

## SUPPLEMENTAL FIGURES and TABLES

Figure S1: Map of each vent field showing locations of multiple hydrothermal structures and approximate video transect locations. Note the tilted view on the PB inset featuring active chimneys in the north.

Figure S2: The Pescadero Transform Fault seep was dominated by dense aggregations of the siboglinid tubeworms (A) *Escarpia spicata* and (B) *Lamellibrachia barhami*.

Table S1: Taxa presence and absence at five sites, based on past and current collections, video transects, and literature. Pescadero Basin and Alarcón Rise vent fields, and the closest known hot vents to the north and south (Guaymas Basin and 21°N EPR).  
Pescadero Transform Fault seeps.

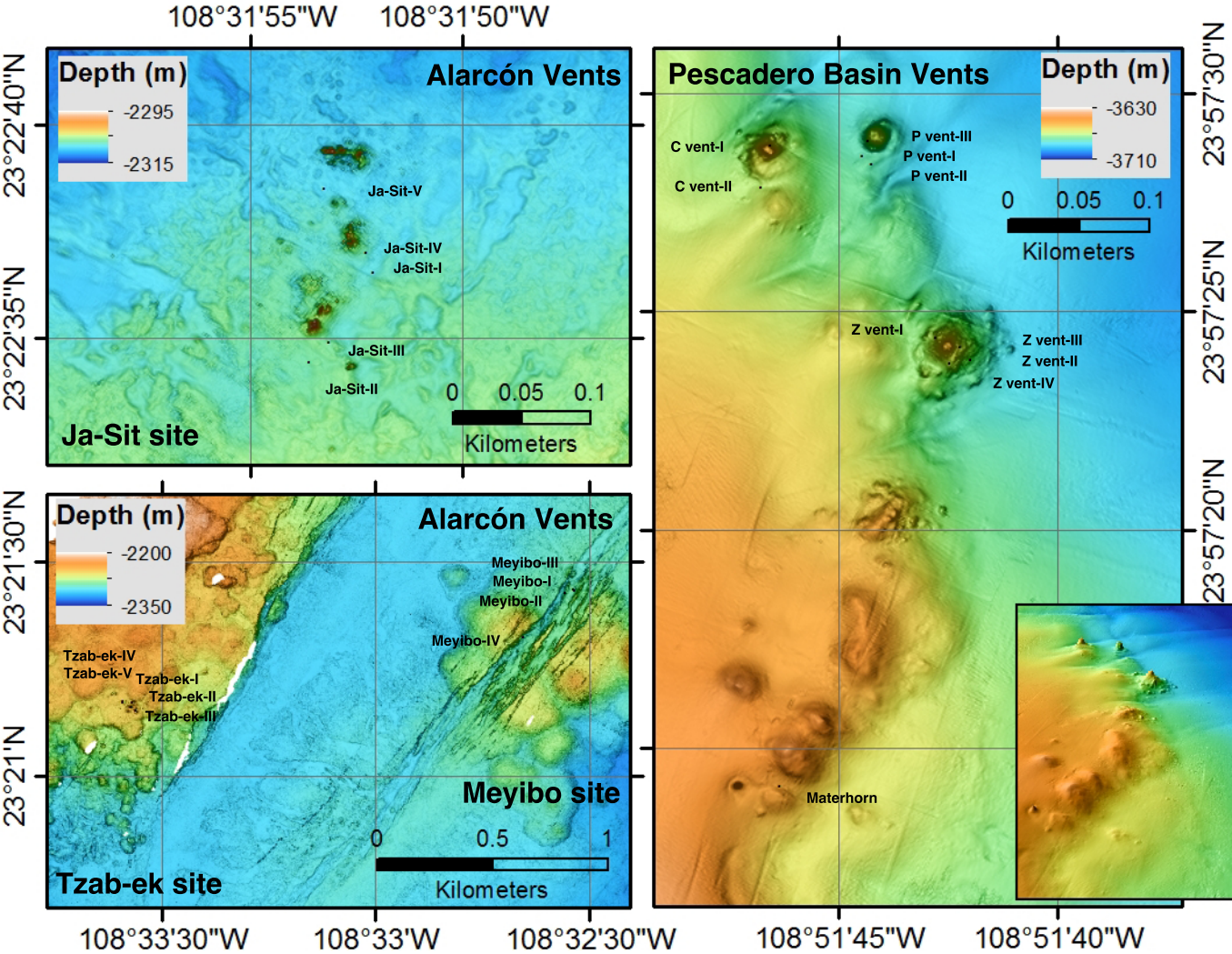
Table S2: PCR primers and conditions used to amplify and sequence genes for identification for each taxonomic group extracted.

