54 35.6	4-5	9.94	5.89	1.26	38.63	57.94	99.44	123.30	2.57	2.13	N/A	N/A	N/A
HB	HB4	HB4	HB4C-11	26 17 59.8	16 54 35.6	5-6	5.88	1.7	1.15	6.02	9.03	21.27	29.39	3.53	3.26	N/A	N/A	N/A
HB	HB4	HB4	HB4C-12	26 17 59.8	16 54 35.6	5-6	5.01	2.93	1.55	11.91	17.87	30.08	42.39	2.52	2.37	N/A	N/A	N/A
HB	HB4	HB4	HB4C-13	26 17 59.8	16 54 35.6	4-5	5.63	1.76	2.13	11.05	16.58	28.25	40.29	2.56	2.43	N/A	N/A	N/A
HB	HB4	HB4	HB4C-14	26 17 59.8	16 54 35.6	5-6	5.31	2.16	0.8	4.80	7.21	20.87	27.40	4.34	3.80	N/A	N/A	N/A
HB	HB4	HB4	HB4C-15	26 17 59.8	16 54 35.6	4-5	4.9	2	0.95	4.87	7.31	18.92	25.69	3.88	3.51	N/A	N/A	N/A
HB	HB4	HB4	HB4C-16	26 17 59.8	16 54 35.6	5-6	4.93	3.29	1.1	9.34	14.01	29.69	39.68	3.18	2.83	N/A	N/A	N/A
HB	HB4	HB4	HB4C-17	26 16 54.6	16 52 48.4	3-4	5.37	2.09	1.95	11.46	17.19	28.15	40.48	2.46	2.36	N/A	N/A	N/A
HB	HB3	HB3	HB3-01	26 16 54.6	16 52 48.4	2-3	3.16	2.66	1.43	6.29	9.44	18.19	26.28	2.89	2.78	N/A	N/A	N/A
HB	HB3	HB3	HB3-02	26 16 54.6	16 52 48.4	2-3	2.82	2.57	2.21	8.39	12.58	20.13	30.10	2.40	2.39	0.13	0.19	6

