

## Supplementary material

### Sea-surface temperatures predict targeted visual surveys of octopus abundance

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#### The period over which temperatures were averaged

Octopuses in each survey vary in age from young to older (larger), so that the temperatures over the full possible life span affect the survey result, particularly if the temperature effect is a result of differential survival at early life stages as surmised.

Here, we present an exploration of the impact that the period over which temperatures were averaged has on the correlation of temperatures with octopus abundance. Shifting the two ends of the period over which temperature is averaged necessarily cuts out the most recent past (affecting very small octopuses) or the more distant past (affecting larger octopuses).

Nonetheless, we tested these factors again for the REEF data (Washington State waters) by calculating average temperatures over 12 different periods, including all combinations from 1 to 5 years before only 1 year prior, 2–5 years before only 2nd year prior and 3–5 to only 3rd year prior. We examined the correlation of the changing start time (Fig. S1, top left), end time (Fig. S1, top right) and total number of average years (Fig. S1, bottom) on the  $R^2$  relationship.

The resulting correlations of average temperatures to WA octopus sighting frequencies ranged from  $R^2 = 0.27$  (only 1 year prior in temperature average) to 0.83 (only 2–3 years prior).

This re-analysis found that (1) there was no effect on  $R^2$  of changing the starting lag (the most recent prior year included in the average); (2) the correlation increases if more than 1 year is averaged, but once 3 years are included, there is no further improvement in the  $R^2$  values; and (3) the correlation increases with end years prior from 1 to 3 years but reaches a plateau at 3–5 years.

From this, we reaffirm our understanding and that of Scheel (2015) that (1) it is not the very recent past temperatures alone that are strongly correlated with the octopus sighting frequency, (2) nor is it the temperature during each octopus's entire life span that affects the octopus sighting frequency. Instead, (3) over a time frame of approximately the life span of the sample of sighted animals, the earliest temperatures have the strongest

correlations with the octopus sighting frequency. Because each sighting frequency includes animals of different ages, the average over the prior 4 years (larger animals, WA) or 2.5 years (smaller animals, AK) is reasonable and biologically realistic to examine.

### **Publicly available data**

Sources are listed in the manuscript for publicly available datasets used for PDO, northern Pacific sea-surface temperatures, and Washington State historical water temperatures, and the REEF datasets. The annual REEF sighting frequency values used in the paper can also be reproduced as described by using interactive reports on the reef.org website. Although the raw REEF data contain additional interesting variables accessible by contacting Reef's science director, analyses presented in this paper do not rely on these additional variables. REEF uses this process to track usage, but they provide raw data extracts to any interested researchers who request it.

**Table S1. PWS surveys – Prince William Sound survey data headers**

Date, date of octopus survey; site description, narrative description of survey location; Occ, number of occupied octopus dens; Area, area of survey (m<sup>2</sup>); year, year of survey; number, alphanumeric designator of survey site; density, number of occupied octopus dens per 1000 m<sup>2</sup> surveyed area