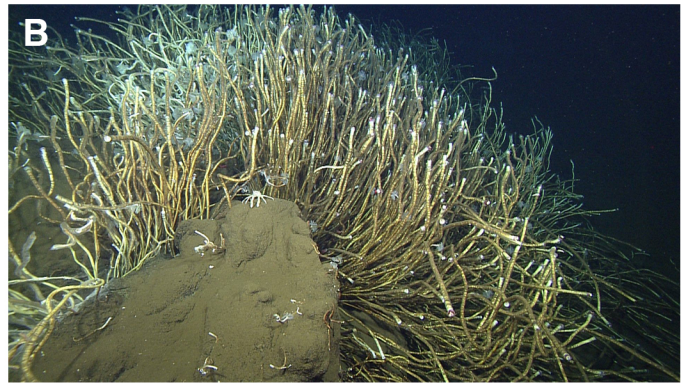
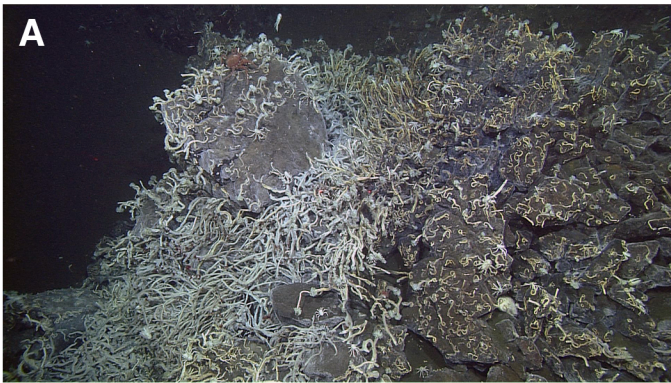
Table S3: Larval detection, via environmental DNA analysis from 100- $\mu$ m filtered seawater collected at 5 different depths at each site. Taxa detected in the water column are indicated via an *l*. Taxa collected or observed via video are indicated by an x.

Table S4: Faunal type and abundance ( $\# \text{ m}^{-2}$ ) for Pescadero Basin vents, identified from 10 video transects at four venting structures.

Table S5: Faunal type and abundance ( $\# \text{ m}^{-2}$ ) for Alarcón Rise vents, identified from 14 video transects at three vent fields.

Table S6: Mean ( $\pm$ SD) and individual values of  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  of the fauna from Pescadero Basin (PB), Alarcón Rise (AR), and Pescadero Transform Fault (PTF). N = number of individuals.





Supplemental Table 1: Taxa presence and absence at five sites, based on past and current collections, video transects, and literature.  
Pescadero Basin and Alarcón Rise vent fields, and the closest known hot vents to the north and south (Guaymas Basin and 21°N EPR).

