2015 Chionoecetes opilio Collection - Pathobiology Hematodinium Project
Negative crabs - Control Group - 2 black zip ties

Plate # 45	
Collected by	
Jen Nike	
2-	
Date 9/3	
F102/191	

Record date in first & last well (all wells 'in between' should be used on same data). Record tag #s in each 'well' & any comments on back of form. Begin in A1 & proceed down column to B1, C1, etc. Proceed to column 2 when column 1 is full.

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2015 Chionoecetes opilio Collection - Pathobiology Hematodinium Project Negative crabs - Control Group - 2 black zip ties

Plate# 46 Collected by New Date 10/13/15

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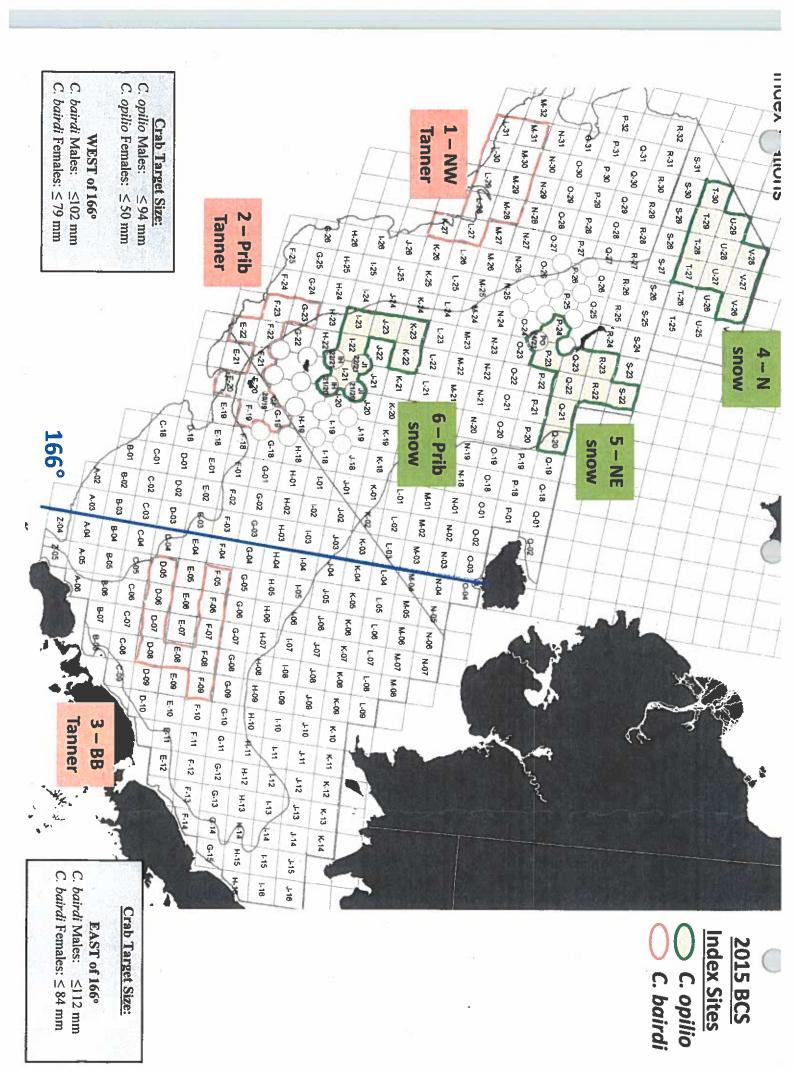
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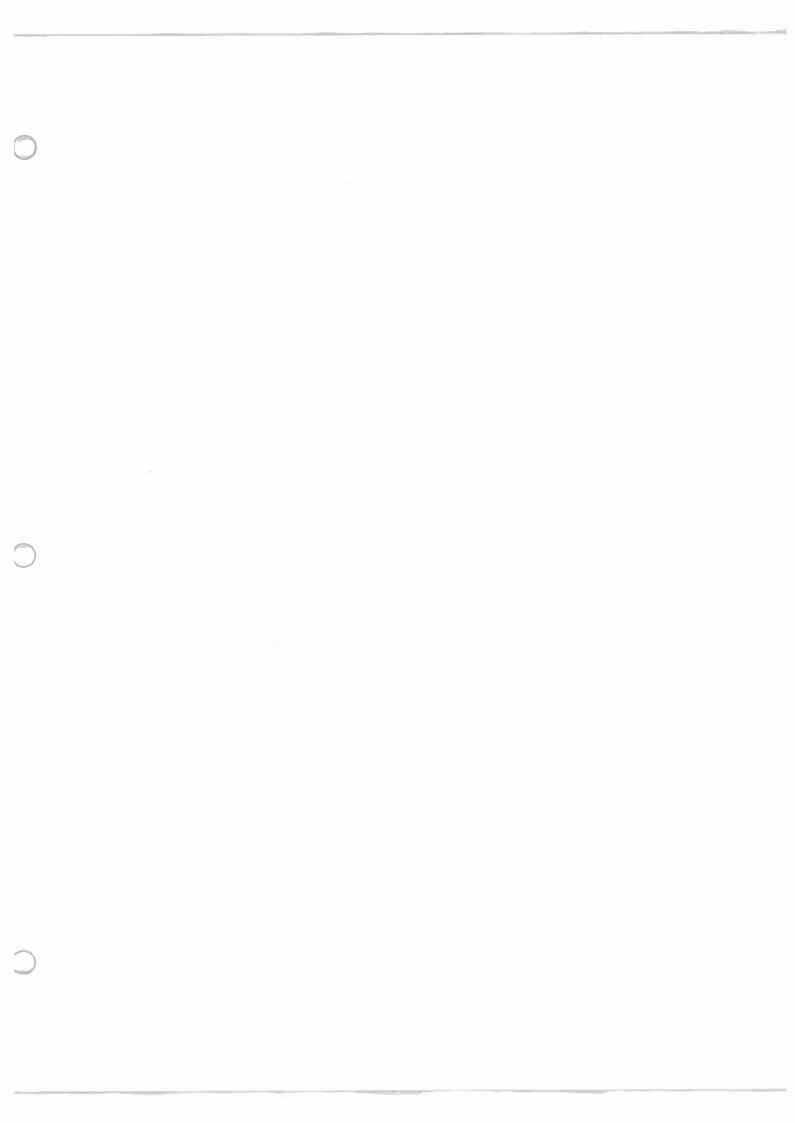
Negative crabs - Control Group - 2 black zip ties

Collected by Cick+ Cikki

Record date in first & last well (all wells 'in between' should be used on same data). Record tag #s in each 'well' & any comments on back of form. Begin in A1 & proceed down column to B1, C1, etc. Proceed to column 2 when column 1 is full.

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2015 EBS SHELF Survey: Bitter Crab - Kodiak / Pathobiology

The goal is to collect **200 blood samples** within each index site. There are <u>3 index sites assigned to Chionoecetes opilio</u>, and <u>3 to C. bairdi</u>. Within each index site, there are <u>10 stations</u> (see below & index station map). Collect **20 blood** samples of the specified species at designated stations. If you cannot collect 20 at a station, make up the difference at the next station within the index site.

- 1. Refer to BCS Index Site and Station map. When on a station, randomly sample <u>immature</u> crabs regardless of sex. See below and the index station map for *C. opilio* and *C. bairdi* target sizes. It is *very* important to obtain 20 crabs/station! Crab leads: please keep in touch with each other to ensure that the 200 crab collection goals are met at each index site.
- 2. For small (<30mm) crabs, try to collect blood at an arthrodial membrane or by using cardiac puncture method. If unable to withdrawal blood, freeze whole crab. Write vessel and haul number on a specimen label, place whole animal inside a bag with label on the inside facing out. Freeze crabs individually!!!!