Date	Site description	Occ	Area	Year	Number	Density
13/06/1995	Ellamar Reef; Large gravel, old dock.	3	7500	1995	EL01	0.4
2/06/1996	Gibbons Anchorage	1	1290	1996	GR17A	0.78
2/06/1996	Gibbons Anchorage	2	540	1996	GR17C	3.7
2/06/1996	Cove south-west of Gibbons Anchorage	1	15000	1996	GR14	0.07
5/06/1996	Green Island – north end between aerial 4 and 5	0	2000	1996	GR5A	0
5/06/1996	Green Island – just E of GR5A; between aerial 4 and 5	0	200	1996	GR5B	0
5/06/1996	Green Island – north side facing Montague Island	0	1000	1996	GR4A	0
5/06/1996	Green Island – north side facing Montague Island	0	1000	1996	GR4B	0
30/06/1996	Bouldery east side of lagoon N. of Gibbons	2	1500	1996	GR20	1.33
22/06/1998	Pinger Place @ '96 B2 trans	1	550	1998	GR17B	1.82
22/06/1998	Pinger Place @ '96 A trans	0	425	1998	GR17A	0
23/06/1998	Enchanted Garden (SW of Gibbons)	0	2000	1998	GR14	0
23/06/1998	Enchanted Garden (SW of Gibbons)	1	1000	1998	GR14	1
24/06/1998	Pinger Place @ '96 C&D trans	2	1000	1998	GR17CD	2
24/06/1998	Pinger Place @ '96 B2 trans	0	750	1998	GR17B	0
25/06/1998	Opposite Enchanted Garden (GR14) on S of cove	2	1225	1998	GR31	1.63
26/06/1998	Second new site on Enchanted Garden cove	0	1000	1998	GR32	0
26/06/1998	Third new site on Enchanted Garden cove. Near GR9802	0	1000	1998	GR33	0
28/05/2002	Outer Busby Island, tip of S rocky reef	1	4000	2002	BU02	0.25
27/05/2002	Enchanted Garden (SW of Gibbons)	1	4000	2002	GR14	0.25
26/05/2002	GR17 Pinger Place – flats (original C/D)	1	1000	2002	GR17C	1
26/05/2002	GR17 Pinger Place – ridge (original B1/B2)	1	912	2002	GR17B	1.1
26/05/2002	Ellamar Reef (outside landward portion)	0	1000	2002	EL02	0
25/05/2002	Ellamar Reef (outside distal portion)	1	625	2002	EL01	1.6
16/06/2003	Opposite GR14 on S of cove (=GR9801)	1	8000	2003	GR31	0.13

Date	Site description	Occ	Area	Year	Number	Density
16/06/2003	Enchanted Garden SW of Gibbons & GR17	3	3000	2003	GR14	1
15/06/2003	GR17 Pinger Place – SSW flats (original C/D)	2	5715	2003	GR17C	0.35
15/06/2003	GR17 Pinger Place – ridge (original B1/B2)	3	2250	2003	GR17B	1.33
14/06/2003	Outer Busby Island, S rocky reef just landward of reef saddle	1	6000	2003	BU02	0.17
13/06/2003	Ellamar Reef (outside landward portion)	1	3400	2003	EL02	0.29
13/06/2003	Ellamar Reef (outside distal portion)	0	6000	2003	EL01	0
5/06/2004	GR17 Pinger Place – SSW flats (original C/D)	1	3000	2004	GR17C	0.33
5/06/2004	GR17 Pinger Place – ridge (original B1/B2)	2	1200	2004	GR17B	1.67
4/06/2004	Second new site on Enchanted Garden cove	0	1995	2004	GR32	0
4/06/2004	Enchanted Garden SW of Gibbons & GR17	0	3330	2004	GR14	0
3/06/2004	Outer Busby Island, S rocky reef just landward of reef saddle	2	7800	2004	BU02	0.26
2/06/2004	Ellamar Reef (outside landward portion)	0	700	2004	EL02	0
2/06/2004	Ellamar Reef (outside distal portion)	0	1820	2004	EL01	0
24/06/2005	Enchanted Garden SW of Gibbons & GR17	1	2475	2005	GR14	0.4
23/06/2005	GR17 Pinger Place – ridge (original B1/B2)	2	1500	2005	GR17B	1.33
22/06/2005	Outer Busby Island, S rocky reef just landward of reef saddle	2	1750	2005	BU02	1.14
21/06/2005	Ellamar Reef (outside landward portion)	0	1200	2005	EL02	0
21/06/2005	Ellamar Reef (outside distal portion)	1	1200	2005	EL01	0.83
27/05/2005	Outer Busby Island, S rocky reef just landward of reef saddle	2	1800	2005	BU02	1.11
26/05/2005	Ellamar Reef (outside distal portion)	0	1360	2005	EL01	0
25/06/2006	Ellamar Reef (outside landward portion)	1	300	2006	EL02	3.33
24/06/2006	Ellamar Reef (outside distal portion)	1	1050	2006	EL01	0.95
26/06/2006	Outer Busby Island, S rocky reef just landward of reef saddle	1	1200	2006	BU02	0.83
25/06/2006	Enchanted Garden SW of Gibbons & GR17	2	4230	2006	GR14	0.47
24/06/2006	GR17 Pinger Place – ridge (original B1/B2)	0	180	2006	GR17B	0
24/06/2006	GR17 Pinger Place – SSW flats (original C/D)	1	1500	2006	GR17C	0.67
16/06/2007	Outer Busby Island, S rocky reef just landward of reef saddle	3	1350	2007	BU02	2.22
15/06/2007	Ellamar Reef (outside landward portion)	0	2000	2007	EL02	0
15/06/2007	Ellamar Reef (outside distal portion)	0	1800	2007	EL01	0
14/06/2007	GR17 Pinger Place – SSW flats (original C/D)	2	1500	2007	GR17C	1.33