Phylum	Family	Taxon	21N EPR	AR vents	PB vents	PTF Seeps	GUY vents
Annelida	Alvinellidae	<i>Alvinella caudata</i>	1	1	0	0	0
Annelida	Alvinellidae	<i>Alvinella pompejana</i>	1	1	0	0	0
Annelida	Alvinellidae	<i>Paralvinella grasslei</i>	1	1	1	0	1
Annelida	Alvinellidae	<i>Paralvinella n. sp.</i>	0	0	1	0	0
Annelida	Alvinellidae	<i>Paralvinella palmiformis</i>	1	1	0	0	0
Annelida	Alvinellidae	<i>Paralvinella bacteriocola</i>	0	0	0	0	1
Annelida	Ampharetidae	<i>Amphisamytha galapagensis</i>	1	0	0	0	0
Annelida	Ampharetidae	<i>Amphisamytha fauchaldi</i>	0	1	0	0	1
Annelida	Amphinomidae	<i>Amphinome sp.</i>	0	0	0	0	1
Annelida	Amphinomidae	<i>Amphinomidae sp. 1</i>	0	0	1	0	0
Annelida	Amphinomidae	<i>Archinome leviniae</i>	0	0	1	1	1
Annelida	Cirratulidae	<i>Aphelochaeta sp.</i>	0	0	0	0	1
Annelida	Dorvilleidae	<i>Exallopus jumarsi</i>	0	0	0	0	1
Annelida	Dorvilleidae	<i>Ophryotrocha cf. akessoni 2</i>	0	1	0	0	0
Annelida	Dorvilleidae	<i>Ophryotrocha cf. akessoni1</i>	0	0	1	0	0
Annelida	Dorvilleidae	<i>Ophryotrocha platykephale</i>	0	0	0	0	1
Annelida	Dorvilleidae	<i>Parougia sp.</i>	0	0	0	0	1
Annelida	Hesionidae	<i>Hesiolysa bergi</i>	1	1	0	0	0
Annelida	Hesionidae	<i>Hesiospina cf. vestimentifera1</i>	1	1	0	0	0
Annelida	Hesionidae	<i>Hesiospina cf. vestimentifera2</i>	0	1	0	0	0
Annelida	Hesionidae	<i>Hesiospina cf. vestimentifera3</i>	0	1	0	0	0
Annelida	Hesionidae	<i>Hesiospina cf. vestimentifera4</i>	0	1	0	0	0
Annelida	Hesionidae	<i>Nereimyra alviniae</i>	0	0	0	0	1
Annelida	Hesionidae	<i>Sirsoe grasslei</i>	0	0	0	0	1
Annelida	Maldanidae	<i>Nicomache cf. arwidssoni</i>	1	1	0	0	0
Annelida	Nereididae	<i>Nereis cf. andersi</i>	1	1	1	0	1
Annelida	Pilargidae	<i>Sigambra sp.</i>	1	0	0	0	0
Annelida	Polynoidae	<i>Bathyskura guaymasensis</i>	0	0	0	0	1
Annelida	Polynoidae	<i>Branchinotogluma hessleri</i>	1	1	0	0	0
Annelida	Polynoidae	<i>Branchinotogluma n.sp. 1</i>	0	1	0	0	0
Annelida	Polynoidae	<i>Branchinotogluma n.sp. 2</i>	0	1	0	0	0
Annelida	Polynoidae	<i>Branchinotogluma n.sp. 3</i>	0	0	0	1	1
Annelida	Polynoidae	<i>Branchinotogluma n.sp. 4</i>	0	0	1	0	0
Annelida	Polynoidae	<i>Branchinotogluma andersi</i>	1	1	0	0	1
Annelida	Polynoidae	<i>Branchiplicatus cupreus</i>	1	0	1	0	1
Annelida	Polynoidae	<i>Ipionella risensis</i>	1	1	0	0	0
Annelida	Polynoidae	<i>Lepidonotopodium fimbriatum</i>	1	1	0	0	0
Annelida	Polynoidae	<i>Lepidonotopodium n. sp.</i>	0	1	1	0	0
Annelida	Polynoidae	<i>Lepidonotopodium williamsae</i>	1	1	0	0	0
Annelida	Polynoidae	<i>Macellicephalinae sp. 1</i>	0	0	0	1	0
Annelida	Polynoidae	<i>Macellicephalinae sp. 2</i>	0	0	1	0	0
Annelida	Polynoidae	<i>Peinaleopolynoe n. sp.1</i>	0	0	1	1	0
Annelida	Polynoidae	<i>Thermiphone tufari</i>	1	0	0	0	0
Annelida	Serpulidae	<i>Laminatubus alvini</i>	1	1	0	0	0
Annelida	Serpulidae	<i>Laminatubus n. sp.</i>	0	0	0	1	1
Annelida	Serpulidae	<i>Protis hydrothermica</i>	1	0	0	0	0
Annelida	Serpulidae	<i>Protis n. sp.</i>	0	1	0	0	0
Annelida	Siboglinidae	<i>Escarpa spicata</i>	0	0	0	1	1
Annelida	Siboglinidae	<i>Lamellibrachia barhami</i>	0	0	0	1	0
Annelida	Siboglinidae	<i>Oasisia aff. alviniae (hap I)</i>	1	1	1*	0	0
Annelida	Siboglinidae	<i>Riftia pachyptila</i>	1	1	1	0	1
Annelida	Spionidae	<i>Lindaspia dibranchiata</i>	0	0	0	0	1
Annelida	Spionidae	<i>Prionospio andersi</i>	0	1	0	0	0
Chordata	Zoarcidae	<i>Thermarces cerberus</i>	1	1	1	0	0
Cnidaria	Actiniaria	<i>Actinaria sp. 1</i>	0	0	1	0	0
Cnidaria	Actiniaria	<i>Actinaria sp. 2</i>	0	1	1	0	0
Cnidaria	Actiniaria	<i>Zoantharia</i>	0	0	1	0	0
Arthropoda	Amphipoda	<i>Amphipod sp. 1</i>	0	0	1	0	0
Arthropoda	Amphipoda	<i>Ventiella sulfuris</i>	1	1	0	0	0
Arthropoda	Bythograeidae	<i>Bythograea thermydron</i>	1	1	0	0	0
Arthropoda	Bythograeidae	<i>Cyanogrea praedator</i>	1	0	0	0	0
Arthropoda	Eolepadidae	<i>Neolepas zeviniae</i>	1	1	0	0	0
Arthropoda	Galatheidae	<i>Munidopsis lentigo</i>	1	1	0	0	0
Arthropoda	Galatheidae	<i>Munidopsis recta</i>	1	1	0	0	0
Arthropoda	Galatheidae	<i>Munidopsis scotti</i>	0	0	1*	0	0
Arthropoda	Hippolytidae	<i>Lebbeus carinatus</i>	0	1	0	0	0
Mollusca	Aplustridae	<i>Parvaplustrum sp.</i>	0	0	0	0	1
Mollusca	Cataegidae	<i>Kanoia myronfeinbergi</i>	0	0	0	0	1
Mollusca	Lepetodrilidae	<i>Gorgoleptis emarginatus</i>	1	0	0	0	0
Mollusca	Lepetodrilidae	<i>Lepetodrilus cristatus</i>	1	1	0	0	0
Mollusca	Lepetodrilidae	<i>Lepetodrilus elevatus</i>	1	1	0	0	0
Mollusca	Lepetodrilidae	<i>Lepetodrilus guaymasensis</i>	0	0	0	0	1
Mollusca	Lepetodrilidae	<i>Lepetodrilus ovalis</i>	1	0	0	0	0
Mollusca	Lepetodrilidae	<i>Lepetodrilus pustulosus</i>	1	0	0	0	0
Mollusca	Neolepetopsidae	<i>Euleptopsis vitrea</i>	1	1	0	0	0
Mollusca	Neolepetopsidae	<i>Neolepetopsis gordensis</i>	1	0	0	1	0
Mollusca	Neolepetopsidae	<i>Neolepetopsis occulta</i>	1	0	0	0	0