HB	HB3	HB3	HB3-03	26 16 54.6	16 52 48.4	3-4	1.85	1.84	1.57	2.80	4.20	9.65	14.45	3.45	3.44	0.14	0.18	6
HB	HB3	HB3	HB3-04	26 16 54.6	16 52 48.4	3-4	2.93	2.2	1.43	4.83	7.24	14.81	21.65	3.07	2.99	N/A	N/A	N/A
HB	HB3	HB3	HB3-05	26 16 54.6	16 52 48.4	5-6	2.74	2.65	0.85	3.23	4.85	13.63	18.60	4.22	3.84	0.09	0.12	9
HB	HB3	HB3	HB3-06	26 16 54.6	16 52 48.4	3-4	4.31	2.55	0.97	5.58	8.37	20.52	27.72	3.68	3.31	N/A	N/A	N/A
HB	HB3	HB3	HB3-07	26 16 54.6	16 52 48.4	3-4	3.13	2.03	0.76	2.53	3.79	11.90	16.14	4.71	4.26	0.14	0.18	6
HB	HB3	HB3	HB3-08	26 16 54.6	16 52 48.4	2-3	4.05	3.5	1.32	9.80	14.70	27.36	37.92	2.79	2.58	0.15	0.2	14
HB	HB3	HB3	HB3-09	26 16 54.6	16 52 48.4	2-3	2.99	2.1	0.5	1.64	2.47	10.88	13.86	6.62	5.62	N/A	N/A	N/A
HB	HB3	HB3	HB3-10	26 16 54.6	16 52 48.4	2-3	2.8	1.83	0.78	2.09	3.14	9.93	13.72	4.75	4.37	0.09	0.13	16
HB	HB3	HB3	HB3-11	26 16 54.6	16 52 48.4	1-2	2.01	1.55	1.22	1.99	2.99	7.91	11.72	3.97	3.92	N/A	N/A	N/A
HB	HB3	HB3	HB3-12	26 16 54.6	16 52 48.4	1	1.5	0.94	0.85	0.63	0.94	3.71	5.47	5.90	5.81	N/A	N/A	N/A
HB	HB3	HB3	HB3-13	26 16 54.6	16 52 48.4	3-4	1.26	1.04	0.69	0.47	0.71	3.09	4.55	6.54	6.41	N/A	N/A	N/A
HB	HB3	HB3	HB3-14	26 16 54.6	16 52 48.4	4-5	3.34	3.01	0.83	4.37	6.55	18.14	24.07	4.15	3.67	0.1	0.18	8
HB	HB3	HB3	HB3-15	26 16 54.6	16 52 48.4	5-6	3.99	3.15	1.09	7.17	10.76	23.51	31.97	3.28	2.97	0.16	0.17	3
HB	HB3	HB3	HB3-16	26 16 54.6	16 52 48.4	5-6	4.19	2.98	1.49	9.74	14.61	25.66	36.39	2.63	2.49	0.08	0.12	13
HB	HB3	HB3	HB3-17	26 16 54.6	16 52 48.4	7-8	4.82	3.56	1.11	9.97	14.96	31.20	41.56	3.13	2.78	0.12	0.17	13
HB	HB3	HB3	HB3-18	26 18 49.0	16 53 40.2	3-4	5.52	4.59	2.94	39.00	58.50	58.95	86.49	1.51	1.48	0.13	0.21	10
HB	HBGS	HBGS	HBGS-01	26 18 49.0	16 53 40.2	3-4	3.98	2.91	1.93	11.70	17.56	26.74	39.08	2.28	2.23	0.12	0.18	9
HB	HBGS	HBGS	HBGS-02	26 18 49.0	16 53 40.2	3-4	3.76	2.78	1.73	9.47	14.20	23.50	34.19	2.48	2.41	0.13	0.19	9
HB	HBGS	HBGS	HBGS-03	26 18 49.0	16 53 40.2	3-4	3.01	2.57	2.93	11.87	17.80	25.26	37.83	2.13	2.13	0.15	0.19	7
HB	HBGS	HBGS	HBGS-04	26 18 49.0	16 53 40.2	2-3	4.21	2.41	2.46	13.07	19.60	28.13	41.52	2.15	2.12	0.16	0.19	10
HB	HBGS	HBGS	HBGS-05	26 18 49.0	16 53 40.2	2-3	2.76	1.9	2.35	6.45	9.68	17.08	25.44	2.65	2.63	0.14	0.18	7
HB	HBGS	HBGS	HBGS-06	26 18 49.0	16 53 40.2	3-4	3.46	1.63	1.5	4.43	6.64	14.34	20.85	3.24	3.14	0.16	0.21	15
HB	HBGS	HBGS	HBGS-07	26 18 49.0	16 53 40.2	2-3	4.11	2.96	3.05	19.43	29.14	35.53	52.98	1.83	1.82	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-08	26 18 49.0	16 53 40.2	2-3	2.8	2.64	5.93	22.95	34.43	42.78	62.28	1.86	1.81	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-09	26 18 49.0	16 53 40.2	3-4	2.72	2.56	2.11	7.69	11.54	19.03	28.44	2.47	2.46	0.12	0.17	7
HB	HBGS	HBGS	HBGS-10	26 18 49.0	16 53 40.2	3-4	3.56	2.68	2.33	11.64	17.46	25.43	37.82	2.19	2.17	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-11	26 18 49.0	16 53 40.2	2-3	3.02	2.13	5.01	16.87	25.31	34.86	50.63	2.07	2.00	0.12	0.19	7
HB	HBGS	HBGS	HBGS-12	26 18 49.0	16 53 40.2	4-5	3.36	1.97	2.17	7.52	11.28	19.31	28.57	2.57	2.53	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-13	26 18 49.0	16 53 40.2	2-3	4.81	4.26	4.56	48.92	73.39	64.82	97.15	1.32	1.32	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-14	26 18 49.0	16 53 40.2	2-3	2.63	2.04	2.73	7.67	11.50	19.07	28.45	2.49	2.47	0.14	0.2	8
HB	HBGS	HBGS	HBGS-15	26 18 49.0	16 53 40.2	3-4	2.73	1.85	2.09	5.53	8.29	15.43	22.97	2.79	2.77	0.12	0.17	12
HB	HBGS	HBGS	HBGS-16	26 18 49.0	16 53 40.2	3-4	3.05	2.84	1.39	6.30	9.46	18.39	26.47	2.92	2.80	0.13	0.16	9
HB	HBGS	HBGS	HBGS-17	26 18 49.0	16 53 40.2	3-4	2.86	2.41	1.78	6.42	9.64	17.24	25.56	2.68	2.65	0.16	0.22	9
HB	HBGS	HBGS	HBGS-18	26 18 49.0	16 53 40.2	2-3	3.32	2.5	1.93	8.39	12.58	20.75	30.68	2.47	2.44	0.13	0.2	8
HB	HBGS	HBGS	HBGS-19	26 18 49.0	16 53 40.2	3-4	2.39	1.84	2.04	4.70	7.05	13.69	20.46	2.91	2.90	0.12	0.18	6
HB	HBGS	HBGS	HBGS-20	26 18 49.0	16 53 40.2	3-4	3.5	2.16	2.47	9.78	14.67	22.81	33.84	2.33	2.31	0.16	0.21	12