Index Site Stations:

1 - NW Tanner: K-27, L-27, L-28, M-28, L-29, M-29, L-30, M-30, L-31, M-31

2 - Prib Tanner: F-19, G-19, GF-20/19, E-20, F-20, F-21, E-22, F-22, F-23, G-23

3 – BB Tanner: F-09, D-08, E-08, F-08, D-07, F-07, D-06, F-06, D-05, F-05

4 - N Snow: V-26, T-27, U-27, V-27, T-28, U-28, V-28, T-29, U-29, T-30

5 - NE Snow: Q-20, Q-21, Q-22, R-22, S-22, P-23, Q-23, R-23, PO-24/23, P-24

6 - Prib Snow: IH-21/20, JI-21/20, I-21, IH-22/21, JI-22/21, I-22, K-22, I-23, J-23, K-23

Crab Target Size:

C. opilio Males: \leq 94 mm C. opilio Females: \leq 50 mm

EAST of 166°

C. bairdi Males: ≤112 mm C. bairdi Females: ≤84 mm

WEST of 166° C. bairdi Males: ≤102 mm

C. bairdi Males: ≤102 mm C. bairdi Females: ≤ 79 mm

Chionoecetes Blood Collection

Crabs can be kept in baskets inside the live tank until you are ready to sample. If crabs have been sitting on deck for a long time during haul processing, they may be more difficult to withdrawal blood. You can let them "soak" in the live tank until the next haul is complete. NOTE: Crab samples must be random; please do not cherry pick crabs based on their visual status.

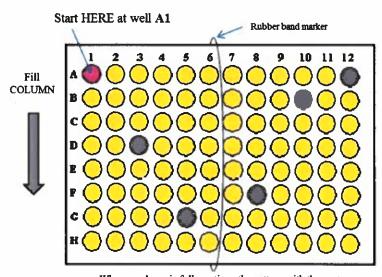
Sample collection in Ethanol:

- 1. Enter crab data onto provided datasheets. Data should include the vessel, leg, and collection plate number, your name, haul number, species, sex, size (carapace width in mm), shell condition, chela height (mm; optional), and note if crab looks visually BCS+ or BCS-. Use calipers to measure all lengths and record in mm.
- 2. Obtain a clean syringe with attached needle. Choose a region of the crab where the arthrodial membrane is exposed and insert the needle (a good spot is where the legs meet the carapace). Pull back on the plunger to extract blood; you may need to move the needle around to locate a sinus. Do not collect more than 0.2 mL blood! If the blood is brownish-yellow, you have sucked up hepatopancreas with the blood and the sample must be discarded. Obtain a new syringe and try again.
- 3. Insert the needle into the colored well plug (cap) and eject the blood into the well prefilled with ethanol. Pull out the needle (the well plug will reseal itself). If you find that the plug is loose or comes out, try removing air from the well with the syringe before injecting the blood sample. Do not remove any ethanol. Do **not** use wells A12, B10, D3, F8 or G5 (grey-colored caps).
- 4. Remove needle from the syringe using the needle remover on the sharps container, trap the plastic part of the needle in the V and twist off the syringe. Used syringes and wrappers may be placed in trash. Extra plastic "trash" bags are provided to include in the caddy. Also, once all of the syringes are gone, use the plastic bag as a trash bag.
- 5. Start all plates with the well marked A1 (pink cap) then proceed down column 1 to B1, C1 etc. When column 1 is full, move to well A2 and continue filling column 2 etc. Use this pattern for all plates. When a column is complete move the rubber band over the well plugs to the next column to help you keep track of where you are on the plate. If it helps, mark the top of the plug with a sharpie to show that the well has been filled, preferably on the edge of the plug. If you have any problems, comments, or mistakes, note the well number and any information on the back of the datasheet.

- 6. Periodically invert the plate to mix the blood and ethanol.
- 7. When a plate is full, replace in Ziploc bag and seal. Stack and store in the gray 5-gal bucket. Buckets will be sent back to Seattle in EBS Survey shipping containers at the end of Leg 3. Please coordinate hazmat with shipping contact personnel:

Grey buckets contain: 0.768 L 100% Ethanol (10 collection plates; 76.8 mL 100 % Ethanol per plate)

- 8. If you see a King Crab that could be infected with Hematodinium, please do the following: Please take a blood sample (just use a Chionoecetes well) and take 3 blood smears. Label Slide: In pencil, write the collection plate well number on the white frosted end of a new microscope slide. Withdraw blood using a syringe and dispense 2 drops of blood near the edge of the non-frosted end of the microscope slide. Take a second slide, place it at a 30°-45° angle, place it so it touches the inner edge of the drop of blood and then drag the "smearing" slide toward the frosted end of the slide with a smooth and steady motion. Drag blood, don't push it. Set smears aside and allow to dry, try to avoid all water splash while making smears. When done, set smears inside to dry. Used "smearing" slides can be disposed of in a container labeled "Used Smearing Slides". When the container is full, cover the opening and tape the lid to the container for shipping back to Seattle. After the slides are completely dry, place in slide box.
- 9. At the end of the survey, combine any frozen crab from both boats. Check with the deck boss to see if you can add the frozen crab to other Seattle-bound frozen shipments. If not, please ship frozen crab to Seattle using Coastal Transportation. Bill of Lading info: Christie Lang, 7600 Sand Point Way NE, Seattle WA, 206-526-6715. Send shipment COD.

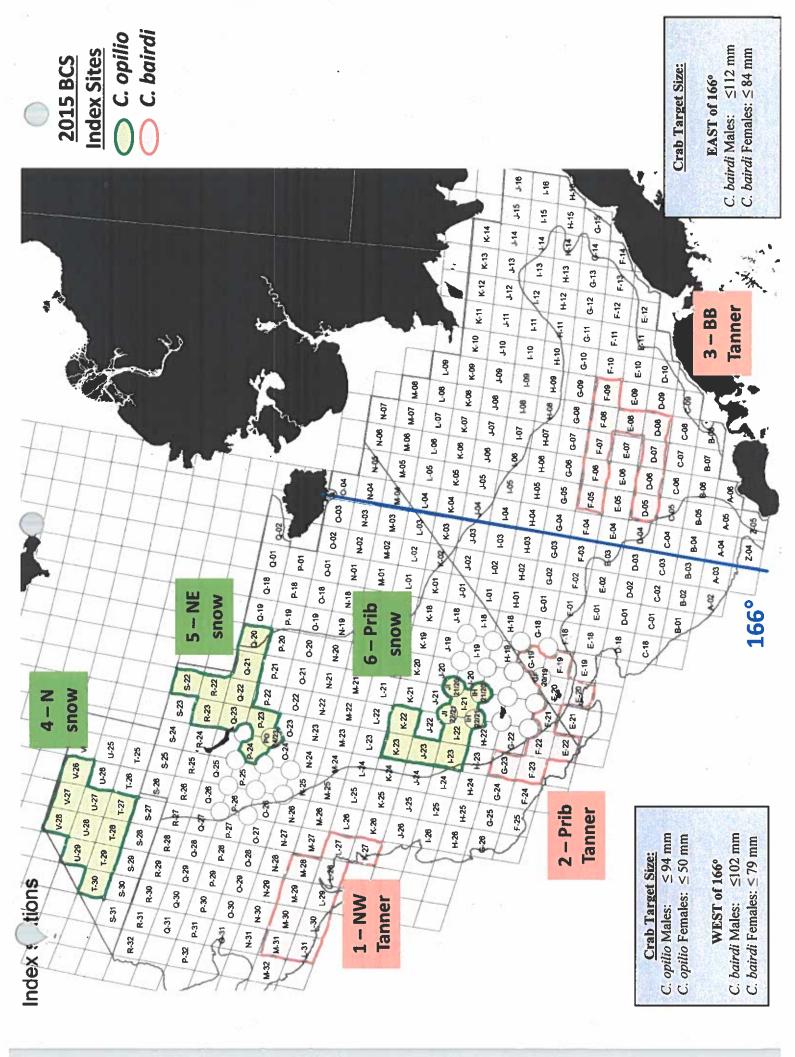


When a column is full, continue the pattern with the next column and move rubber band marker.

Recommended Caddy Contents:

- Collection plate
- Sharps container
- Bag of unused syringes
- Plastic bag for used syringes and wrappers
- Plastic bags for small crabs (freezing)
- Specimen label booklet (freezing)





2015 EBS SHELF Survey: Chionoecetes opilio LIVE collection – Kodiak / Pathobiology Leg 3 – Alaska Knight

The goal is to collect 50 LIVE immature <u>male</u> Chionoecetes opilio <u>outside</u> of Pathobiology index sites on LEG 3, Alaska Knight.