1 = present  
**bold** is range extension  
 \* is 1st sighting in the GoC  
 0 = absent

Mollusca	Neolepetopsidae	<i>Neolepetopsis verruca</i>	1	0	0	0	0
Mollusca	Neolepetopsidae	<i>Paralepetopsis sp.</i>	0	0	1	1	0
Mollusca	Neomphalidae	<i>Cyathermia naticoides</i>	1	0	0	0	0
Mollusca	Neomphalidae	<i>Melanodrymia aurantiaca</i>	0	1	0	0	0
Mollusca	Neomphalidae	<i>Neomphalus fretterae</i>	1	0	0	0	0
Mollusca	Neomphalidae	<i>Pachydermia laevis</i>	1	0	0	0	0
Mollusca	Neomphalidae	<i>Planorbidella planispira</i>	1	0	0	0	0
Mollusca	Neomphalidae	<i>Retiskenea diploura</i>	0	0	0	0	1
Mollusca	Nuculanidae	<i>Nuculana grasslei</i>	0	0	0	0	1
Mollusca	Peltopiridae	<i>Echinopelta fistulosa</i>	1	0	0	0	0
Mollusca	Peltopiridae	<i>Hirtopelta hirta</i>	1	0	0	0	0
Mollusca	Peltopiridae	<i>Hirtopelta tufari</i>	1	0	0	0	0
Mollusca	Peltopiridae	<i>Lirapex granularis</i>	1	0	0	0	0
Mollusca	Peltopiridae	<i>Nodopelta sp.</i>	1	1	0	0	0
Mollusca	Peltopiridae	<i>Peltopira delicata</i>	0	0	1*	0	0
Mollusca	Peltopiridae	<i>Peltopira n. sp.</i>	0	1	0	0	0
Mollusca	Peltopiridae	<i>Peltopira operculata</i>	1	0	0	0	0
Mollusca	Peltopiridae	<i>Rhynchopelta concentrica</i>	1	0	0	0	0
Mollusca	Provannidae	<i>Provanna ios</i>	1	0	1*	1	0
Mollusca	Provannidae	<i>Provanna laevis</i>	0	0	1	0	1
Mollusca	Provannidae	<i>Provanna lomana</i>	0	0	0	0	1
Mollusca	Provannidae	<i>Provanna muricata</i>	1	0	0	0	0
Mollusca	Provannidae	<i>Provanna n. sp 2</i>	0	0	1	0	0
Mollusca	Pseudococculinidae	<i>Amphiplica sp.</i>	1	0	0	0	0
Mollusca	Pyramidellidae	<i>Eulimella lomana</i>	1	0	0	1	0
Mollusca	Pyropeltidae	<i>Pyropelta corymba</i>	0	0	0	0	1
Mollusca	Pyropeltidae	<i>Pyropelta musaica</i>	0	0	0	0	1
Mollusca	Solemyidae	<i>Acharax aff johnsoni</i>	0	0	0	0	1
Mollusca	Trochidae	<i>Bathymargarites aff. symplector</i>	1	1	0	0	0
Mollusca	Turbinidae	Turbinidae	0	0	1	1	0
Mollusca	Vesicomidae	<i>'Calyptogena' magnifica</i>	1	1	0	0	0
Mollusca	Vesicomidae	<i>Calyptogena lepta</i>	0	0	0	0	1
Mollusca	Vesicomidae	<i>Calyptogena costaricana</i>	0	0	0	1	0
Mollusca	Vesicomidae	<i>Archivesica gigas</i>	0	0	0	0	1
Mollusca	Vesicomidae	<i>Archivesica sp 7</i>	0	0	1*	1	0
Mollusca	Vesicomidae	<i>Archivesica mtV</i>	0	0	0	1	0
Mollusca	Vesicomidae	<i>Phreagena soyooe</i>	0	0	0	0	1
Porifera		<i>Caulophacus cyanae</i>	0	1	0	0	0
Xenoturbella	Xenoturbellidae	<i>Xenoturbella profunda</i>	0	0	1*	0	0

