Supplemental Information

Methods

Chemical analysis: Quantitative analysis for PCB congeners and selected chlorinated pesticides was performed on an Agilent 6890 Gas Chromatograph equipped with an electron capture detector. A J&W DB-5 60m fused silica capillary column (0.25 µm film thickness, 0.25 mm i.d.) was used to achieve the separation. Ultra-high purity helium was the carrier gas (flow rate = 1.3 ml/min) and 95%:5% Argon/Methane (P5) was used as the auxiliary gas. The initial column temperature was held at 90° C for 1 min, increased to 170° C at 25°C min^{-1} and then to 215°C at 1.5° C min^{-1}. After 3 min at 215° C, the temperature was increased to 250° C at 1.5° C min^{-1}. Final column temperature was taken to 300° C at 20º C min^{-1} and held for 5 minutes. The injection port temperature was 250° C and the detector temperature was 300° C. Integration and calculations were accomplished by Agilent ChemStation® software.

For all PCB congener analyses, procedural blanks, standard reference materials [1], analytical duplicates and matrix spiked samples were routinely taken through the entire analytical procedure with each batch of 20 samples to evaluate and maintain quality assurance and quality control. Procedural blanks were free of any contaminants; the laboratory values for standard reference materials were within 30% of true values on average for most of the analytes. The relative standard deviation for analytical duplicates was less than 10% for most analytes and the range for matrix spike recoveries was 73% to 113%. The method detection limits (MDLs) for 18 PCB congeners in 4 g wet egg contents ranged from 0.06 to 0.11 ng/g.

Eight extracts were not analyzed for DLCs until 2014. To test for possible changes between 2005 and 2014, these extracts were reanalyzed for other PCB congeners. For 7 extracts, the mean difference in Total PCBs between the measurements in 2005 and 2014 was +3.6% with a maximum difference of +16%. For the eighth extract, the difference between the two measurements was −46%; data for this sample were not used.

To convert from dw to aww, we use the mean value of 0.24 for tern eggs derived from data in [2]. Concentrations should not have been changed significantly by embryonic development in the 1972 eggs that were hatched, because mass intake of O_2 during embryonic development in birds is approximately balanced by loss of CO_2, so that the net loss of mass consists primarily of H_2O [3].

Tern breeding pair censuses: Data on the numbers of breeding pairs of common and roseate terns at the nesting sites in Buzzards Bay, MA, were compiled from various sources [4 - 11]. Field methods were described in the sources cited as well as [12 -14].

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Supplemental Tables

Table S1. Concentrations of PCB congeners and *p,p*'-DDE in samples of tern eggs from Buzzards Bay, Massachusetts, USA. All concentrations are reported in ng g^{-1} adjusted wet weight as described in Methods; when below minimum detection limit (MDL), values are shown in bold as ½ MDL.

Lab ID	Sample	Site	Year	Period	Species	PCB008	PCB018	PCB028	PCB052
30848A	Egg	RI	1972	1970s	CT	195.60	123.06	2589.84	2154.12
30953A	Egg	RI	1972	1970s	CT	34.43	54.62	2395.70	426.61
30954A	Egg	RI	1972	1970s	CT	**0.20**	**0.26**	25.29	1.95
30955A	Egg	RI	1972	1970s	CT	**0.10**	**0.13**	74.38	5.67
30957A	Egg	RI	1972	1970s	CT	63.85	6.69	3756.28	822.91
30959A	Egg	RI	1972	1970s	CT	233.53	61.12	4771.18	1646.84
30960A	Egg	RI	1972	1970s	CT	253.43	112.09	2659.47	1773.44
30961A	Egg	RI	1972	1970s	CT	378.41	126.36	3293.37	1677.30
30962A	Egg	RI	1972	1970s	CT	**0.15**	**0.19**	1045.43	612.81
30963A	Egg	RI	1972	1970s	CT	691.43	225.20	4662.70	2266.46
30970A	Egg	RI	1972	1970s	CT	52.21	7.99	1447.22	966.42
30956A	Egg	RI	1972	1970s	RT	0.18	**0.17**	509.37	60.85
30712A	Egg	BI	1994	1990s	RT	3.26	**0.06**	16.17	3.05
30713A	Egg	BI	1994	1990s	RT	2.17	**0.08**	5.98	0.85
30736A	Egg	BI	1994	1990s	RT	6.35	**0.07**	12.79	2.68
30743A	Egg	BI	1994	1990s	RT	0.78	**0.07**	84.07	14.19
30749A	Egg	BI	1994	1990s	RT	3.48	**0.07**	22.57	3.07
30755A	Egg	BI	1994	1990s	RT	0.44	**0.08**	23.25	2.38
30761A	Egg	BI	1994	1990s	RT	9.80	**0.07**	25.15	20.33
30767A	Egg	BI	1994	1990s	RT	6.84	**0.08**	9.70	4.24
30721A	Eggpool	BI	1994	1990s	RT	7.36	**0.07**	19.92	3.13

Table S1 (continued).