Collections:

- 1) During Leg 3, select 50 immature male C. opilio between 50 & 75 mm carapace width that appear to be in good shape (look healthy, have all limbs)
- 2) Please do **not** take crab from the Index Site stations:

Index Site Stations: Please do not collect live crab from these stations

- 1 NW Tanner: K-27, L-27, L-28, M-28, L-29, M-29, L-30, M-30, L-31, M-31
- 2 Prib Tanner: F-19, G-19, GF-20/19, E-20, F-20, F-21, E-22, F-22, F-23, G-23
- 3 BB Tanner: F-09, D-08, E-08, F-08, D-07, F-07, D-06, F-06, D-05, F-05
- 4 N Snow: V-26, T-27, U-27, V-27, T-28, U-28, V-28, T-29, U-29, T-30
- 5 NE Snow: Q-20, Q-21, Q-22, R-22, S-22, P-23, Q-23, R-23, PO-24/23, P-24
- 6 Prib Snow: IH-21/20, JI-21/20, I-21, IH-22/21, JI-22/21, I-22, K-22, I-23, J-23, K-23
- 3) Place ~10 crab per onion bags and keep bags in holding tank for the duration of the survey.
- 4) Periodically check the collection and toss out dead crabs.

Packing crabs: (notes from ADFG Procedure "Packing Live Crabs for Transport")

- 1) If checked baggage, contact Pen Air in advance with flight details and the number of coolers as checked bags containing live crabs. Dutch Harbor Pen Air: 907-581-1383.
- 2) If shipping on Air Cargo, coordinate with them the day before: find out flight times and best time to deliver crabs. Typically, Pen Air Cargo requests delivery by ~8 am to make their morning cargo flight and ACE Cargo will deliver to Kodiak in the same day ONLY if it is set up in advance and they have a large enough load to justify it. <u>Dutch Harbor ACE: 907-581-5787.</u>
- 3) Tare the scale with empty cooler before packing.
- 4) Place a row of large ice packs along the bottom (2-3) and one upright at each end.
- 5) Soak burlap in cold seawater and cover the ice packs, ensuring that the crab will not come in direct contact with the ice packs. Retain as much moisture in the burlap as possible.
- 6) Add the first layer of crab (right side up with legs outstretched), so the crabs are touching but their bodies are not overlapping. Ensure they have a burlap cushion and are packed carefully to avoid smashing or in contact with ice pack edges. Crabs can be placed inside onion bags for additional protection.
- 7) Add a layer of wet burlap over the crab. Add 2 medium or large ice packs, placed at the 1/3 and 2/3 mid-points, add another layer of wet burlap.
- 8) Add the second layer of crab, and then add another layer of wet burlap, covering the crab.
- 9) Add 3 medium ice packs, at the start, 1/2, and end points, add another layer of wet burlap. Repeat.
- 10) Finally, add several small ice packs (5-8), interspersed on top (it is important to have multiple ice packs here as warm air rises).
- 11) Repeat as needed to fill the cooler, but ensure the lid can close without putting any pressure on the contents.
- 12) Weigh the cooler. Since the scale reads in kg and you are trying to keep weight under 100 lbs, ensure the scale reads no more than 46 kg (although 45 kg is just under 100 lbs, assume at least 1 kg of water (or ~1L) will be drained out at the airport).
- 13) Tape on a shipping label to the lid.
- 14) Seal cooler with duct tape if shipping on Air Cargo or with duct tape or cooler straps if taking as checked baggage.
- 15) At the airport, hold each cooler at an angle off the tail gate, open the stop cock, and drain all the water out (this is important both for weight allowances and for crab health, as crabs at the bottom of the cooler will suffocate if immersed in water).
- 16) When transporting coolers as checked baggage, STRESS the fact that there are live crabs in the coolers and they MUST be loaded with you; ask them to add Live Animal and Must Load tags to the coolers (& possibly Keep Cool).
- 17) If transporting coolers as Air Cargo, STRESS the fact that they contain live crabs and they must be shipped as quickly as possible (Gold Streak).



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Data Sheet for HEMOCYTE Collections

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QA/QC 11/10/15

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NOTES: Non-random? Mistakes? Anything Unsual? (Please write WELL Number in front of comment) If a cap pops off: put cap back on, rinse plate with fresh water and blot dry If you ever see a positive King Crab, please take a photo and a blood sample (use a collection plate well)! KEYS: Species: Sex: Size: **Shell Condition:** Chela: BCS+: CO = C. opilio 0 = Premolt/Molt 1 = Male Carapace MALE Chela P = Visually Positive 1 = Soft Shell CB = C. bairdi 2 = Female Width (mm) Height (mm) N = Visually Negative 2 = New Shell *or write out 3 = Unknown **Optional** 3 = Old Shell "opilio " or

4 = Very Old Shell

5 = Graveyard

"bairdi"

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П	G3	10.1	C 4013160)	300	1125-f2		160	1		G 9	1		1	102.1	3	20,5	_
	H 3		Profit L	200 1	75.8	ð	/ X- 7			H 9	Marine de Contro	Part all parties	1	100.8	.3	19.6	_
П	A 4	/	4.5		98.4	3	200	- parties	H	A 10	704	05	1	1025	1.5	117.	
Ш	B 4	16			1+4	.3	142			B 10	DO	NOT TAK	E SAI	MPLE -	Company to	ROL WE	LL
5	C 4			 	771	٧	1+4	_	÷	C 10	108	45	1	48.3	3	17.0	
	D 4	11		4	85.4	15	193		Ę	D 10	7.1		100	89.7	3	158	-
힝	E 4			V	85.6	4	16-3		Colu	E 10	1 1 1	10 mg		89.6		15.6	1,5
Ì	F 4	1/		1	101,4	3	21.6	~	Ιĭ	FIIU	4	0	þ	979	3	16.6	-
	G 4	101	C13	2	408	2	-			G 10	養		5	107.3		00GC	-
١,	H 4	106	CB	2	23.7	2		-	l '	H 10	· r	de		874		15.6	7-0
	A 5	104	CB		30.7	2	* **	5.00		A 11	6	4	4	945		17.d	-
	B 5	IN	1/2	fut.	230	22	ET.			B 11	/_		(85.0	2	12.0	1
5	C 5	104	S. Carlot	13%	22.2	8		-	F	C 11	λ	l h	/	99.2	2	.13.1	-
إَ	D 5	(C)	-	1	8800	3	162	Ministra	° E	D 11	4	4		87.5	2	10,5	-
Column	E5	106		d	14,2	2,	reacu	-	Column 11	E 11		/	1	65.4		8.7	-
ĭĺ	F 5	100		1	girit	193	1-7-4	12 to 81 or	၂ ပို	F 11.				969	3	16.7	+
	G 5		NOT TAK							G 11		,		79.9	2	11.3	-
' [H 5	102	CB	1	10049	3	18:44		_ '	H 11)		[]	101.2	3	19,2	57
,[A 6)	ì	(84.1	3	169	-		A 12		NOT TAK	E SA		CONT	ROL W	LL
	B 6	1	1)	93.5	2	165			B 12	168	CB	1	953	2	730	
6	C 6	1		1	43.8	3	14.8		4	C 12	1	B	\$6) W.S.	90.0	Z	15.6	-
-Column 6-	D 6	1) To		911	3	20,2		Column 12	D 12	*(1 TO 1 TO 1	*(378	3	149	-
륁	E 6)	d	1	903	3	17.3] 흥	E 12		t	1	80.1	20	14.3	-
입	F6	ų.	L		83.1	3	15.1		ပို	F 12	15:35		1) (1)	873	2	147	-
	G 6	1		1	868	3	1109			G 12		277	高點	772	2	10.8	35
П	H 6	10-2	CB	2	42.5	2			1 1	H 12		CVS	1	63.6	2	83	-
	b 1	ORT 1	7 (4)				101,10	d .				6 * 20				n felt	4 7773

65-4	solu cla	IWS MG	Xc.		
1-1-1-0	2v1 6/0				<u> </u>
F6 -6	Artelan	a acissi	hai not	Wa	
((,)	old ala		07	.0	
00	J. Prau	1) reglin			
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rt clau	J regen	. m'd le	lt: E10.	611	
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			100		14
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				<u> </u>	
f a cap pops of	: put cap back on,	rinse plate with f	resh water and blot d	ry	
f you ever see a	positive Kina Cra	ab, please take a	photo and a blood sa	ample (use a collectio	AND 3 n plate well)! Blood
KEYS:		- I production a	pe.ce arra a blood se		Plate Hell): Black
Species:	Sex:	Size:	Shell Condition: 0 = Premolt/Molt	Chela:	BCS+:
CO = C. opilio CB = C. bairdi	1 = Male 2 = Female	Carapace Width (mm)	1 = Soft Shell	MALE Chela Height (mm)	P = Visually Positive N = Visually Negative
*or write out "opilio " or	3 = Unknown		2 = New Shell 3 = Old Shell 4 = Very Old Shell	**Optional**	in the same of the