Date	Site description	Occ	Area	Year	Number	Density
14/06/2007	GR17 Pinger Place – ridge (original B1/B2)	2	1800	2007	GR17B	1.11
13/06/2007	Enchanted Garden SW of Gibbons & GR17	0	1700	2007	GR14	0
6/06/2008	Ellamar Reef (outside landward portion)	1	1352	2008	EL02	0.74
6/06/2008	Ellamar Reef (outside distal portion)	1	1508	2008	EL01	0.66
5/06/2008	Outer Busby Island, S rocky reef just landward of reef saddle	4	2000	2008	BU02	2
4/06/2008	GR17 Pinger Place – SSW flats (original C/D)	2	4187	2008	GR17C	0.48
4/06/2008	GR17 Pinger Place – ridge (original B1/B2)	2	1100	2008	GR17B	1.82
3/06/2008	Enchanted Garden SW of Gibbons & GR17	2	3480	2008	GR14	0.57
25/06/2009	GR17 Pinger Place – SSW flats (original C/D)	4	2700	2009	GR17C	1.48
25/06/2009	GR17 Pinger Place – ridge (original B1/B2)	3	819	2009	GR17B	3.66
24/06/2009	Enchanted Garden SW of Gibbons & GR17	1	3180	2009	GR14	0.31
22/06/2009	Outer Busby Island, S rocky reef just landward of reef saddle	4	2600	2009	BU02	1.54
21/06/2009	Ellamar Reef (outside distal portion)	0	1170	2009	EL01	0
25/05/2009	Outer Busby Island, S rocky reef just landward of reef saddle	3	1600	2009	BU02	1.88
15/06/2010	GR17 Pinger Place – SSW flats (original C/D)	1	2025	2010	GR17C	0.49
15/06/2010	GR17 Pinger Place – ridge (original B1/B2)	2	805	2010	GR17B	2.48
14/06/2010	Enchanted Garden SW of Gibbons & GR17	2	3480	2010	GR14	0.57
13/06/2010	Ellamar Reef (outside landward portion)	3	1100	2010	EL02	2.73
13/06/2010	Ellamar Reef (outside distal portion)	4	1500	2010	EL01	2.67
12/06/2010	Outer Busby Island, S rocky reef just landward of reef saddle	3	855	2010	BU02	3.51
17/06/2011	GR17 Pinger Place – SSW flats (original C/D)	0	900	2011	GR17C	0
17/06/2011	GR17 Pinger Place – ridge (original B1/B2)	2	1000	2011	GR17B	2
16/06/2011	Enchanted Garden SW of Gibbons & GR17	3	1640	2011	GR14	1.83
15/06/2011	Ellamar Reef (outside landward portion)	1	1400	2011	EL02	0.71
15/06/2011	Ellamar Reef (outside distal portion)	1	1610	2011	EL01	0.62
14/06/2011	Outer Busby Island, S rocky reef just landward of reef saddle	3	900	2011	BU02	3.33
6/06/2012	Outer Busby Island, S rocky reef just landward of reef saddle	5	1875	2012	BU02	2.67
5/06/2012	GR17 Pinger Place – SSW flats (original C/D)	2	1400	2012	GR17C	1.43
5/06/2012	GR17 Pinger Place – ridge (original B1/B2)	3	1070	2012	GR17B	2.8
4/06/2012	Enchanted Garden SW of Gibbons & GR17	3	1764	2012	GR14	1.7