**Table S2.** PCR primers and conditions used to amplify and sequence genes for identification for each taxonomic group extracted.

Primers	Ref	Reaction Condition	Fragment	Primer Sequence 5'→3'	Group
LSU26F/ LSU657R	[1]	1	28S	LSU26F: AATGATACGGCGACCACCGAGATCTACACTATGGTAAT TGTACCCGCTGAACCTTAAGCATAT LSU657R: CAAGCAGAAGACGGCATACGAGATGTCGAATTTGCGA GTCAGTCAGCCCTTGGTCCGTGTTCAAGAC	Illumina MiSeq HTS
mlCOIintF	[2]	1	COI	mlCOIintF: AATGATACGGCGACCACCGAGATCTACACTATGGTAAT TGTGGWACWGGWTGAACWGTWTAYCCYCC	Illumina MiSeq HTS
jgHCO2198	[3]	1	COI	jgHCO2198: CAAGCAGAAGACGGCATACGAGATCACTGGTGCATAA GTCAGTCAGCCTAAACTTCAGGGTGACCAAAAAATCA	Illumina MiSeq HTS
LCO1490/ HCO2198	[4]	2	COI	LCO1490: GGTCAACAAATCATAAAGATATTGG HCO2198: TAAACTTCAGGGTGACCAAAAAATCA	Gastropods
jgLCO1490/ HCO2198	[3]	2	COI	jgLCO1490: TITCIACIAAYCAYAARGAYATTGG HCO2198: TAAACTTCAGGGTGACCAAAAAATCA	Provannids
COIF/COIR	[5]	2	COI	COIF: TCMACTAATCAYAARGAYATTGGNA COIR: CCDCTTAGWCCTARRAARTGTTGNGG	Annelids, Lepetodrilids
VesLCO/ VesHCO	[6]	2	COI	VesLCO: TTAATAGGAACTGCTTTTAG VesHCO: TCACCCAAACCAgCAgGATC	Vesicomysids
galaCOIF/ galaCOIR	[7]	2	COI	galaCOIF: CATCACTWAGWTTTRATYA TTCGAGCAGAA galaCOIR: GAAYAGGRTCTCTC CTC CTAC	Arthropods
AnthCOIIF/ AnthCOIIR	[8]	2	COII	AnthCOIIF: ACTTTTCAAGGTCTTCACACCRGTGGTT AnthCOIIR: CAAACCACATCTACAAAATGCCAATATC	Actinarians
Anem16SA/ Anem16SB	[8]	2	16S rRNA	Anem16SA: CACTGACCGTGATAATGTAGCGT Anem16SB: CCCCATGGTAGCTTTTATTCG	Actinarians
27F/1492R	[9]	3	16S	27F: AGAGTTTGATCMTGGCTCAG 1492R: TACGGYTACCTTGTTACGACTT	Bacteria, Archaea
symITS16SF/ sym23SR	[10]	3	ITS	SymITS16SF: GAAGTCGTAACAAGG Sym23SR: CAAGGCATCCACCGT	Bacteria

PCR primer conditions:

- 1) Touchdown protocol reactions in triplicate: 95°C-10', (94°C-10S, 62°C-30S, 68°C-1')×16 -1°C each cycle), (94°C-10S, 46°C-30S, 68°C-1')×25, 72°C-10', 4°C hold.
- 2) 95°C-10', (95°C-1', 50°C-1', 72°C-1')×35, 72°C-7', 4°C hold.
- 3) 95°C-10', (92°C-1', 60°C-30S, 68°C-1')×25, 72°C-6', 4°C hold.