		المالة	-	21	-	V	'essel:		4.4		~ 7			Comn	nents o	n
		102			•) ده			back			<
-	Haul #	Species	Sex	Size	Shell	Chela	BCS+	1	-	Haul#	Species	Sex	Size	Shell	Chela	Т
A1	108	(N)	2	1618	2	80 1 0 0 0 0 80 0 d 80			A7	114	45	0	166	~		+
B1	and the same of	200	2	13X, 1	B 1 1 1 1 1 1 1	Miles of the second			B7	_	1	8	+X.6	2		+
C 1	1	1 (1)	7	63.3	2	and the second of	the state of		C7	-	-1	6	3/6	2	_	+
D1)	0	34.7		200	7 7 5 1	١Ę	D7	/	1	2	28-0	2		4
E1	10 G 100/10 S	2/2	4	30,7	2	Smith of	3-	Column	E7			2	33.5	2		4
F1		michania	2	33.9	2	September 1	No.	ľ	F7			2	31.2	2		1
G1	34100	1	1	31.7	2	1 1146			G 7	1	1	2	31.5	2		1
H 1	108	TOP	2	31,2	2			l '	H 7				101.5	4	27.1	1
A 2	114	CB	2	37.4	2	~		l i	A8	型學		11/2	93.4	3	20.0	1
B 2	1	2	2	29.9	2	********			B8	114	CB	10	97.6	4	19.9	1
C 2	1		4	560	2		-	Column 8	C 8	115	CB	11	74.1	2	YEARIN	
D 2			1	20,7	2			Ē	D8		翻起	271%	9/8	4	14.9	T
E 2	1		-2	30.4	2	-	0	룼	E 8		表, 甚至	1	86.7	2	142	T
F 2			2	35.4	2	-	-	lΥ	F8	001	NOT TAK	Œ SA	MPLE -	CONT	ROL W	El
G 2	7		2	58.7	2	37.73	-		G 8			11	1014	4	18,2	T
H 2	1	6	1	23.1	2	2.9		i	H 8	是 发的		10/00	722	2	12,3	T
A3		1	2	30.0	2	An other	223		A 9			1	76.5	2	11.1	T
В3		4	100	237	2				В9	1)	7/4	4	11.4	Ť
C3	5572	562 4.6	1	24.1	2	9,510	-0000	8	C 9		1	1	762	2	10 2	†
D3	001	OT TAK	E SAI	MPLE -	CONT	ROL WE	ELL	Column 9-	D 9	1		1	962	3	109	1
E 31	Mary Star	-		200	-2	-	Andreas March Control	' 킁	E 9	1	1	1	60.7	2	711	†
F 3	10	7	2	330	2			Ÿ	F9			2	342	2	1.7	†
G 3	10000	100	100	8-2/2	20-2	Service Spirit	Service.		G 9			1.	360	2	7.2	t
H3	22/10	2 - 1 -		325	9			1	H 9	1		2	29.6	2	-	t
A 4)	. /	2	29.6	2.		~	S .	A 10	-		-7-	30 0	2	Property of	t
B 4	K	1	1	240	2		_		B 10	DØ I	NOT TAK	ESA	MPLE -	CONT	ROL W	늘
C 4	-		٦	32.6	2			"	C 10		I I A	E OA	1287	L a	TOE VV	T
D4			1	24.4			,	olumn 10	D 10	111	112	1	90%	2		t
E 4			1	22,7	2	No.	-	5	E 10	對方在建	21	1	201	2	34	t
F4)		2_	35.6	2			ပို	F 10	110	CV.	1	195	2	3.0	t
G 4	1	1	1	33.5	2				G 10		are less	2	233	1	0,0	+
H 4	-/-		1	40.0	2				H 10	12 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -)	80.0	29.0	2		+
-	1 - 100 Total	252 G 17574	357253.60	200000100100	7	NEW CONTRACTOR	30000			25.22 1.35 2.55 2.55 2.55 2.55 2.55 2.55 2.55 2	SEE SECTION	2		2	See See Library	+
A 5	F To Date	es des la compa	53 (GRE 1)	3/.6 329	2	end Selections	ENGLY.		A 11 B 11	1	-	4	70.8	2		ł
			1	115% O	2	1877 S. V. S.			_		9	1	20.3	2		t
C 5	0.5000 0.000	(453 \ \ 100 \ 243	1	2//			See War	Column 11	C 11		-	2	20.0	<u></u>		+
	SESAL DATES	20102	and the same	2/16	2		- Spinestendi	틀			1	2	1122	2	_	+
E 5	EE IN A	ASSESSED LOSS OF	AND THE	22.0	n Desch	top ettingter	Verse	ខ	E 11	()	1	2	43.3	2	- 1	+
F.5			Special Sport	13/2012			11 51377,432.47		F 11	15		1	24/2	2	3.2	+
G 5	S DO 1	NOT TAK	E SA	MPLE	CONT.	ROL WI	LL LOVE		G 11		- 1	1	30,2	2	_	4
H 5		Carl A Carle	488 TE	5574	F-170	stark, one	1000000		H 11	Name and Address of the Owner, where the Owner, which the Owner, which the Owner, where the Owner, which the	1		305	2	-	_
A 6			2	30.6	2 -	-			A 12		NOT TAK	E SA	MPLE -		ROL W	E
B 6	_	(219	2	-			B 12		B/Auto	10	2614	2	90-25	1
C 6			1	250	2	-		, 2	C 12		4 5 5	1	20.8	2	-	4
D 6	ď	4		242	2		_	Ĭ Ĕ	D 12			1	22.5	1000	il and	1
E 6		/_	2	60.3	2,			Column 12	E 12			2	3/10	2100	M.55	1
F6	/ .			32.7	2		_	1 Y	F 12		1	1	31.4	2	(m) mp	1
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H 6	114	CR	12	158.9	12.	I '		1 "	H 12	11/	C13	1	213	2	100	ĸ

	-		ميده		
NOTES: Non-rai	ndom? Mistakes?	Anything Unsual '	? (Please write WE Li	L Number in front of c	comment)
1 ml 6	1d' D2 6	2. * 3 164	n 4		
white 6	load: 42			<u></u>	
missine	claw; H7,	B8		5	
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2				M10 711	
If a can none off	f: nut can back on	rings plats with f	rook water and blat a	<u> </u>	
	-		resh water and blot of photo and a blood sa	ample (use a collection	n plate well)! Blood SMEAN
Species: CO = C. opilio CB = C. bairdi *or write out "opilio" or "bairdi"	Sex: 1 = Male 2 = Female 3 = Unknown	Size: Carapace Width (mm)	Shell Condition: 0 = Premolt/Molt 1 = Soft Shell 2 = New Shell 3 = Old Shell 4 = Very Old Shell 5 = Graveyard	Chela: MALE Chela Height (mm) **Optional**	BCS+: P = Visually Positive N = Visually Negative