HB	HBGS	HBGS	HBGS-21	26 18 49.0	16 53 40.2	3-4	3.85	2.42	2.55	12.44	18.66	26.80	39.75	2.15	2.13	0.17	0.22	18
HB	HBGS	HBGS	HBGS-22	26 18 49.0	16 53 40.2	1-2	3.34	2.81	2.73	13.42	20.12	27.47	41.12	2.05	2.04	0.15	0.19	6
HB	HBGS	HBGS	HBGS-23	26 18 49.0	16 53 40.2	2-3	2.22	1.98	0.8	1.84	2.76	8.69	12.18	4.72	4.41	0.13	0.19	8
HB	HBGS	HBGS	HBGS-24	26 18 49.0	16 53 40.2	2-3	2.22	1.99	0.91	2.10	3.16	9.10	12.96	4.32	4.10	0.16	0.19	8
HB	HBGS	HBGS	HBGS-25	26 18 49.0	16 53 40.2	1-2	2.95	1.48	1.25	2.86	4.29	10.70	15.56	3.74	3.63	0.13	0.2	7
HB	HBGS	HBGS	HBGS-26	26 18 49.0	16 53 40.2	3-4	2.45	1.5	1.85	3.56	5.34	11.63	17.25	3.27	3.23	0.14	0.2	8
HB	HBGS	HBGS	HBGS-27	26 18 49.0	16 53 40.2	3-4	2.98	2.5	1.24	4.84	7.26	15.62	22.38	3.23	3.08	0.12	0.14	10
HB	HBGS	HBGS	HBGS-28	26 18 49.0	16 53 40.2	1-2	4.21	3.2	2.66	18.76	28.15	35.10	52.12	1.87	1.85	0.11	0.15	12
HB	HBGS	HBGS	HBGS-29	26 18 49.0	16 53 40.2	2-3	1.94	1.6	1.54	2.50	3.75	8.99	13.44	3.59	3.58	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-30	26 18 49.0	16 53 40.2	2-3	3.36	2.24	1.2	4.73	7.09	15.72	22.38	3.32	3.15	0.14	0.19	18
HB	HBGS	HBGS	HBGS-31	26 18 49.0	16 53 40.2	2-3	3.14	2.31	0.71	2.70	4.04	13.15	17.47	4.88	4.32	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-32	26 18 49.0	16 53 40.2	3-4	2.64	1.74	1.48	3.56	5.34	11.78	17.40	3.31	3.26	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-33	26 18 49.0	16 53 40.2	2-3	3.37	2.37	2.05	8.57	12.86	20.93	31.03	2.44	2.41	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-34	26 18 49.0	16 53 40.2	2-3	2.63	1.65	2.31	5.25	7.87	15.08	22.35	2.87	2.84	0.12	0.2	7
HB	HBGS	HBGS	HBGS-35	26 18 49.0	16 53 40.2	1-2	2.55	1.43	1.58	3.02	4.53	10.57	15.61	3.50	3.45	0.14	0.18	10
HB	HBGS	HBGS	HBGS-36	26 18 49.0	16 53 40.2	3-4	2.97	2.31	1.06	3.81	5.71	13.86	19.57	3.64	3.43	0.14	0.19	13
HB	HBGS	HBGS	HBGS-37	26 18 49.0	16 53 40.2	2-3	2.88	1.99	0.82	2.46	3.69	11.06	15.28	4.50	4.14	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-38	26 18 49.0	16 53 40.2	2-3	2.42	2.06	1.41	3.68	5.52	12.03	17.75	3.27	3.22	0.13	0.17	9
HB	HBGS	HBGS	HBGS-39	26 18 49.0	16 53 40.2	3-4	2.36	1.64	2.02	4.09	6.14	12.60	18.77	3.08	3.06	0.13	0.19	13
HB	HBGS	HBGS	HBGS-40	26 18 49.0	16 53 40.2	1-2	4.17	2.63	3.09	17.74	26.62	33.83	50.23	1.91	1.89	0.18	0.23	9
HB	HBGS	HBGS	HBGS-41	26 18 49.0	16 53 40.2	2-3	2.39	1.94	1.73	4.20	6.30	12.76	19.05	3.04	3.02	0.13	0.17	10
HB	HBGS	HBGS	HBGS-42	26 18 49.0	16 53 40.2	3-4	2.95	2.45	1.79	6.77	10.16	17.92	26.54	2.65	2.61	0.12	0.15	9
HB	HBGS	HBGS	HBGS-43	26 18 49.0	16 53 40.2	2-3	2.62	2.01	1.2	3.31	4.96	11.71	17.00	3.54	3.43	0.15	0.2	9
HB	HBGS	HBGS	Sample and Rock	27 18 49.0	17 53 40.2	3-4	4.18	2.37	1.2	6.22	9.34	19.95	27.91	3.20	2.99	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-44	28 18 49.0	18 53 40.2	3-4	3.19	2	2.36	7.88	11.83	19.71	29.26	2.50	2.47	0.17	0.21	10
HB	HBGS	HBGS	HBGS-45	26 18 49.0	16 53 40.2	2-3	3.58	3.26	2.44	14.91	22.37	29.95	44.55	2.01	1.99	0.07	0.14	12
HB	HBGS	HBGS	HBGS-46	26 18 49.0	16 53 40.2	3-4	3.71	2	1.49	5.79	8.68	17.27	25.02	2.98	2.88	0.18	0.22	5
HB	HBGS	HBGS	HBGS-47	26 18 49.0	16 53 40.2	2-3	4.18	2.9	2.31	14.66	21.99	30.31	44.73	2.07	2.03	0.16	0.21	11
HB	HBGS	HBGS	HBGS-48	26 18 49.0	16 53 40.2	2-3	3.52	2.6	2.16	10.35	15.53	23.69	35.14	2.29	2.26	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-49	26 18 49.0	16 53 40.2	2-3	3.14	2.58	1.03	4.37	6.55	15.79	21.98	3.61	3.35	0.1	0.14	9
HB	HBGS	HBGS	HBGS-50	26 18 49.0	16 53 40.2	2-3	3.63	2.49	1.3	6.15	9.23	18.77	26.70	3.05	2.89	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-51	26 18 49.0	16 53 40.2	2-3	3.52	2.33	1.72	7.39	11.08	19.58	28.69	2.65	2.59	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-52	26 18 49.0	16 53 40.2	1-2	3.58	2.08	1.91	7.45	11.17	19.48	28.68	2.62	2.57	0.15	0.18	11
HB	HBGS	HBGS	HBGS-53	26 18 49.0	16 53 40.2	2-3	2.71	2.06	1.98	5.79	8.68	15.82	23.60	2.73	2.72	0.14	0.18	15
HB	HBGS	HBGS	HBGS-54	26 18 49.0	16 53 40.2	2-3	2.52	1.89	2.08	5.19	7.78	14.65	21.89	2.82	2.81	0.14	0.2	9
HB	HBGS	HBGS	HBGS-55	26 18 49.0	16 53 40.2	2-3	3.24	2.48	3.38	14.22	21.33	28.83	42.99	2.03	2.02	0.16	0.2	11