**Supplemental Table 3.** Larval detection, via environmental DNA analysis from 100-µm filtered seawater collected at 5 different depths at each site. Taxa detected in the water column are indicated via an *l*. Taxa collected or observed via video are indicated by an x.

<b>Animal taxa</b>	<b>AR Vents</b>	<b>PB Vents</b>	<b>PTF Seeps</b>
<b>Annelida - Polychaeta</b>			
Siboglinidae			
<i>Riftia pachyptila</i>	x, <i>l</i>	x	<i>l</i>
<i>Oasisia</i> haplotype IIA	x, <i>l</i>		
Alvinellidae			
<i>Alvinella pompejana</i>	x, <i>l</i>		
Spionidae			
<i>Prionospio sandersi</i>	x, <i>l</i>		
Maldanidae		<i>l</i>	
<i>Nicomache</i> cf. <i>arwidssoni</i>	x		
<i>Nicomache venticola</i>			
<b>Mollusca - Bivalvia</b>			
Vesicomyidae			
<i>Calyplogena costaricana</i>	<i>l</i>	<i>l</i>	x, <i>l</i>
" <i>Calyplogena</i> " <i>magnifica</i>	x, <i>l</i>		<i>l</i>
<b>Mollusca - Gastropoda</b>			
Lepetodrilidae			
<i>Lepetodrilus elevatus</i>	x, <i>l</i>		<i>l</i>
Provannidae			
<i>Provanna</i> n sp 2	<i>l</i>	x	
Melanodrymidae			
<i>Melanodrymia aurantiaca</i>	x, <i>l</i>		<i>l</i>
<b>Cnidaria</b>	<i>l</i>	<i>l</i>	<i>l</i>
Small white actinarian	x	x	
White actinarian		x	
Red actinarian		x	
<b>Crustacea - Decapoda</b>			
<i>Lebbeus (carinatus)</i>	x		<i>l</i>

AR = Alarcón Rise, PB = Pescadero Basin,  
PTF = Pescadero Transform Fault, GUY = Guaymas Basin

**Supp Table 4:** Faunal type and abundance (#/m<sup>2</sup>) for Pescadero Basin vents, identified from 10 video transects at four venting structures.

Taxa	Mater horn	C vent I	C vent II	Z vent I	Z vent II	Z vent III	Z vent IV	P vent I	P vent II	P vent III
<b>Cnidaria</b>										
Actiniaria sp. 1	20.03	14.73	29.24	67.93	8.82	4.30	14.42	24.85	30.14	17.42
Actiniaria sp. 2	-	-	-	-	-	-	-	-	-	-
Actiniaria-other	2.29	-	-	-	0.14	0.13	-	-	-	0.07
Zoantharia	6.86	0.07	-	21.76	-	1.27	-	-	-	-
Cerianthidae	-	0.37	-	4.52	-	-	6.81	-	0.60	0.73
<b>Annelida</b>										
Alvinellidae	-	-	-	0.26	-	-	-	0.42	-	-
Amphinomidae	-	0.15	0.08	0.68	-	-	-	-	-	-
<i>Hesiolyra bergi</i>	-	-	-	-	-	-	-	-	-	-
<i>Nereis cf. sandersi</i>	-	-	-	-	-	-	-	-	-	-
<i>Oasisia aff. alvinae</i>	57.18	318.88	-	30.98	11.20	783.54	0.53	-	2422.97	451.38
<i>Peinaleopolynoe</i> sp. 1	32.02	16.45	11.5	14.09	24.79	7.72	10	12.12	22.25	4.8
<i>Riftia pachyptila</i>	-	-	-	-	-	-	-	-	-	-
<i>Protis</i> n sp.	-	-	-	-	-	-	-	-	-	-
<i>Laminatubus</i> spp.	-	-	-	-	-	-	-	-	-	-
Serpulidae-other	-	0.07	-	-	-	-	-	-	-	-
<b>Mollusca</b>										
<i>C. magnifica</i>	-	-	-	-	-	-	-	-	-	-
Gastropoda	-	0.07	-	0.51	0.42	-	-	-	0.12	-
Patellogastropoda	-	-	-	-	-	-	-	-	-	-
Vesicomyidae	-	-	-	-	-	-	-	-	0.12	-
<b>Crustacea</b>										
Amphipoda	-	-	-	0.26	-	-	-	-	-	-
<i>B. thermydron</i>	-	-	-	-	-	-	-	-	-	-
<i>L. carinatus</i>	-	0.07	-	-	-	-	-	-	-	-
Galatheididae	-	0.15	-	-	0.28	-	-	0.14	0.12	0.15
<b>Vertebrata</b>										
<i>T. cerberus</i>	-	-	0.08	0.09	0.28	0.38	-	-	-	-
Transect width (m)	1.06	1.07	0.78	0.63	1.4	1	1.19	1.08	0.95	1.06
Transect length (m)	3.3	12.5	16.4	18.6	5.1	7.9	9.5	13.3	8.8	13
Transect area (m^2)	3.50	13.38	12.79	11.72	7.14	7.9	11.31	14.36	8.36	13.78
Dive #	D751	D751	D751	D750	D757	D757	D757	D751	D757	D757
Transect #	T1	T2	T3	T1	T1	T2	T3	T4	T4	T5