Date	Site description	Occ	Area	Year	Number	Density
3/06/2012	Ellamar Reef (outside landward portion)	2	980	2012	EL02	2.04
3/06/2012	Ellamar Reef (outside distal portion)	1	1470	2012	EL01	0.68
25/06/2013	Ellamar Reef (outside landward portion)	1	980	2013	EL02	1.02
25/06/2013	Ellamar Reef (outside distal portion)	1	1000	2013	EL01	1
24/06/2013	GR17 Pinger Place – SSW flats (original C/D)	4	1500	2013	GR17C	2.67
24/06/2013	GR17 Pinger Place – ridge (original B1/B2)	0	1060	2013	GR17B	0
23/06/2013	Enchanted Garden SW of Gibbons & GR17	2	2125	2013	GR14	0.94
22/06/2013	Outer Busby Island, S rocky reef just landward of reef saddle	1	975	2013	BU02	1.03
16/06/2014	GR17 Pinger Place – SSW flats (original C/D)	2	1440	2014	GR17C	1.39
16/06/2014	GR17 Pinger Place – ridge (original B1/B2)	0	1000	2014	GR17B	0
15/06/2014	Enchanted Garden SW of Gibbons & GR17	1	1320	2014	GR14	0.76
14/06/2014	Ellamar Reef (outside landward portion)	1	1030	2014	EL02	0.97
14/06/2014	Ellamar Reef (outside distal portion)	2	1000	2014	EL01	2
13/06/2014	Outer Busby Island, S rocky reef just landward of reef saddle	6	1248	2014	BU02	4.81
18/06/2015	Ellamar Reef (outside landward portion)	2	1200	2015	EL02	1.67
18/06/2015	Ellamar Reef (outside distal portion)	3	1200	2015	EL01	2.5
18/06/2015	GR17 Pinger Place – SSW flats (original C/D)	0	2100	2015	GR17C	0
18/06/2015	GR17 Pinger Place – ridge (original B1/B2)	0	1000	2015	GR17B	0
17/06/2015	Enchanted Garden SW of Gibbons & GR17	1	1176	2015	GR14	0.85
16/06/2015	Ellamar Reef (outside landward portion)	1	1000	2015	EL02	1
16/06/2015	Ellamar Reef (outside distal portion)	0	1200	2015	EL01	0
15/06/2015	Outer Busby Island, S rocky reef just landward of reef saddle	0	864	2015	BU02	0
7/06/2016	GR17 Pinger Place – SSW flats (original C/D)	0	1000	2016	GR17C	0
7/06/2016	GR17 Pinger Place – ridge (original B1/B2)	1	1030	2016	GR17B	0.97
6/06/2016	Enchanted Garden SW of Gibbons & GR17	1	1200	2016	GR14	0.83
5/06/2016	Ellamar Reef (outside landward portion)	1	1000	2016	EL02	1
5/06/2016	Ellamar Reef (outside distal portion)	0	1000	2016	EL01	0
4/06/2016	Outer Busby Island, S rocky reef just landward of reef saddle	0	840	2016	BU02	0

**Table S2. Octopus size – measured weights of octopuses in PWS surveys**

Den ID, alphanumeric designator of den where octopus was captured; size class, size class of octopus, integer kilograms; site, alphanumeric designator of survey area