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	Number:		>			V	essel:	1	7-7	m . 1			Keys &	Comm	nents or	1_
Colle	cted By:	PCT	+ (JCL	-		Leg:	+2	201	501			back			5
Well:	Haul #	Species	Sex	Size	Shell	Chela	BCS+		Well:	Haul#	Species	Sex		Shell	Chela	ВС
A1	116	CB	3-1-3	73.3	3	13,0	2012 (2014)	١,	A 7	137	Co	1	75.5	3	162	-
B 1	and the story		1	744	2	9-64			B7	,	\		89.4	4	21.4	-
C1	道 苏兴		1	23 Or	3	1514	l	-	C 7		111		82.9	4	21.1	Minus
D1	116	CB	7	750	製	1075	- Start	Column	D7			1	922	3	20.8	rises
E,1	117	CB	2	30,2	2	410	M1 /10	긓	E 7	/	=/	1	758	4	18.9	-
F1	1 feetings	5	isty	313	77		plant and	입	F 7	-/ 5	/	1	887	4	20.5	-
G1	克森 1987		10	373	2	20730			G 7	1/	1/	104	97.7	73	222	-
H1	THE TOTAL		2	372	2		411		H7	137	C _o	ì	90.8	.3	19.6	-
A 2	- 1	4	2	33.7	2		-	١, ١	A8	139	Co	11 252	63.0	4	130	-
B 2	C.	/	2	30.9	2	_	-		B8		~~	100	778	(7	17.5	1
C 2		1	1	305	2			8	C 8	214 PS	in the second	1	641	3	141	
D 2		λ=	1	223	2		_		D8	171.7 1.35		23 58	60 X	3	122	- 0
D 2	(-	1	213	0	17	101	Column	E8		\$ 7 Jun	المريد	747	. 3	122	
F 2		-	7	315	2	- 4		ပြိ	F8	00.1	NOT TAK	E CAI	MDIE - (CONT	ROL WE	<u>1</u> =□ □
G 2	/	/ 50	7	30.5	2.				G 8.		W.		27 A 1	2 4	17 1	-
H 2	(-	 	2	24.0	27		_		H 8	ili.ito	Section 1	Maria Car	1201	مندرجيست	TO O	Н
	1000 T. D.R		2	206	223	For Total Page 1	(p) ************************************	11		5775 PS\$\$24	SERVE CANCE	1	7770	7	10 0	-
A 3	Street, Sandy Street	5.	1000	7/0	93	TO SELECT OF THE	Section 10		A 9	1	10 1000		777	7	10-2	┢
B3		E STATE	7	1)1. O	23		和 學之		B 9		(4)	A	745	1	10/4	1
C3 D3 E3		107 = 41	7	704		- CALLANIE	established		C 9	10	- !	-1-	775	4	1X 7	Н
D 3	рот	NOT TAK	E SAI	WPLE - 0	CONTI	ROL WE	2.00	Column	D 9	- 17		- 6	76.9	3	16.7	1
5 E-3	12.00 St. 10.00	F	4	27+		tronstation.	7	ි	E 9	V	A/	1	709	\sim	16-4	-
F 3		0.0	240	25		100			F9	139	0		843	3	20.0	174
G3	117	UB	2	206			1 2 1 1 1		G 9	170	Co		59.0	2	12.6	-
H 3	1124	Co	V	84.5	4	172	10	l '	H 9		Co	2	101.8	2	9.2	-
1 A4		0/	1	85.6	4	18.5	0.00		A 10			P AL	48.9	2	7.9	-
B 4			ſ	55.6	3	11.8			B 10	001	NOT TAK	E SA	II .		ROL WE	ELL
C4	12A-	Co	1.	81.3	3	180	_	6	C 10			1	67.6	2	11.0	-
D4	136	Co	1	715	2	12.7	-	• E	D 10	2.75	警告 ()。		61.0	2	9.4	-
<u>E4</u>	136	Q b	1	876	4	21.9			E 10			1	66.3	2	10.0	-
F 4	137	Co	1	723	3	15,6	-	ᅵᄋ	F 10			2	52.8	2		-
G 4	137	Co	1	73.3	3	164	-		G 10	可計劃		2	26.5	3	회의회	-
H 4	(37)	Co		923	4	185		'	H 10	Ed E		2	43.7	2	Carri,	
A 5	121	Co	7 50	740	1	125	1		A 11	71.		1	26.4	2	3.9	2
B 5		تستسر		97.63	2	16.0	all standard		B 11		1	2	37.9	2	=	
C 5	14	0/100	a Îç	723	3	143		‡	C 11	_0		2	36.7	2		
D.5 E.5			<u> </u>	4/140		20.2	Manufacture, No.	Column 11	D.11	A		7	34.1	2	- 8	
E 5	994			773	马	146	-	흥	E 11	EC.	12:	1	56.5	2	11.1	_
F 5	121	Co	3120	71-0	2	1(20	272.1	ပို	F 11.			-/	86.7	2	16.9	2
G 5	DO	NOT TAK	E SAI		CONTI		LES		G 11		1	1	21.2	2	3.2	-
H 5	(22)	Co		797	47	1640		H	H 11			2	39.3	2	1 1 2	, _
A 6	122	Cp	i	7112	4	159	-	Ι.	A 12	DO I	NOT TAK		9 1 2 3		ROI W	FII
B 6	137		N	797	4	19	_		B 12	7903 K		13	39.6	2	6.39	
2C.6.	127			991		223	-	12	C 12	Asn -	(1) · · · · · · · · · · · · · · · · · · ·	2	39-0	3	3 W/	40.
	137			878	3	20.9			D 12	49.71	Taken Salan	OC Y	185	2	15.2	H
D 6	12/		1	896	4	223	- Lond	Column	THE R. LEWIS CO., LANSING, MICH.	-12 \	CA			-3.°	111	-
۲ ۱ - ۳	1 2		- 1	676	.3	129	_	ပြ	E 12	770	C 0		56.2	2		100
F6	-		1	60.		1 N 10	_	1	F 12	170	Go	24 9334	40.4		6.6	-
G 6	Lon		(h /	10.6	4	178	-		G 12	171	(1)	V 100	68.3	2	14.7	-
H 6	137			80.8	4	16.2	-		H 12	V	lis al	-	A CARLES	4/10/25	SZAGORA	

124, 136, 137, 121, 122

@ 1/9/16 axlac wents in to

NOTES: Non-random? Mistakes? Anything Unsual? (Please write WELL Number in front of comment) If a cap pops off: put cap back on, rinse plate with fresh water and blot dry AND 3 BLOOD SMEARS If you ever see a positive King Crab, please take a photo and a blood sample (use a collection plate well)! KEYS: Species: Sex: Size: Shell Condition: Chela: BCS+: CO = C. opilio 0 = Premolt/Molt 1 = Male Carapace MALE Chela P = Visually Positive 1 = Soft Shell CB = C. bairdi 2 = Female Width (mm) Height (mm) N = Visually Negative

2 = New Shell

3 = Old Shell

5 = Graveyard

4 = Very Old Sheil

Optional

*or write out

"opilio" or

"bairdi"

3 = Unknown

2015 EBS Chionoecetes Index Site Hemolymph Collections - Pathobiology Plate Number: Vessel: Keys & Comments on Collected By: Leg: back