HB	HBGS	HBGS	HBGS-56	26 18 49.0	16 53 40.2	2-3	3.99	2.89	1.48	8.94	13.40	23.95	34.11	2.68	2.54	0.18	0.23	11
HB	HBGS	HBGS	HBGS-57	26 18 49.0	16 53 40.2	2	3.15	2.35	1.99	7.71	11.57	19.41	28.82	2.52	2.49	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-58	26 18 49.0	16 53 40.2	3-4	2.83	2.35	0.83	2.89	4.34	12.56	17.20	4.35	3.97	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-59	26 18 49.0	16 53 40.2	2-3	4.04	3.2	1.34	9.07	13.61	25.44	35.55	2.80	2.61	0.13	0.19	9
HB	HBGS	HBGS	HBGS-60	26 18 49.0	16 53 40.2	3-4	2.66	3.01	1.6	6.71	10.06	18.32	26.83	2.73	2.67	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-61	26 18 49.0	16 53 40.2	2-3	3.53	3.28	1.46	8.85	13.28	23.76	33.81	2.68	2.55	0.9	0.11	8
HB	HBGS	HBGS	HBGS-62	26 18 49.0	16 53 40.2	1-2	3.43	1.72	3.11	9.61	14.41	23.66	34.43	2.46	2.39	0.13	0.17	11
HB	HBGS	HBGS	HBGS-63	26 18 49.0	16 53 40.2	3-4	2.7	2.33	1.44	4.74	7.11	14.51	21.26	3.06	2.99	0.1	0.17	11
HB	HBGS	HBGS	HBGS-64	26 18 49.0	16 53 40.2	2-3	3.86	3.18	1.4	9.00	13.50	24.65	34.76	2.74	2.58	0.14	0.2	14
HB	HBGS	HBGS	HBGS-65	26 18 49.0	16 53 40.2	2-3	3.64	3	1.2	6.86	10.29	21.31	29.67	3.11	2.88	0.13	0.18	15
HB	HBGS	HBGS	HBGS-66	26 18 49.0	16 53 40.2	2-3	3.53	2.61	2.83	13.65	20.48	27.97	41.77	2.05	2.04	0.12	0.18	17
HB	HBGS	HBGS	HBGS-67	26 18 49.0	16 53 40.2	1-2	3.46	2.3	1.79	7.46	11.19	19.51	28.70	2.62	2.56	0.12	0.17	11
HB	HBGS	HBGS	HBGS-68	26 18 49.0	16 53 40.2	3-4	2.65	2.17	1.02	3.07	4.61	11.79	16.76	3.84	3.64	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-69	26 18 49.0	16 53 40.2	3-4	4.12	2.59	2.05	11.45	17.18	26.14	38.37	2.28	2.23	N/A	N/A	N/A
HB	HBGS	HBGS	HBGS-70	27 18 49.0	17 53 40.2	3-4	4.17	3.07	2.99	20.04	30.06	36.30	54.11	1.81	1.80	0.13	0.19	12

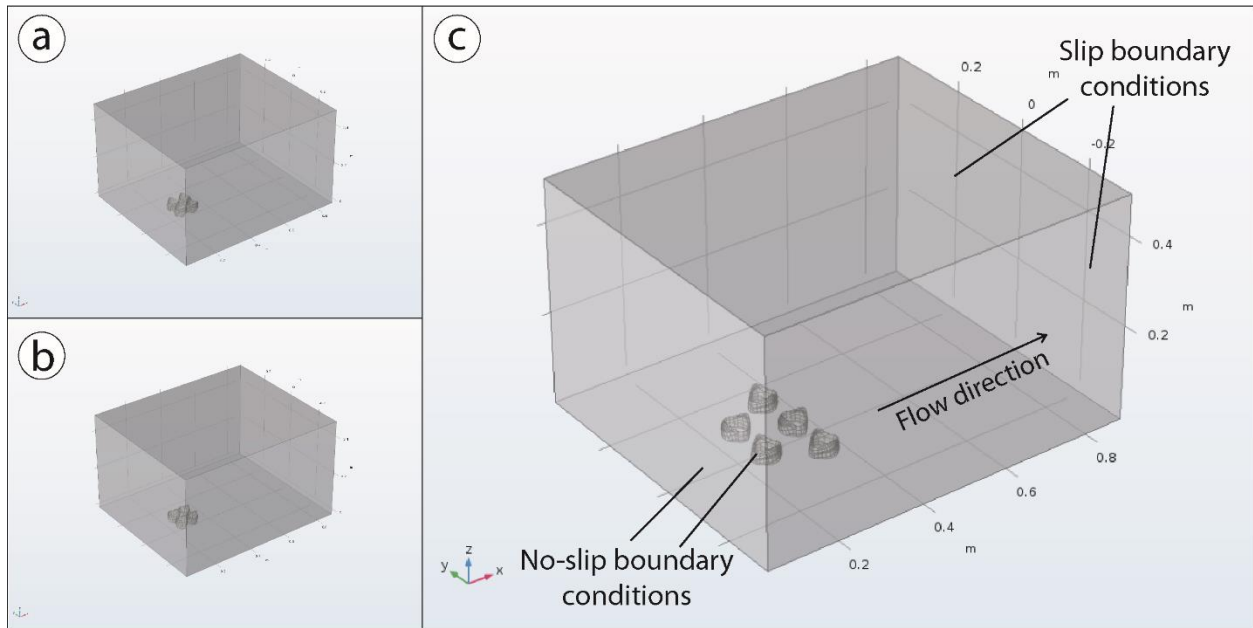


Fig. S3. Select examples of CFD simulation setup. a) Parallel clumped. b) Perpendicular clumped. c) Mixed offset setup showing slip/no-slip conditions and flow direction.