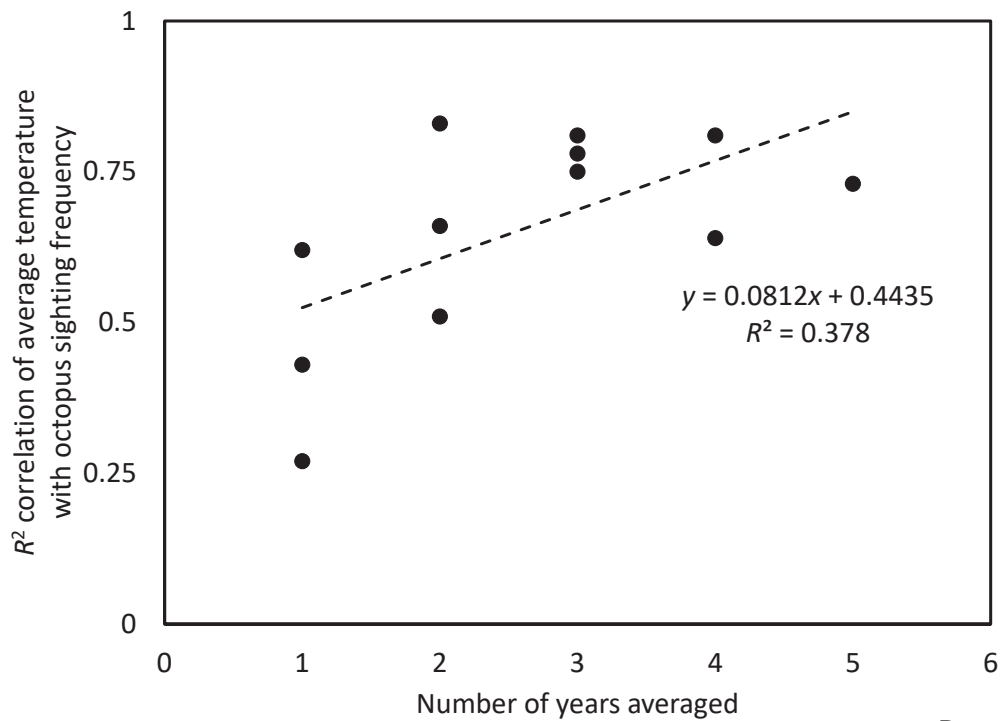
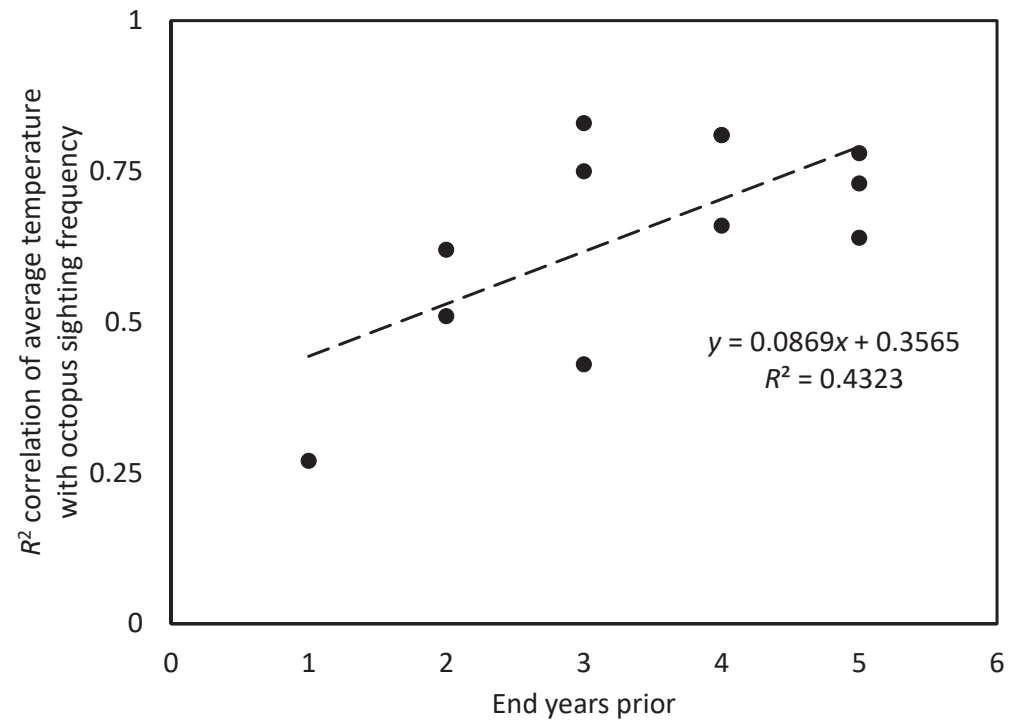
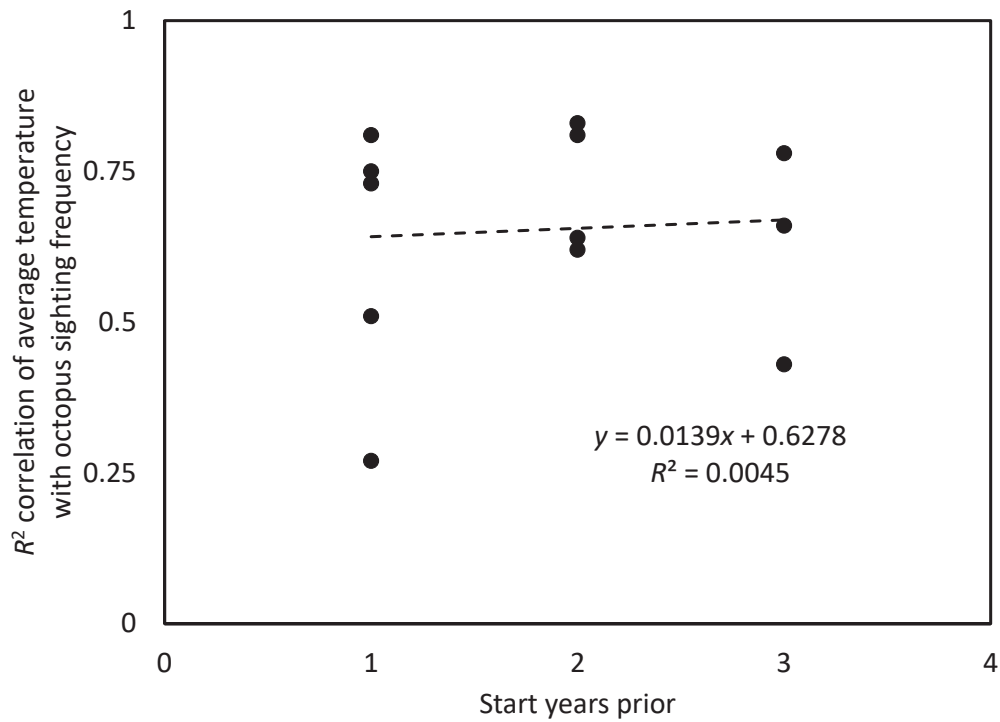
Den ID	Date of survey	Weight (kg)	Sex	Size class	Year	Site
3B	13/06/1995	0.8	F	0	1995	EL
3A	13/06/1995	0.8	F	0	1995	EL
12D	16/06/1995	0.2	U	0	1995	SW PWS
MO16A.1.B.1	1/06/1996	0.9	F	0	1996	MO
GR17B1.1.B.1	2/06/1996	0.5	M	0	1996	GR
CH3.1.nm4.1	4/06/1996	0.9	F	0	1996	CH
MO04.1.out	6/06/1996	0.2	F	0	1996	MO
	25/06/1998	0.6	F	0	1998	GR
	25/06/1998	0.7	F	0	1998	GR
	24/06/1998	0.004	F	0	1998	GR
	23/06/1998	0.006	F	0	1998	GR
GR14.2003-01.B.1	16/06/2003	0.75	F	0	2003	GR
GR14.2003-01.A.1	16/06/2003	0.7	F	0	2003	GR
BU02.2005-03.T4.1	25/06/2005	0.0043	F	0	2005	BU
BU02.2005-03.T3.1	25/06/2005	0.15	F	0	2005	BU
BU02.2005-03.T2.1	25/06/2005	0.0113	F	0	2005	BU
GR14E.2005-01.C-off.1	24/06/2005	0.8	U	0	2005	GR
EL01.2005-04.C.3	24/06/2005	0.94	F	0	2005	EL
GR17B.2005-01.Out.1	23/06/2005	0.89	F	0	2005	GR
BU02.2005-02.F.1	22/06/2005	0.48	F	0	2005	BU
EL01.2005-02.D.1	21/06/2005	0.007	F	0	2005	EL
BU02.2005-01.C.1	27/05/2005	0.6	M	0	2005	BU
BU05.2005-01.1.nm.1	25/05/2005	0.0014	na	0	2005	BU
EL02.2006-01.B.1	25/06/2006	0.8	M	0	2006	EL
BU02.2006-01.C.1	26/06/2006	0.01	F	0	2006	BU
GR17C.2006-01.A.1	24/06/2006	0.79	F	0	2006	GR
BU03.2007-01.A.1	18/06/2007	0.01	F	0	2007	BU
BU02.2007-01.D.1	16/06/2007	0.005	F	0	2007	BU
BU02.2008-01.Off 3.1	5/06/2008	0.52	F	0	2008	BU
BU02.2008-01.E.1	5/06/2008	0.59	F	0	2008	BU
GR17B.2008-01.Off 1.1	4/06/2008	0.21	F	0	2008	GR
BU06.2009-01.Off4.1	26/06/2009	0.01	F	0	2009	BU