**Supp Table 5:** Faunal type and abundance (#/m<sup>2</sup>) for Alarcón Rise vents, identified from 14 video transects at three vent fields.

Taxa	Meyibo I	Meyibo II	Meyibo III	Meyibo IV	Tzab-ek I	Tzab-ek II	Tzab-ek III	Tzab-ek IV	Tzab-ek V	Ja-Sit I	Ja-Sit II	Ja-Sit III	Ja-Sit IV	Ja-Sit V
<b>Cnidaria</b>														
Actiniaria sp. 1	-	-	-	0.83	-	1.50	-	-	-	1.99	0.12	1.44	-	0.11
Actiniaria sp. 2	-	-	-	-	-	-	-	-	-	-	-	-	131.36	0.97
Actiniaria-other	-	-	-	0.28	-	-	-	-	-	-	-	-	0.26	-
Zoantharia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerianthidae	-	-	-	-	-	-	-	-	-	-	-	-	0.13	-
<b>Annelida</b>														
Alvinellidae	40.00	4.08	-	5.28	-	39.47	-	-	-	0.66	-	-	-	0.05
Amphinomidae	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Hesiolyra bergi</i>	0.78	-	-	-	-	-	-	0.06	-	0.66	-	0.08	-	-
<i>Nereis cf. sandersi</i>	-	0.51	-	-	0.41	1.13	-	0.25	-	0.66	-	0.23	-	0.04
<i>Oasisia aff. alvinae</i>	-	-	-	12.22	-	200.00	191.06	0.86	-	-	-	-	-	-
<i>Peinaleopolynoe</i> sp. 1	-	-	-	0.28	0.35	0.38	-	-	-	-	0.06	0.23	-	-
<i>Riftia pachyptila</i>	504.31	730.10	474.77	102.78	-	38.72	-	-	16.13	66.98	12.46	1.98	-	-
<i>Protis</i> n. sp.	370.98	125.00	34.02	380.28	-	-	126.99	30.89	-	-	-	0.08	-	0.02
<i>Laminatubus</i> spp.	2.35	6.12	-	7.78	0.14	-	41.19	11.70	52.02	18.57	9.44	-	0.13	-
Serpulidae-other	-	-	-	-	-	-	6.69	-	-	-	-	15.19	-	1.99
<b>Mollusca</b>														
<i>C. magnifica</i>	-	-	-	0.56	-	-	-	-	-	-	-	-	-	-
Gastropoda	-	-	-	277.50	-	142.86	0.06	-	-	-	-	-	-	-
Patellogastropoda	1020.39	1224.49	3822.63	2527.78	7.81	3460.15	231.11	-	120.97	72.94	5.93	-	-	4.02
Vesicomyidae	-	-	-	-	-	-	0.06	-	-	-	-	-	-	0.02
<b>Crustacea</b>														
Amphipoda	-	-	-	-	10.37	409.40	-	-	-	-	-	-	-	-
<i>B. thermydron</i>	10.98	11.22	8.03	1.11	0.07	1.50	0.23	0.18	0.81	3.32	0.65	2.20	0.39	0.18
<i>L. carinatus</i>	-	-	-	0.28	-	1.50	0.23	-	-	-	0.06	0.08	-	-
Galatheididae	-	1.02	6.88	0.56	0.14	3.76	1.94	0.18	0.40	7.96	0.36	0.46	0.39	0.05
<b>Vertebrata</b>														
<i>T. cerberus</i>	25.88	61.22	35.17	1.11	0.07	1.50	0.17	0.80	0.81	1.99	0.30	1.75	-	0.15
Transect width (m)	0.85	1.09	1.09	1.2	1.00	0.95	1.37	1.15	1.24	1.16	1.25	1.2	1.17	1.8
Transect length (m)	1.5	1.8	2.4	3	14.5	2.8	12.76	14.19	2	1.3	13.48	10.97	6.5	30.4
Transect area (m^2)	1.28	1.96	2.62	3.6	14.47	2.66	17.48	16.32	2.48	1.51	16.85	13.16	7.61	54.72
Dive #	D752	D752	D752	D752	D753	D753	D753	D753	D753	D754	D754	D754	D754	D754
Transect #	T1	T2	T3	T4	T1	T2	T3	T4	T5	T1	T2	T3	T4	T5

**Supp Table 6.** Mean ( $\pm$ SD) and individual values of  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  of the fauna from Pescadero Basin vents (PB), Alarcón Rise vents (AR), Pescadero Transform Fault seeps (PTF), as well as non vent/seep fauna. N = number of individuals.