	Colle	ected By:	MCI	- 11	VIC			Leg:		<u>ာ</u>		-		back			\Rightarrow
	Well:	Haul #	Species	Sex	Size	Shell	Chela	BCS+	5.0	Well:	Haul#	Specie	s Sex	Size	Shell	Chela	BCS+
- T-20	A1	195	Co		240	2	2.8	-	1 .	A7	198	C6		48-3	2	6,4	
1017	B1	195	Ob		178	2	20	- material		В7				27.5	2	_	<u> </u>
31 believe =	C 1	196	*Gb		1084	3	22,8			C7			2	25.4	2	S-3	-
14 F	D1	196	Cb	et-las	1027	3	20-3	Harry.	1 =	D7		-	t	260	a	-	
• no	E1	196	Cb		863	3	15.D		Column	E7			2	16.9	ス	. ~	-4
	F 1	196	Co	17	95.6	3	17.7	200	ľĬ	<u> </u>	ズ.		11	290	2	_ c	
	G1	196	Cb		983	3	189			G 7	32		13	27.5	2		_
	H1	1010	Cb	1000	994	3	17.8		1	H7		196000000000000000000000000000000000000	1	28 3	2	7.9	-
I	A-2	196	Cb	2	35.7	2	100	-	H	A 8		Service of		570	2		-
97	B 2	196	Ch	1	97.6	3	18.00	-	1	B8		FAR A	3	35 1	ス	-	
E	C 2	126	0	1	99.2	3	18.9		Column 8	C8		Glade No.	1	3) >	- 5	25	-
• e umulo:	D.2	196	Cb	2	101-0	2	17.0		<u>.</u> §	D8		現役 ポー	(273	12	4001 _ 11111	
ပို	E 2	196	Cb	+	97.5	3	17.2	_	ပို	E 8		P	るる	27.2	سدهند	\$ -	
	F.2	196	Cb	,	90	3	15.00	- 1		F8	рΟ	AT TON	IKE SA	MPLE -	CONTI	ROL WE	:LL
- 4	G 2	196	60		90.1	3	15.0	-		G 8.	of the South	200 000		33.7	2	Table 1	-
	-	196	A Jones	F177.928	95.0	2	AND DESCRIPTION OF THE PERSON NAMED IN	- T	9 1		2010) 9886	1838 VA	2		2	1000	
22.	B3	196	C5	200 AS	95.6	3	170	(*************************************	1	A 9	 	 	17	3/2	\frac{1}{\times}		
, 1	C3	-196	CI	CACCAS	010	7	55	1		C9	1		+ '	30.7	2		
E	D3		NOT TAK	F SAI	MPI E	CONTI		11	4 E	D 9	-1	= \	12	33.7	2		
Column	E-3	196	Ch	LUA	90.6	3	152		Column	E 9	0.::	4	1 2	47-6	3	_	
Ÿ	F 3	1960	cb		829	3	13.5	20.2	ļΫ	F 9			1	22:3	12	75	
20	G3	196	6	1	8 2	20	35	200-0402		G 9			1	32.7	2	7 9800	
7	H3	1410	Ch		(CO)	2	187	200	1	H 9	198	4	12	293	2		
()	A4	196	C6		93.5	2	7.2	-	ſ.	A 10	796	707		422	3	136	
	B4	196	Clo	1	637	2	8.8	-		B 10		-		MPLE -			LL
4	C4	196	Co	1	79.7	a	11.0	-	후		777	· (2)		976	15	16.4	-
,	D4	-1	1	1	74.3	2.	12.3	-	È	D 10	1.00 图摄			999	2	187	
• Polumu	E4			1	95.0	2	17.0	-	olumn	E 10	7 74	200	11 10	85-14	2	142	1
ို	F4			1	14-8	2	17.1		ပု	F 10		19Un-2		1004	2	156	
	G 4			1	840	3				G 10		3-16		940	2	17.6	-
- 1	H4				95.6	2	170	-	1 '	H 10	MA TO	建数能	1 1 2	943		17.1	إنيسم
Dubry ust .	A5	0.70	- 5		810	To Plan makes	79-7		Η.	A 11	10	1	1	90.9	3	15.6	~
	B.5	-		1	704	48	135	distributed in		B 11			: \	97.6	2	15-3	-
4	C 5	135	CONTRACT OF		95.3	9	16.7		Ė	0.11			1	101.2	2	19.7	- 1
Column	D 5	description to	Section 1	1	89.3	2	5.7	1	Column 11	D 11		0%		94.5	3	17.5	
충	E 5	的复数形式			959	2	174		亅륁	E 11			1	80-2		11.4	No.
w T	F5	Spell o			450	2	16.7	Separate A	1	F 11			100	950	2	18:5	~
A 122	G 5	DO	NOT TAK	E SA	MPLE -	CONT	ROL WE	LL		G 11				93.3	3	169	71
•	H 5	277	西西		178	2	183		1	H 11			1	95.2	2	170	~
4	A 6		10.	1	100.2	8	184	`	1	A 12	DO	NOT T		MPLE -	CONTI		
•	B 6		10	1/2	25.7	ス	3.5		•	B 12		39.30	1	882	1	155	,
Prit we -	C 6		10 - 0		944	2	16.3	S. San	12,	C 12	THE RESERVE	2000	1	93:94	T100 No. 40 136	17.7	12 8
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Ş	E 6	1	122	1	98.5	5	18-5	-	. 중	E 12	71/25	CORA S		989	3x	18-2	-
75-1	F 6		V			-	- 20		Ĭ	F 12	ALMANA S	1		913	3	168	-09
-1.0	G 6	JAIN .			_					G 12				100.0	3	195	53
7 beh.	H 6	19/2	(6						I	H 12	196			988	2	17.4	
15 .	nd a	2.11.	A (#C)			*						QA (a	c nt	13/15		(3)	ulal
1.97	F	24			U-111							•	e				

(8) 4/9/16

NOTES: Non-ran	dom? Mistakes? A	Anything Unsual?	(Please write WELL	Number in front of co	omment)	
D. I ml san	nde - Al,	B6 B7	E7, H8, H	4 9		
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15						
	(1)	2.50	resh water and blot dr photo and a blood sa	-	AND 3 n plate well)! Bloods	AR
KEYS:		,				
Species: CO = C. opilio CB = C. bairdi *or write out "opilio " or "bairdi"	Sex: 1 = Male 2 = Female 3 = Unknown	Size: Carapace Width (mm)	Shell Condition: 0 = Premolt/Molt 1 = Soft Shell 2 = New Shell 3 = Old Shell 4 = Very Old Shell 5 = Graveyard	Chela: MALE Chela Height (mm) **Optional**	BCS+: P = Visually Positive N = Visually Negative	C

		Number:	-	-			V	essel:		1	5.55		37		Comn	nents or	,
	Colle	cted By:	_WCI		-			Leg:	3		14.75	2 2		back			\Rightarrow
	Contract of		Species	Sex			Chela	BCS+				Species	Sex		Shell	Chela	BCS+
	A1	171	Co		612		10.1	HESSET.		A 7	193	Cb	1	102.2	2	7.3	-
	B 1			de l'estable	72.0		12:9			B7	193	C.6	1 .	47	7	55	-
~ {	C 1				101,5	2	13.2	-	-7-	C7	193	Cb	1	525	2	6.8	~
(E	D1		The same	Section 1	59.9	2	31.50		Column	D7	193	00	1	42.8	<u> </u>		
Ę	E1		產學的	11	53 6	2	8.5		혓	E7	193	Cb	1	42.8	2	5.46	-
)X	F1	- Carried	23 5.03	1	75	2	13.1	applications	Ĭ	F 7	193	Cb.	1	51.5	2	6.8	-
	G 1	54 . 1578	新 斯	No.	632		10.1			G 7	193	Cb	1	611	2	9.1	-
•	H1			100	108.10	2	125	7	1	H 7	193	Clo		419	2	5.2	
1	A 2	1		Ĺ	55.9	2	9.5			A 8		MP C つか		390	2	5.3	
	B 2			1	45.4	2	7.4	70		B8	深 整拉		1	8 HH	2	5.4	-
,	C 2	7.		1	66.9	2	11.7)	8	C8	1		1	329	2	4.4	f
	D 2	11.	-	-1	64.0	12	10.9	_	Column	D8	2. 为正	基础地	13	35.2	2	44	-
<u> </u>	E 2	(1)		1	71.7	2	15.7		응	E8	V		1	55.2	2	74	-
١	F 2		Ξ.	1	1047	2	13.6		۱۲	F8	DO 1	NOT TAK	E SAI	MPLE -	CONT	ROL WE	ELL
	G 2	1		Ī	568		9.8	_		G 8.	J. EX	455000	212	3410	2	4.9	-
1	H 2		, =	1	604	2	10.0			H 8	表 激粉		1	428	2	5.3	~
	A3	30	-43.5		(02,0	2	1044	100	,	A 9			1	480	2	10.3	
	В3	171	Co	1	62.10	1	10.9	V 100		B 9			1	45.8	2	5.9	
ę.	C3	182	Cb	360	349	2	4.4		ြ	C 9			1	24.5	2	3.2	-
1 and	D3	DO	NOT TAK	E SA	MPLE -	CONT	ROL WE	LL	• =	D 9			2	44.2	2	7	_
3	E 3	483	CAM	2	3+2	2	بالمتعاددة	-	Column	E9			2	31.4	2		1+1
	F 3	184	Ch	2	509	2	40	1	1 9	F 9			2	38.7	2	N	-
	G3	184	Cb	12	29 2	32		-		G9			2	484	2		-
[]	H 3	184	Co	2	50.0		1124			H 9			2	37.00	2	((7)
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192,012	B4	1954	06	2	57.3	2	-		- 1	B 10		NOT TAK	E SA	MPLE -	CONT	ROL WE	ELL
	C4	1834	رک	.2	44.5	2	-	_	6	C 10	Annual Control of the Association in Control of the	15.215	2	41.7	2		E
• de la companya de l	D4	184	05	16	32.0	,),	41	1	Column	D 10	12	Alle V.	2	378	2		-
-	E 4	184	(6	2	33.5	2	_		븅	E 10		#	2	273	2		1
Ç	F 4	3A	Cb	1	44.5	2	5.2		Ÿ	E 10 F 10	THE RESERVE		2	43.2			I
3.4	G4	192	C b	1	38.5	2	4.7	-		G 10			2	33.5	2	V 1 2	7
19	H 4	1	1	7	31.8	2	3.7	- 1	1 1	H 10	V	10.20	.2	537	2	and the same of	-
=060 J	A 5		10 mg	查查员	32.4	2	3.9	2		A 11	192	Ch	2	26.8	2		-
C. C. P. pak	B 5		, ind.,	ue)	2245)	7.9	St. keymout		B 11	1	1	2	31.4	2		-
14			行线 图		24.6	2	3-0	第十二八百 名6	‡	C 11			2	26.4	2		
19	D 5		era Britania	100	22,00	200	3.0	1	Column	D 11			2	25,2	2		-
1	5.5	NA TOTAL	1 7 7	3/3	246	2	3.2	3-11	訁킁	E 11			2	20.0	2	7	
10	F 5	1000	ئەبىتلىرىد	1000	29.7	2	24	国	입	F 11		1	2	24.2	2		_
	G 5	DOI	NOT TAK	E SA	MPLE -	CONT	ROL WE	ELL .		G 11	192	(5	2	24.6	2		-
	H 5	其為	Parel Course		20.0	9	9	巴巴	24	H 11	195	Cb	2	26.2	2	-	-
ca.	A 6			11	18.6		2.2	-		A 12		NOT TAK	E SA	MPLE -	CONT	ROL WI	ELL
100	В6	1			17.3	2	2.2			B 12	1115	Cb	2	18.7	2	Sector	
	C 6			$\hat{\mathcal{Z}}$	15.0	2			12	C 12	195	Co	2	325	2	4.00	-
	D 6	-	÷	2	33.0	2		+V	' E	D 12		Cu	2	225	12	ALL AND	-
019	E6	ما	1	2	220	2			Column	E 12	195	CO	2	173	200	Biveo"	-
	F6	×	() -	2	30.8			,,,,,,	၂ ပု	F 12	195	Ch	1	19.4	8	\$5 ts d"	+ (32)
71.	G 6	192	Cb	2	18,50	2	AFFC:			G 12		Cb	2	189	2	ga	330
67	H 6	193	Cb	1	90.4	2	158] '	H 12		Cb	18	277	2	3.8	3
	(()			-								OHOC	ातीः	13/15		0	عالف