Den ID	Date of survey	Weight (kg)	Sex	Size class	Year	Site
BU06.2009-01.Off1.1	26/06/2009	0.53	F	0	2009	BU
GR17C.2009-01.Off1.1	25/06/2009	0.26	F	0	2009	GR
GR17C.2009-01.Old-X.1	25/06/2009	0.49	F	0	2009	GR
BU02.2009-04.Off-1.1	23/06/2009	0.016	F	0	2009	BU
BU02.2009-04.Out 1.1	23/06/2009	0.23	F	0	2009	BU
BU02.2009-03.Off-L.1	22/06/2009	0.55	F	0	2009	BU
BU02.2009-03.(addr)-G.1	22/06/2009	0.38	F	0	2009	BU
NA01.2010-01.B.1	16/06/2010	0.75	F	0	2010	NA
NA01.2010-01.A.1	16/06/2010	0.68	F	0	2010	NA
GR14.2011-01.Off-1.1	16/06/2011	0.007	F	0	2011	GR
GR14.2011-01.A.1	16/06/2011	0.5	F	0	2011	GR
BU02.2011-01.B.1	14/06/2011	0.0058	M	0	2011	BU
GR17C.2013-01.I.1	24/06/2013	0.41	M	0	2013	GR
GR14.2013-01.A.1	23/06/2013	0.8	M	0	2013	GR
BU02.2013-00.Off0.1	20/06/2013	0.006	F	0	2013	BU
BU02.2014-01.Off3.1	13/06/2014	0.35	M	0	2014	BU
BU02.2014-01.Off2.1	13/06/2014	0.875	F	0	2014	BU
BU02.2014-01.Off1.1	13/06/2014	0.6	F	0	2014	BU
BU02.2014-01.F1-out.1	13/06/2014	0.575	F	0	2014	BU
BU02.2014-01.D.1	13/06/2014	0.4	F	0	2014	BU
BU02a.2014-01.Off2.1	12/06/2014	0.825	M	0	2014	BU
BU02a.2014-01.Off1.1	12/06/2014	0.022	F	0	2014	BU
GR17C.2015-01.Off1.1	18/06/2015	0.465	M	0	2015	GR
BU02.2015-01.Off-3.1	15/06/2015	0.855	F	0	2015	BU
BU02.2015-01.Off-2.1	15/06/2015	0.895	F	0	2015	BU
BU02.2015-01.Off-1.1	15/06/2015	0.99	F	0	2015	BU
EL02.2016-01.B.1	5/06/2016	0.36	F	0	2016	EL
6E	14/06/1995	1.75	F	1	1995	Tatitlek
15A	17/06/1995	1.5	F	1	1995	SW PWS
MO16A.1.C.1	1/06/1996	1.5	F	1	1996	MO
GR14.1.A.1	2/06/1996	1.5	F	1	1996	GR
MO16F.1.G.1	29/06/1996	1.65	F	1	1996	MO
GR17B2.2.A.2	30/06/1996	1.95	F	1	1996	GR
GR17D.1.I.1	30/06/1996	1.95	M	1	1996	GR
GR17B.2003-01.Old A.1	15/06/2003	1.8	M	1	2003	GR
2006.NO.04.all.3	30/06/2006	1.4	M	1	2006	BU
EL01.2006-01.1.1	23/06/2006	1.1	M	1	2006	EL