Table S2. Sensitivity analyses for meshing.

Density of fluid (kg/m ³)		Dynamic viscosity of fluid (kg/(s·m))														
1000		0.001		Model	Burial depth	Orientation	Characteristic dimension (m)	Reference area (m ²)	Mesh size	Number of elements	Velocity (m/s)	Reynolds number	Drag force (N)	Drag coefficient	Difference from extra coarse mesh	
Single individual	Shallow	Parallel	0.059	0.0032	Extra coarse	116454	0.10	5900	0.0119716	466559836	0	0.7482279	15998975			
									0.0458390	448725999	0	0.7162350	76134373			
									0.2557721	173372060	0	0.6394302	93343015			
									0.50	29500	0					
							Coarser	212727	0.10	5900	0.0117160	986923044	0	0.7322561	68269025	-2.13%
											0.0457004	305595039	0	0.7140692	27492248	-0.30%
											0.2666390	609021620	0	0.6665976	52255405	4.25%
											0.50	29500	0			
							Coarse	400421	0.10	5900	0.0113553	670038049	0	0.7097104	37737806	-3.08%
											0.0446876	874227407	0	0.6982451	15980323	-2.22%
											0.2671847	771292140	0	0.6679619	42823035	0.20%
											0.50	29500	0			
					Normal	783250	0.10	5900	0.0111549	871723099	0	0.6971866	98269369	-1.76%		
									0.0443515	604810512	0	0.6929931	32516425	-0.75%		
									0.2745139	143245500	0	0.6862847	85811375	2.74%		
									0.50	29500	0					

To establish the optimal mesh size to use in our CFD simulations, we repeated simulations for a single individual of *Ernietta* oriented parallel to the current with shallow burial using different mesh sizes. We compared the drag forces for these different mesh sizes to identify the coarsest mesh that would guarantee the computational accuracy of the simulation (i.e. the results were not substantially different from a finer mesh).

Section S1. Reynolds number and drag coefficient calculations for characterizing flow regimes

Reynolds numbers (Re) were calculated using the following equation

$$Re = \rho u L / \mu \quad (1)$$

ρ is the density of water (1000 kg m^{-3}), u is the inlet velocity ($0.1, 0.2, \text{ or } 0.5 \text{ m s}^{-1}$), L is the characteristic dimension (Height of model exposed to flow; S. Fig. 7.1), and μ is the dynamic viscosity of water ($0.001 \text{ kg m}^{-1} \text{ s}^{-1}$).

Drag forces were calculated to quantify the forces exerted by the fluid on *Ernietta*. The results were used to calculate the coefficients of drag by solving the following equation

$$C_d = 2F_d / \rho u^2 A \quad (2)$$

where C_d is the drag coefficient, F_d is the drag force (N), ρ is the fluid density (kg/m^3), u is the inlet velocity (m/s), and A is the characteristic area (m^2). Here, the characteristic area is the surface area of *Ernietta* exposed above the sediment water interface, which varied depending on the burial depth.

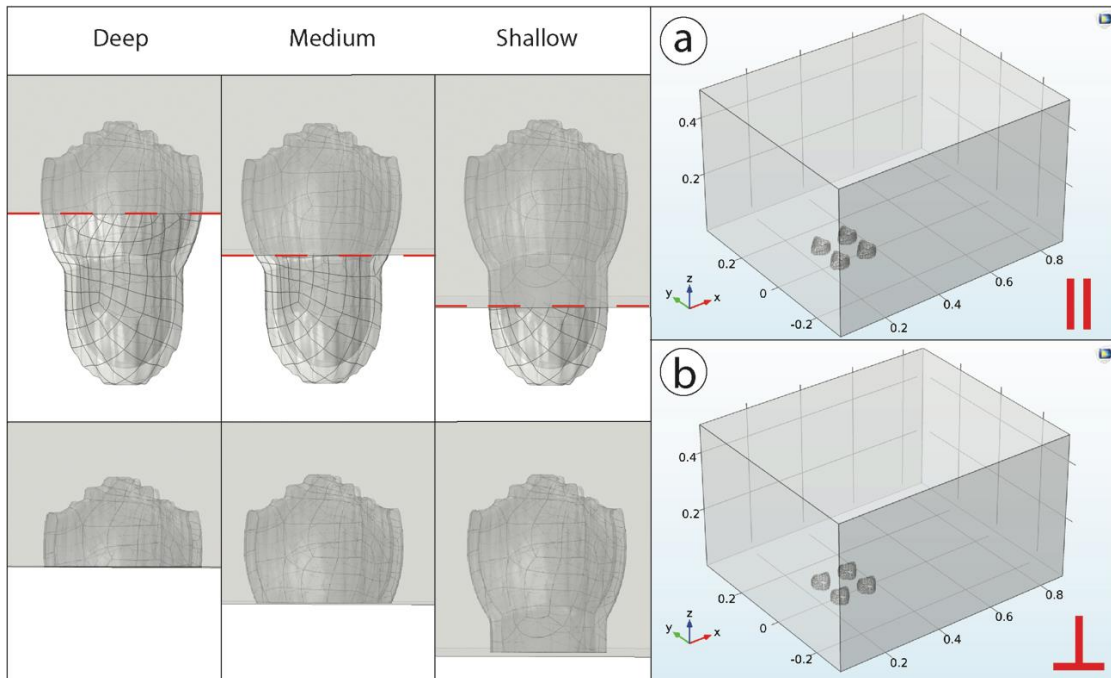


Fig. S4. Frontal surface area at respective burial depth for calculations. a) Parallel orientation with respect to flow. **b)** Perpendicular orientation with respect to flow. Characteristic length scale was frontal area with respect to flow.

