

Table 2. Metagenomic data in Fig. 2 and SI Fig 6

	Total ORFs	Similarity		Neighborhood		Combined		Overall	
Environments Combined (60 bits)	1,438,944	938,342	65.2%	248,943	17.3%	938,342	65.2%	1,097,085	76.2%
				23,274	1.6%	0	0.0%		
				14,502	1.0%	0	0.0%		
				651,623	45.3%	0	0.0%		
		187,249	13.0%	88,964	6.2%	88,964	6.2%	103,954	7.2%
				3,095	0.2%	98,285	6.8%		
				1,757	0.1%	0	0.0%		
				93,433	6.5%	0	0.0%		
		133,459	9.3%	57,394	4.0%	57,394	4.0%	76,801	5.3%
				1,824	0.1%	1,824	0.1%		
				2,925	0.2%	74,241	5.2%		
				71,316	5.0%	0	0.0%		
		179,894	12.5%	12,385	0.9%	12,385	0.9%	161,104	11.2%
				3,845	0.3%	3,845	0.3%		
2,560	0.2%			2,560	0.2%				
161,104	11.2%			161,104	11.2%				
Whale Fall (60 bits)	122,146	66,055	54.1%	13,637	11.2%	66,055	54.1%	80,557	66.0%
				2,069	1.7%	0	0.0%		
				1,357	1.1%	0	0.0%		
				48,992	40.1%	0	0.0%		
		16,714	13.7%	7,436	6.1%	7,436	6.1%	10,395	8.5%
				469	0.4%	9,278	7.6%		
				265	0.2%	0	0.0%		
				8,544	7.0%	0	0.0%		
		12,765	10.5%	5,032	4.1%	5,032	4.1%	8,049	6.6%
				290	0.2%	290	0.2%		
				468	0.4%	7,443	6.1%		
				6,975	5.7%	0	0.0%		
		26,612	21.8%	2,034	1.7%	2,034	1.7%	23,145	19.0%
				827	0.7%	827	0.7%		
606	0.5%			606	0.5%				
23,145	19.0%			23,145	19.0%				
Surface Sea Water (60 bits)	1,086,400	772,660	71.1%	218,182	20.1%	772,660	71.1%	893,306	82.2%
				18,373	1.7%	0	0.0%		
				11,531	1.1%	0	0.0%		
				524,574	48.3%	0	0.0%		
		135,913	12.5%	69,587	6.4%	69,587	6.4%	68,475	6.3%
				1,770	0.2%	66,326	6.1%		
				1,065	0.1%	0	0.0%		
				63,491	5.8%	0	0.0%		
		100,673	9.3%	44,456	4.1%	44,456	4.1%	56,076	5.2%
				1,126	0.1%	1,126	0.1%		
				1,906	0.2%	55,091	5.1%		
				53,185	4.9%	0	0.0%		
		77,154	7.1%	6,603	0.6%	6,603	0.6%	68,543	6.3%
				1,023	0.1%	1,023	0.1%		
985	0.1%			985	0.1%				
68,543	6.3%			68,543	6.3%				
Acid Mine (60 bits)	46,862	20,643	44.1%	5,297	11.3%	20,643	44.1%	25,295	54.0%
				658	1.4%	0	0.0%		
				626	1.3%	0	0.0%		
				14,062	30.0%	0	0.0%		
		5,523	11.8%	2,268	4.8%	2,268	4.8%	3,803	8.1%
				186	0.4%	3,255	7.0%		
				113	0.2%	0	0.0%		
				2,956	6.3%	0	0.0%		
		4,360	9.3%	1,527	3.3%	1,527	3.3%	2,940	6.3%
				141	0.3%	141	0.3%		
				221	0.5%	2,692	5.7%		
				2,471	5.3%	0	0.0%		
		16,336	34.9%	857	1.8%	857	1.8%	14,824	31.6%
				407	0.9%	407	0.9%		
248	0.5%			248	0.5%				
14,824	31.6%			14,824	31.6%				
Minnesota Soil (60 bits)	183,536	78,984	43.0%	11,827	6.4%	78,984	43.0%	97,927	53.4%
				2,174	1.2%	0	0.0%		
				988	0.5%	0	0.0%		
				63,995	34.9%	0	0.0%		
		29,099	15.9%	9,673	5.3%	9,673	5.3%	21,281	11.6%
				670	0.4%	19,426	10.6%		
				314	0.2%	0	0.0%		
				18,442	10.1%	0	0.0%		
		15,661	8.5%	6,379	3.5%	6,379	3.5%	9,736	5.3%
				267	0.2%	267	0.2%		
				330	0.2%	9,015	4.9%		
				8,685	4.7%	0	0.0%		
		59,792	32.6%	2,891	1.6%	2,891	1.6%	54,592	29.7%
				1,588	0.9%	1,588	0.9%		
721	0.4%			721	0.4%				
54,592	29.7%			54,592	29.7%				

Moving from top to bottom is equivalent to moving clockwise around the pie chart and moving from left to right across the table is equivalent to moving from the inner pie to the outside ring of the 60 bit column of SI Fig. 6. A description of the colors used and the corresponding categories can be found in Fig. 2.