Den ID	Date of survey	Weight (kg)	Sex	Size class	Year	Site
GR17C.2010-01.Off-2.1	15/06/2010	1.09	F	1	2010	GR
EL02.2010-01.Off-5.1	13/06/2010	1.47	M	1	2010	EL
GR17C.2014-01.D.1	16/06/2014	1.05	F	1	2014	GR
BU02.2015-01.Off-4.1	15/06/2015	1.825	F	1	2015	BU
EL02.2016-01.Off3.1	5/06/2016	1.24	M	1	2016	EL
6B	14/06/1995	2	F	2	1995	Tatitlek
12A	16/06/1995	2.25	F	2	1995	SW PWS
EV9A.1.nm1.1	3/06/1996	2.2	F	2	1996	EV
CH2.1.A.1	4/06/1996	2.3	F	2	1996	CH
MO16.2.1.A.1	5/06/1996	2.6	U	2	1996	MO
MO16.3.1.E.2	29/06/1996	2	F	2	1996	MO
	22/06/1998	2.3	F	2	1998	GR
BU02.2006-01.OFF.1	26/06/2006	2.25	F	2	2006	BU
GR14.2008-01.Off 2.1	3/06/2008	2.5	F	2	2008	GR
2A	13/06/1995	3.25	F	3	1995	Tatitlek
11A	16/06/1995	3.25	F	3	1995	SW PWS
GR17C.1.F2.1	2/06/1996	3.4	M	3	1996	GR
EV9A.1.nm4.1	3/06/1996	3.8	M	3	1996	EV
CH3.1.nm1.1	4/06/1996	3.5	F	3	1996	CH
MO16.2.1.B.2	5/06/1996	3	F	3	1996	MO
GR17A.1.H.1	30/06/1996	3.25	F	3	1996	GR
GR17B1.2.F.1	30/06/1996	3.05	M	3	1996	GR
GR17B.2003-02.D.2	17/06/2003	3.8	U	3	2003	GR
GR17C.2003-01.OFF.1	15/06/2003	3.35	F	3	2003	GR
BU02.2009-02.Off-3.1	26/05/2009	3.55	M	3	2009	BU
GR17C.2010-01.Off-1.1	15/06/2010	3.015	M	3	2010	GR
GR17C.2010-01.I.1	15/06/2010	3.18	M	3	2010	GR
GR14.2010-01.Off-1.1	14/06/2010	3.53	F	3	2010	GR
GR14.2010-01.A.1	14/06/2010	3.775	M	3	2010	GR
BU02.2010-01.Off 1.1	12/06/2010	3.185	M	3	2010	BU
GR14.2013-01.E.1	23/06/2013	3.5	F	3	2013	GR
11D	16/06/1995	4.75	F	4	1995	SW PWS
GR17B2.1.C.1	2/06/1996	4.6	F	4	1996	GR
GR20.1.A.1	30/06/1996	4.1	M	4	1996	GR
GR20.1.B.1	30/06/1996	4.3	F	4	1996	GR
	25/06/1998	4.1	F	4	1998	GR
BU02.2002.2002.D.1	28/05/2002	4.2	F	4	2002	BU