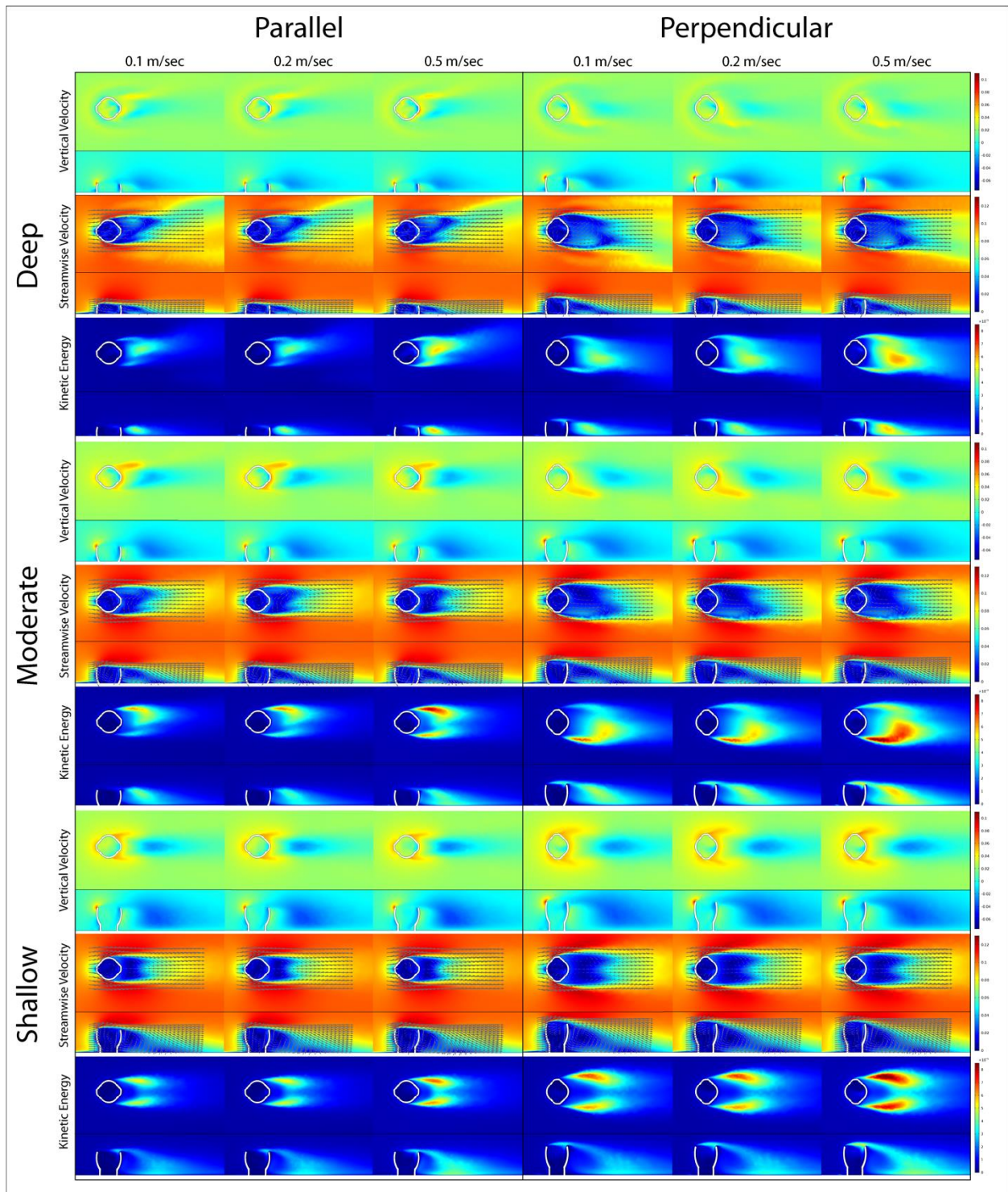


Fig. S5. CFD results for single-individual model. Results visualized as two-dimensional plots of vertical velocity magnitude, average flow velocity magnitude with flow vectors (gray arrows; length of arrows proportional to the natural logarithm of the flow velocity magnitude), and kinetic energy.