# in figurePB vent Taxa	Trophic guild	N	$\delta^{13}\text{C}\text{‰}$	$\delta^{15}\text{N}\text{‰}$
<b>Cnidaria</b>				
Actiniaria indiv. 1	suspension-feeder	1	-35.6	2.7
Actiniaria indiv. 2	suspension-feeder	1	-32.6	6.8
Actiniaria indiv. 3	suspension-feeder	1	-33.8	2.1
Actiniaria indiv. 4	suspension-feeder	1	-37.9	1.0
Actiniaria indiv. 5	suspension-feeder	1	-19.6	5.6
Actiniaria group 6	suspension-feeder	4 <sup>a</sup>	-23.6	4.5
Actiniaria group 7	suspension-feeder	26 <sup>a</sup>	-20.8	14
<b>Annelida</b>				
Amphinomidae sp.	predator	1	-17.9	6.7
Amphinomidae sp.2	predator	1	-22.3	4.5
<i>Oasisia</i> aff <i>alvinae</i>	symbiont-bearing	6	-14.7 ( $\pm$ 1.4)	1.9 ( $\pm$ 0.4)
<i>Riftia pachyptila</i>	symbiont-bearing	1	-13.1	3.8
<i>Paralvinella</i> sp.	bacterivorous	2 <sup>a</sup>	-20.5	-0.8
<b>Mollusca</b>				
<i>Archivesica</i> sp. 7	symbiont-bearing	1	-35.3	-2.3
<b>Crustacea</b>				
<i>Munidopsis scotti</i>	predator/scavenger	1	-19.2	10.5
<b>AR vent Taxa</b>				
<b>Porifera</b>				
<i>Caulophacus cyanae</i>	suspension-feeder	3	-26.7 ( $\pm$ 1.6)	17.6 ( $\pm$ 0.4)
<b>Cnidaria</b>				
Actiniaria sp.	suspension-feeder	2	-12.1 ( $\pm$ 2.1)	8.9 ( $\pm$ 0.1)
<b>Annelida</b>				
<i>Nereis</i> sp.	predator	1	-17.1	4.0
<i>Alvinella pompejana</i>	symbiont-bearing	2	-9.4 ( $\pm$ 2.0)	0.9 ( $\pm$ 0.1)
<i>Riftia pachyptila</i>	symbiont-bearing	5	-11.1 ( $\pm$ 1.7)	4.1 ( $\pm$ 0.3)
<b>Mollusca</b>				
<i>Calymene magnifica</i>	symbiont-bearing	3	-34.2 ( $\pm$ 1.4)	-4.6 ( $\pm$ 1.0)
<b>Crustacea</b>				
<i>Bythograea thermydron</i>	predator	1	-11.7	8.2
<i>Lebbeus</i> sp.	predator	1	-14.8	8.2
<b>Vertebrata</b>				
<i>Thermarces cerberus</i>	predator	1	-12.0	9.9
<b>PTF seep Taxa</b>				

<b>Annelida</b>				
<i>Escarpia spicata</i>	symbiont-bearing	2	-17.7 ( $\pm$ 0)	0.3 ( $\pm$ 0.2)
<i>Lamellibrachia barhami</i>	symbiont-bearing	2	-17.0 ( $\pm$ 1.1)	-1.2 ( $\pm$ 1.5)
<b>Mollusca</b>				
<i>Calymene costaricana</i>	symbiont-bearing	1	-39.5	-9.1
<b>Non vent/seep Taxa (site)</b>				
<b>Cnidaria</b>				
<i>Actinaria</i> sp. 8 (PB)	suspension-feeder	2	-18.9 ( $\pm$ 0.4)	18.7 ( $\pm$ 0.5)
<b>Echiura</b>				
Echiuridae sp. (AR)	detritivore	2 <sup>a</sup>	-21.9	7.2
<b>Echinodermata</b>				
<i>Holothuroidea</i> sp. (AR)	detritivore	1	-19.0	17.2

<sup>a</sup> = small specimens which were pooled prior to analysis

## Supplemental References

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