Den ID	Date of survey	Weight (kg)	Sex	Size class	Year	Site
GR17C.2003-01.Old G.1	15/06/2003	4	M	4	2003	GR
GR32.2004-01.D.1	4/06/2004	4.65	F	4	2004	GR
BU02.2004-01.D.1	3/06/2004	4.25	F	4	2004	BU
BU03.2007-01.B.1	18/06/2007	4.65	M	4	2007	BU
BU06.2009-01.Off3.1	26/06/2009	4	F	4	2009	BU
BU02.2009-04.(addr)-J.1	23/06/2009	4	M	4	2009	BU
6F	14/06/1995	5.75	F	5	1995	Tatitlek
11B	16/06/1995	5.75	F	5	1995	SW PWS
GR17C.1.F1.1	2/06/1996	5	M	5	1996	GR
GR14.2003-01.OUT.1	16/06/2003	5.1	F	5	2003	GR
BU01.2004-01.C.1	3/06/2004	5.4	F	5	2004	BU
BU02.2008-01.Off 4.1	5/06/2008	5.05	M	5	2008	BU
GR17B.2011-01.Out.1	17/06/2011	5.45	F	5	2011	GR
GR17D.1.AI.1	30/06/1996	6.25	F	6	1996	GR
2006.NO.03.all.3	28/06/2006	6.65	F	6	2006	BU
BU02.2008-01.Off 2.1	5/06/2008	6.15	F	6	2008	BU
GR17C.2002.2002.C.1	26/05/2002	7.39	M	7	2002	GR
BU02.2003-01.A.1	14/06/2003	7.6	F	7	2003	BU
BU06.2009-01.Off2.1	26/06/2009	7.2	M	7	2009	BU
Pot 98.1.3.8	19/05/1998	16.5	M	16	1998	98
Tracking_09Jun2008.Jude	9/06/2008	16.5	F	16	2008	EL



**Fig. S1.** Each data point is the overall correlation of average temperature with Washington octopus sighting frequency for a different span over which temperatures were averaged. See supplemental text for details.