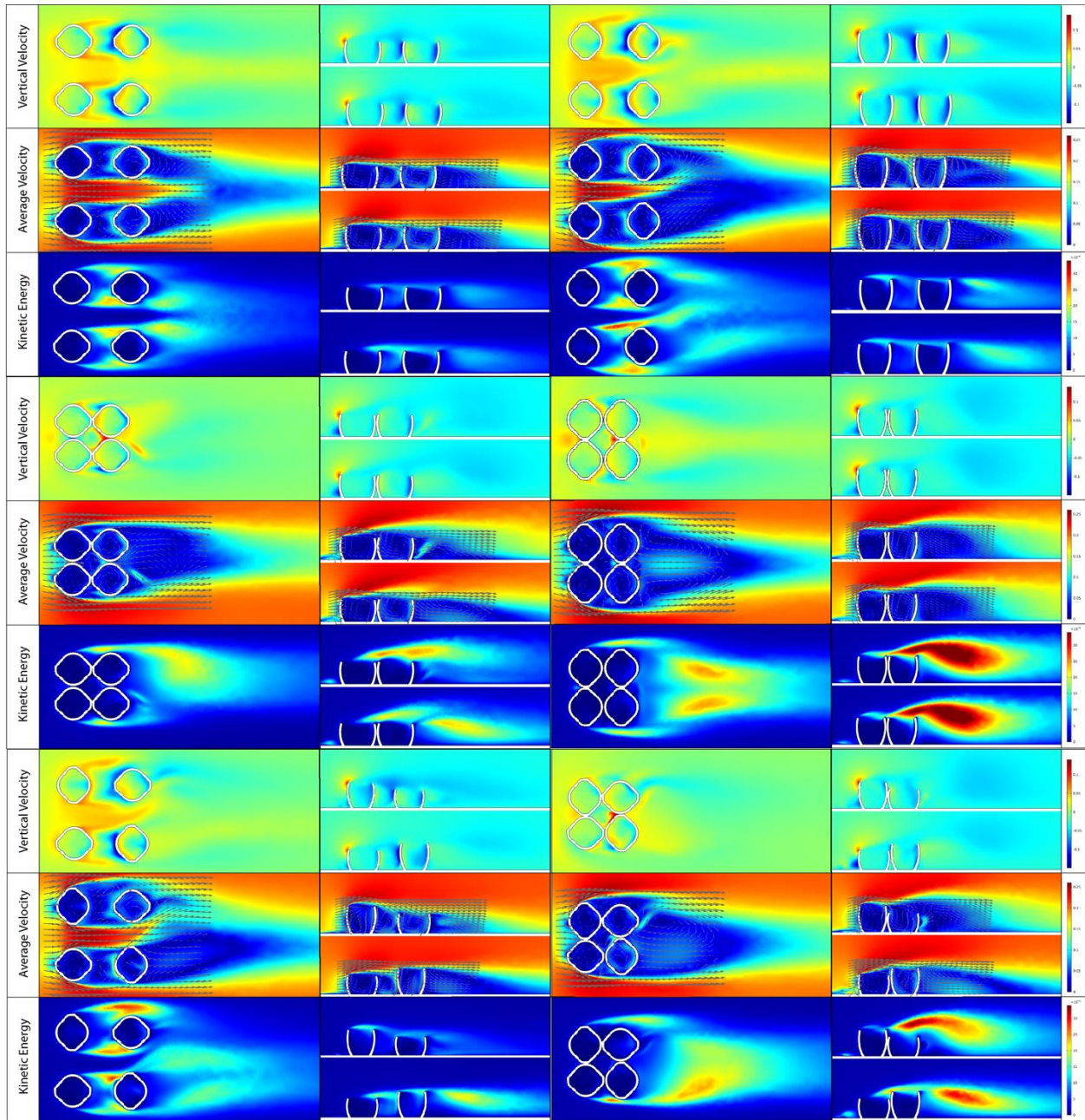


Fig. S6. CFD results for multiple-individual model. Results visualized as two-dimensional plots of vertical velocity magnitude, average flow velocity magnitude with flow vectors (gray arrows; length of arrows proportional to the natural logarithm of the flow velocity magnitude), and kinetic energy.