1604 H	4. A5, B	5 (5, 1	5 K5, H5	5 A 6 B1	e, Fle,66,08	,
		The state of the s	, GII, B/2	; <u>E12-,+12</u>	1,6/2, +/2	
· £5 - Hi	ipato pan	creas		•	9 9	
· C7- May	be emply	3 cont	ents in D7		1	_
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If a cap pops of	: put cap back on,	rinse plate with f	resh water and blot di	ту	E	_
If you ever see a	positive King Cra	b, please take a	photo and a blood sa	imple (use a collect	ion plate well)! Blo	Э D.
Species:	Sex:	Size:	Shell Condition:	Chela:	BCS+:	
CO = C. opilio CB = C. bairdi	1 = Male 2 = Female	Carapace Width (mm)	0 = Premolt/Molt 1 = Soft Shell	MALE Chela Height (mm)	P = Visually Positiv	
*or write out "opilio " or "bairdi"	3 = Unknown	, , , , , ,	2 = New Shell 3 = Old Shell 4 = Very Old Shell 5 = Graveyard	**Optional**	, , , ,	-

		Number: cted By:	NCL WCL	/NR			٧	essel: Leg:		1501		-		Keys 8 back	k Comn	nents or	Ð
	Well:		Species	Sex	Size	Shell	Chela	BCS+	17 30	Well:	Haul #	Species	Sex	Size	Shell	Chela	BCS+
ı	A 1	190	Cb	2	98.6	3	3.2	SP		A 7]#1					
	B1	-11-		St. march	943	2	109	-		B7							
7	C 1	183 85	1		101.97	3	15.5	域形式	7	C 7	·						
Ē	D1	ببنا يهن	947	tin Take	90	2/9				D7							
Column	E1		基例的		96-6	2	14.26	S. B.	Column 7-	E7						- 3	
Ĭ	F1	**V	V	V	483	3	16-8	-	١٢	F 7							
	G 1	1411	N. S. S.	1271	y Pa	542	ALE AL	200		G 7							
i	H1								l '.	H 7							
1	A 2									A 8	THE SELL	製力をよった。 機能をあった。	Test.		が改一点 1 対象 - 計画	3,895	-
	B 2		<u> </u>							B8	L. FEBRU			Carlo Carlo	49.0	To the	Yare -
2	C 2								8	C 8	A SERVICE	Sand :	32K	PARTY.			NT E
ዿ	D 2				<u> </u>				Solumn	D8	型開源		574	AND	the c	30	94 NO
Column	E 2	<u> </u>							중	E8	<u> </u>	1.75	1	100	Service.	-	198
Ĭ	F 2								ΙĬ	F8	DO	NOT TAK	E SAI	MPLE -	CONT	ROL WE	LL
	G 2									G 8	2.43	\$1.50 mm	25	Name and Address of the	propulation	Sharan	
•	H 2								'	H8	是影響的	\$4.75%	SC-SEE	OFFICE /	18		1
-1	A 3	SEC. 2				Service Services		programs	1	A 9							
- 1	B3	LIVE W	P. A.	1.36	Year	Marin.	200	聖書		B 9					<u> </u>		
<u>ښ</u>	C3		A CHANG				9-2-5	+4400	-6 C	C 9							
톸	D 3	DO	NOT TAK	E SA	MPLE -	CONT	ROL WE	LL	Ę	D 9							
Column	E 3	-34753		-	17.44	tion or	10 M	-7	Column 9	E 9	4.						
Ĭ	F3				为异维度	5/2/5/2			ΙĬ	F 9					<u> </u>		<u> </u>
	G3				5世里生	域系统		Mp consilie		G 9							
•	H 3		10 Mg 170			ALC: N	140,6424		' '	H 9			_		- 11		
1	A 4		d							A 10	90.3855		D) VI		20.0		1.52
	B 4									B 10	DO I	NOT TAK	E SA	MPLE -	CONT	ROL WE	ELL
4	C 4								6	C 10	244		45.7				
olumn	D 4								E L	D 10	17.7	Transfer of			¥1.50		EW
S	E 4		ļ	<u> </u>	<u> </u>				덩	E 10			1		Contract of	Adl St	- 35
٥Ĭ	F 4								äΪ	1 10	Ar A		0.00			9 931	35/
	G 4									G 10	4. 有 唱	T. Pasta.			17. 3		61/Fe
•	H 4		OF WINDLESS OF STREET	180 128 120	1001 957 961 961	Secretary of the	CAN DRIVEN	FIG. 45 (100 cont.)		H 10		G. C.	1			-	0045
-	A 5			. 3					1	A.11							
	B 5			-	-	m references				B 11	_				-		
5	C 5		A CONTRACTOR	0.042				190	Column 11	C 11					-	•,	
Column	D.5	100000	deputy bear	auto Angley	Service married	Summerally		th spect	Ę	D 11					-		-
ပို	E 5	LESSON	BP V W	- Mari		N. N. P. M.	THE STATE OF THE S	1028-WB-4	중	E 11					-		-
	F 5	4 1 1 1 1 1 1	de biographic annua	- maile	and the same	in the second		1	ΙĬ	F 11.		ļ					
	G 5	DO	NOT TAK	E SA	MPLE -	CONT	ROL WE			G 11		<u> </u>			-		
	H 5	- The second	Cardia Agriculto	420,5	1000000		Child Allegan	(A)		H 11	GOLDEN CO.		er o un	1122000-2300	- An 279750		
1	A 6	-	-	<u> </u>		96 C	(8)	¥		A 12	DO I	NOT TAK	E SA	MPLE -	CONT	ROL WE	ELL
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ė L	C 6	-		 	-		ed Control	1	12	C 12	上の変更がある。		107	2013	C-MANUT	- NO.	5,353
Column	D6			 	6 Gar	1.3	CINC.		Column	D 12		N. Berry	E VV	20 To 10	100	10 mg	- 44
S	E 6		 	 		—		24	Į Ķ	E 12	Wing W	MMT	201	11259	10	Bios"	E STATE
	F6	525	100	<u> </u>		- 4			ľ	F 12	110411	Property of the same of the sa	1 2 2	177E-0	14 1	prieif"	Cesas.
l	G 6		-	 	- 0					G 12	it iggspletters		2824	STATE OF	19.00	pi -	35,10
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cap pops off	: put cap back on.	rinse plate with fi	resh water and blot di	·v	
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ou ever see a KEYS:	positive King Cra	ıb, please take a	photo and a blood sa	mple (use a collectio	n plate well)! Blood SM
	Covi	Cina .	Shall Condition	Chal	nec
pecies: D = C. opilio	Sex: 1 = Male	Size: Carapace	Shell Condition: 0 = Premolt/Molt	Chela: MALE Chela	BCS+: P = Visually Positive
B = C. bairdi	2 = Female	Width (mm)	1 = Soft Shell	Height (mm)	N = Visually Negative
or write out	3 = Unknown	1	2 = New Shell 3 = Old Shell	**Optional**	iii iiiiiiiii iiiiiiiiiiiiiiiiiiiiiiii
pilio " or		17	4 = Very Old Shell		