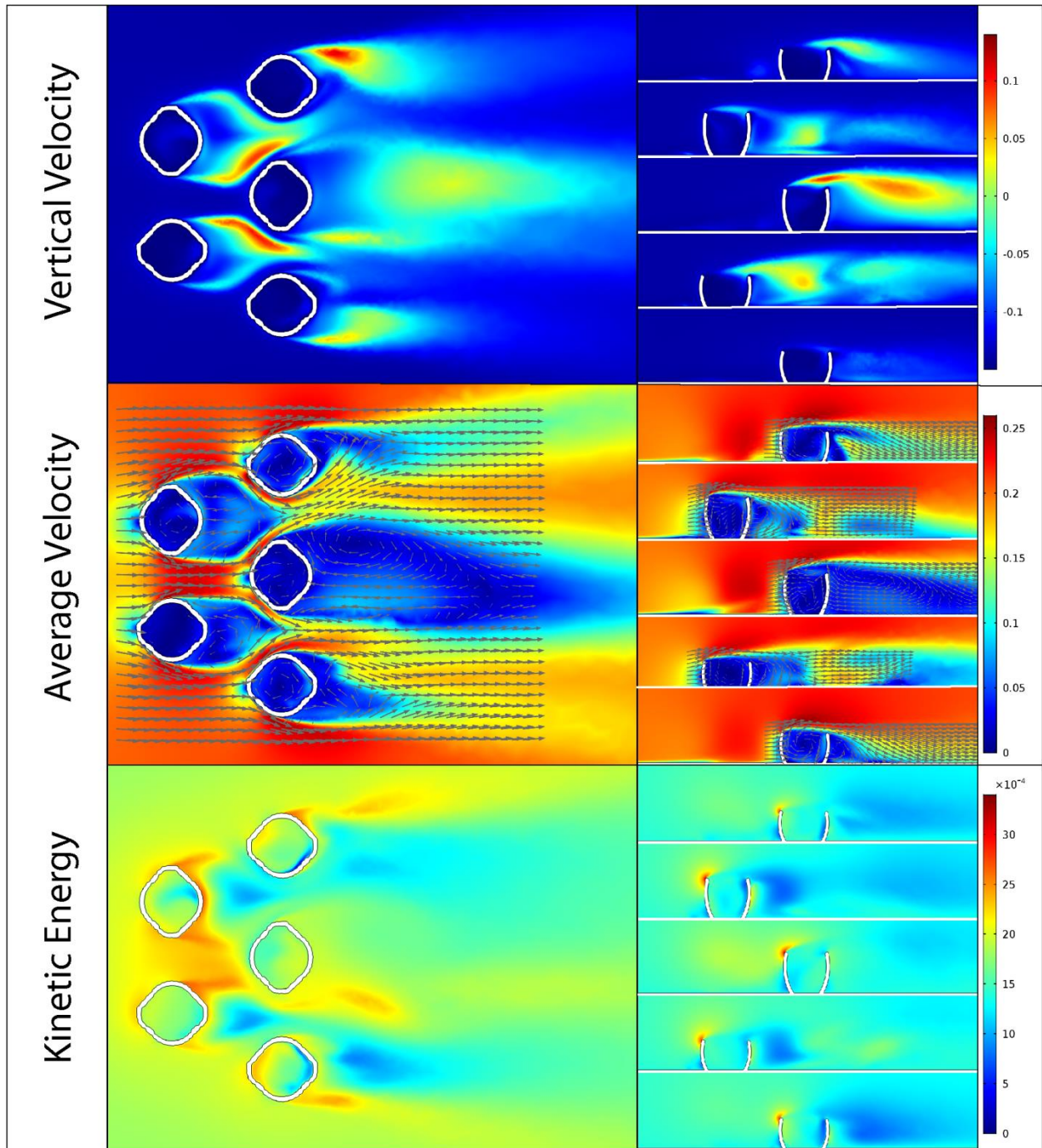


Fig. S7. CFD results for offset multiple-individual model. Results visualized as two-dimensional plots of vertical velocity magnitude, average flow velocity magnitude with flow vectors (gray arrows; length of arrows proportional to the natural logarithm of the flow velocity magnitude), and kinetic energy.

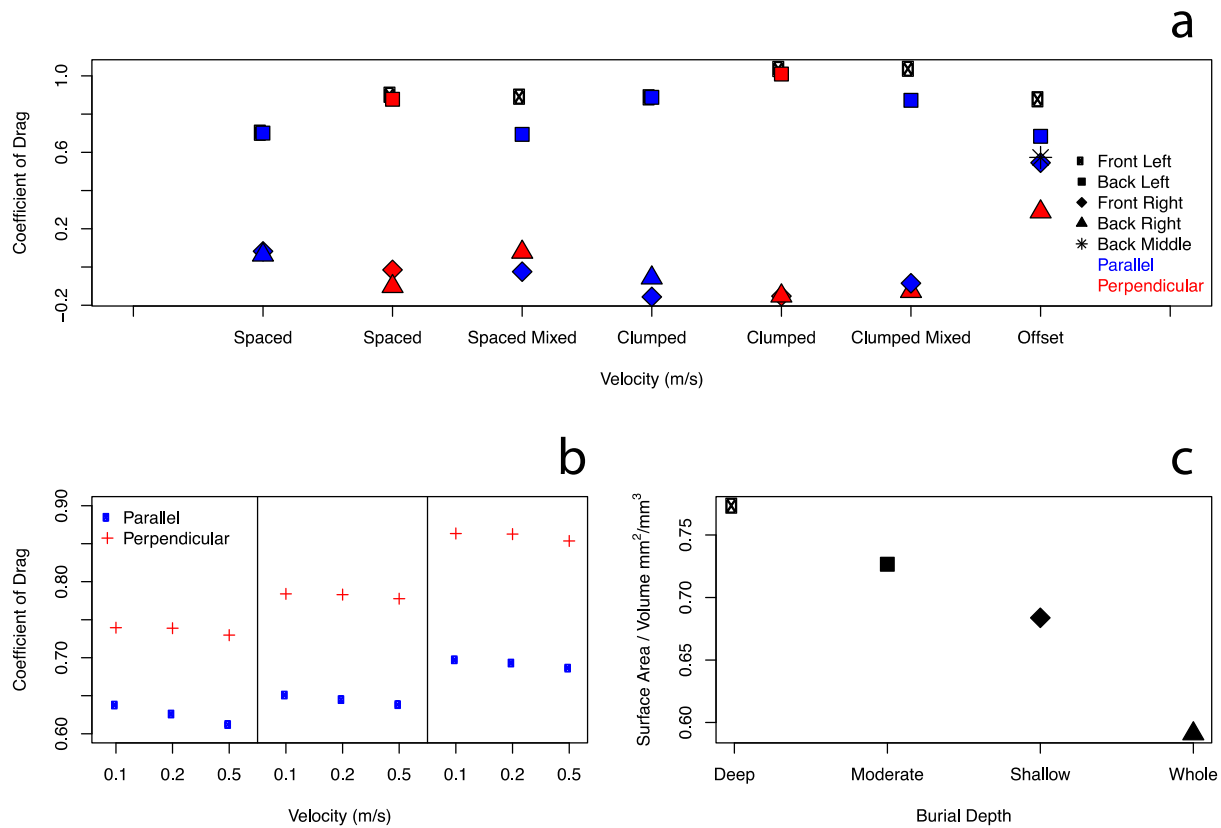


Fig. S8. CFD drag results and SA/V values for all models. a) Coefficients of drag for multiple model simulations. b) Coefficients of drag for single model simulations. c) SA/V ratios for individual models at four burial depths.

Movie S1. 2D FSI simulation of *Ernietta* in perpendicular orientation. Initial frames are showing the simulation building to steady state.

Movie S2. 3D FSI simulation of *Ernietta* in parallel orientation. Initial frames are showing the simulation building to steady state.