1	Specie:	Sex	Size	Shell	Chela	RCS+		5-8-6 FB	11. 8.44	Charles	SAY	Size	Shell	Chela	-
de de		2			0.1.0.1	D00.	1 1		Haul #	Species				-11010	BCS
de de	73	2.2	58	Z		100	1	A7	32	(0	2	58	12		
	8.5	77	02	2				B 7	32	6	- {	43	2		
			66	2		TWE'S	-21	C 7	32	6	1	107	3		
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ti t		<u>Li</u>	III.	3		-		B8	30	6	2	57	2	S. Alley	_
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T		2	54	2			lΥ	F8	DÖ 1	NOT TAK	E SAI	MPLE -	CONTI	ROL WE	LL
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KEYS: Species: CO = C. opilio CB = C. bairdi *or write out "opilio " or "bairdi"	Sex: 1 = Male 2 = Female 3 = Unknown	Size: Carapace Width (mm)	Shell Condition: 0 = Premolt/Molt 1 = Soft Shell 2 = New Shell 3 = Old Shell 4 = Very Old Shell	Chela: MALE Chela Height (mm) **Optional**	BCS+: P = Visually Positive N = Visually Negative

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2015 EBS Chionoecetes Index Site Hemolymph Collections - Pathobiology Vessel: 167 Plate Number: Keys & Comments on Collected By: Ben Daly/Mike Knutson Leg: back Well: Haul # Species Sex Size Shell Chela BCS+ Well: Haul # Species Sex Size Shell Chela BCS+ 2 67 46 58 48 CB 2 **B7** 58 -Column 7-C1 **C7** D1 CVB **D7** 51 E 1 E 7 F1 F 7 **G1** CB **G7 H7** A 2 A8 B8 3 C 2 C8 D 2 D8 E 2 E8 DO NOT TAKE SAMPLE - CONTROL WELL F 2 G 2 G 8 H 2 0 A3 A 9 **B3 B9** C3 C 9 -Column DO NOT TAKE SAMPLE - CONTROL WELL D3 D 9 66 E 3 E 9 F3 F 9 G3 G 9 H 3 H 9 18 A 4 DO NOT TAKE SAMPLE - CONTROL WELL Column 10 C 4 69 **D4** D 10 ঽ E 10 E 4 F 4 F 10 G 10 **G4** H4 H 10 A 11 A 5 2 C 5 C 11 D 5 D 11 E 5 E-11 F 5 F-11 DO NOT TAKE SAMPLE - CONTROL WELL **G** 5 G 11 627 H 5 DO NOT TAKE SAMPLE - CONTROL WELL A 6 **B**6 **B 12** 63 C 12 D 6 D 12 E 6 E 12 F 6 F 12 V **G** 6 G 12 139 H 12 /67-

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C. bairdi	3 = Unknown		2 = New Shell	**Optional**	, ,

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2015 EBS Chionoecetes Index Site Hemolymph Collections - Pathobiology Plate Number: Vessel: **Keys & Comments on** Collected By: DUDR Leg: back Well: Haul # Species Sex Size Shell Chela BCS+ Size Shell Chela BCS+ Well: Haul # Species Sex 74 Co 50 50 **B** 1 **B7** C 7 C 1 Column **D1 D7** E 1 E 7 F1 F 7 **G1 G7** H1 **H7** 42 A 2 A 8 **B** 2 **B**8 48 C 2 C 8 Column **D2** 49 D8 E 2 E 8 46 2 DO NOT TAKE SAMPLE - CONTROL WELL F 2 F8 46 39 **G2** G 8 43 H 8 **H2** A3 A 9 **B**3 **B9** C3 C 9 Column Column 9 DO NOT TAKE SAMPLE - CONTROL WELL D 9 D3 E 3 E 9 F3 F 9 45 2 17-17 Co **G3** G 9 H 3 Co H 9 A 10 **A4** TAKE SAMPLE - CONTROL WELL **B4 B** 10 DO NOT C 10 C 4 -Column 1 D4 D 10 64 E 4 E 10 F4 F 10 G 10 **G4** H4 H 10 A5 A 11 50 48 **B** 5 **B** 11 C 5 C:11 Column 11 9 D 5 D 11 E 11 E5 F 11 F5 **G** 5 DO NOT TAKE SAMPLE - CONTROL WELL G 11 47 44 45# 192 H 11 H 5 48 DO NOT TAKE SAMPLE - CONTROL WELL A 6 A 12 43 GY 筝 **B**6 **B 12** ablaC 6 45 2 C 12 Column ' 56 D 6 D 12 56 2 E 6 E 12 45 45 4 Q F 6 F 12 **G**6 G 12 t O H 6

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2015 EBS Chionoecetes Index Site Hemolymph Collections - Pathobiology Plate Number: Vessel: **Keys & Comments on** Collected By: Du back Leg: Size Shell Chela BCS+ Well: Haul # Species Sex Size Shell Chela BCS+ Well: Haul # Species Sex 12 **B**7 53 **B1** 57 10 185 Column 7-C 1 60 10 C7 Column 186 **D1 D7** 10 9 E1 **E7** F1 F 7 **G1 G7** H7 H1 A 8 A 2 B8 **B2** 18 C 2 C 8 Column 57 D 2 D8 E 2 E8 DO NOT TAKE SAMPLE - CONTROL WELL F 2 F 8 10 **G2** G 8. 79 H 2 H8 5X A 9 A3 9 **B**3 **B9** 79 C3 C 9 60 Column D3 DO NOT TAKE SAMPLE CONTROL WELL D9 6 80 15 E-3 E 9 92 59 54 F3 F 9 **G3** G 9 H3 H 9 A 10 A 4 4 DO NOT TAKE SAMPLE - CONTROL WELL **B** 10 **B4** C 4 C 10 Column 68 D 10 **D4** 57 71 72 1<u>5</u> 13 E 10 E 4 F4 F 10 **G4** G 10 0 63 H 10 **H4** A 5 A 11 **B** 11 **B** 5 C 5 Column 11 C 11 59 90 D.5 D 11 E 11 E 5 F 11 60 F-5 DO NOT TAKE SAMPLE - CONTROL WELL 60 G 11 **G** 5 H 5 86 H 11 72 DO NOT TAKE SAMPLE - CONTROL WELL A 6 A 12 56 B 12 **B**6 C 6 Column 12-C 12 Column 6 90 12 D 6 D 12 E 6 E 12 20 F 12 F 6 17 10 G 6 G 12 H 12 H 6 QA10C 11/23/15 CHELA MISSING (D) 11/16/15

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2015 EBS Chionoecetes Index Site Hemolymph Collections - Pathobiology Vessel: /62 Keys & Comments on Plate Number: back Collected By: Shell Chela BCS+ Size Well: Haul # Species Sex Shell Chela BCS+ Size Well: Haul # Species Sex 10 **A7** B 7 **B**1 C 7 C 1 **D7 D1** E 7 E1 F 7 F1 **G7 G** 1 H 7 H1 A 8 A2 B8 **B** 2 C8 Column 8--Column 2 C 2 D8 D 2 E 8 E 2 DO NOT TAKE SAMPLE - CONTROL WELL F8 F 2 G 8 G 2 H8 H 2 A 9 A3 **B** 9 **B3** C 9 C3 Column DO NOT TAKE SAMPLE - CONTROL WELL D 9 **D3** E 9 E-3 F 9 F3 G 9 G 3 H 9 H 3 A 10 DO NOT TAKE SAMPLE - CONTROL WELL A4 **B** 10 **B4** C 10 C 4 D 10 D4 E 10 E 4 F 10 4 F4 G 10 G 4 H 10 H4 A 11 A5 **B** 11 **B** 5 Column 11-C 11 C 5 D 11 D 5 E 11 E 5 F 11 F 5 DO NOT TAKE SAMPLE - CONTROL WELL G 11 G.5 H 11 H 5 DO NOT TAKE SAMPLE - CONTROL WELL A 12 A6 **B 12** B 6 Column 12. C 12 C 6 D 12 D 6 E 12 E 6 F 12 F6 G 6 H 12 @ Wielk QA/QC 1/23/15

					
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