Lab ID	PCB044	PCB066	PCB101	PCB118	PCB153	PCB105	PCB138	PCB187
30848A	368.12	2587.32	2596.16	4042.27	4332.28	1956.45	3907.43	753.32
30953A	94.68	2248.28	1329.78	3245.47	3133.78	1617.10	2879.43	408.70
30954A	5.06	57.36	13.46	252.91	762.52	80.47	491.53	222.38
30955A	0.78	124.33	85.84	218.18	342.78	83.79	268.34	64.56
30957A	19.25	3254.90	2403.33	4377.69	4154.69	2232.94	3629.41	565.81
30959A	71.26	3600.97	2877.73	3831.06	3685.06	1659.49	3163.75	495.50
30960A	620.88	2118.47	1919.25	2601.72	2684.19	1056.32	2296.07	326.35
30961A	288.44	2671.58	2170.07	3611.90	3614.34	1640.10	3179.44	451.81
30962A	118.95	1178.83	777.63	2785.27	3120.78	1179.87	2672.36	435.32
30963A	306.10	3954.36	3287.10	5020.99	4893.10	2450.49	4212.97	647.07
30970A	202.61	1138.65	939.49	1634.63	1604.06	827.23	1463.14	218.57
30956A	0.66	627.30	479.60	1303.93	1635.01	590.99	1375.52	383.98
30712A	**0.03**	39.96	85.91	208.19	402.17	44.12	266.78	63.45
30713A	**0.03**	14.92	17.57	116.39	291.55	21.77	178.99	48.03
30736A	**0.03**	24.23	41.80	179.89	392.21	34.14	251.38	66.76
30743A	0.74	193.18	200.92	719.99	1003.38	196.15	729.09	173.39
30749A	**0.03**	49.15	83.20	271.48	528.59	58.29	353.24	93.74
30755A	**0.03**	51.08	53.37	211.32	378.29	46.82	256.30	54.99
30761A	1.00	56.18	108.89	393.67	748.02	86.44	503.73	146.62
30767A	**0.03**	21.42	39.88	158.82	352.48	29.19	222.93	61.83
30721A	**0.02**	41.91	67.97	193.28	321.40	47.52	228.43	61.58

Table S1 (continued).

Lab ID	PCB128	PCB180	PCB170	PCB195	PCB206	PCB209	Total PCBs	p,p'-DDE
30848A	1269.33	1535.83	863.67	64.43	76.36	8.60	29424.18	985.86
30953A	966.53	1007.22	570.44	42.97	77.59	26.85	20560.17	677.29
30954A	71.62	421.86	139.84	29.16	27.88	24.29	2628.04	2515.14
30955A	42.01	167.77	49.16	7.00	13.80	4.63	1553.25	361.89
30957A	1244.02	1358.87	768.32	54.45	77.36	24.12	28814.89	864.28
30959A	831.81	1108.35	508.36	46.56	108.76	43.19	28744.49	779.46
30960A	519.75	694.40	315.84	17.96	30.34	2.39	20002.36	630.26
30961A	941.42	1117.07	579.73	37.33	48.74	9.30	25836.72	856.63
30962A	822.41	1085.06	588.03	39.80	46.06	5.75	16514.71	565.93
30963A	1412.72	1762.98	950.32	99.66	175.90	62.35	37081.91	1186.65
30970A	504.45	576.36	347.02	28.05	28.56	3.91	11990.57	362.91
30956A	396.10	569.22	253.24	25.25	28.51	5.74	8245.62	597.09
30712A	50.87	75.56	28.84	2.45	5.77	1.96	1298.61	95.20
30713A	29.04	62.40	23.09	1.97	6.09	2.06	822.99	36.95
30736A	46.55	79.00	32.08	2.50	5.90	1.77	1180.12	81.76
30743A	187.54	211.03	96.40	6.33	8.42	1.84	3827.53	139.26
30749A	72.72	115.63	50.03	3.94	7.17	2.18	1718.59	117.32
30755A	51.28	63.36	28.08	1.77	3.66	0.65	1227.13	60.92
30761A	108.24	172.11	75.17	5.17	8.07	2.22	2470.86	127.65
30767A	40.90	70.13	28.87	1.92	3.89	0.59	1053.73	56.20
30721A	51.46	68.24	32.10	2.19	4.12	0.81	1151.51	90.18

98 **Table S1 (continued).**

99

Lab ID	Sample	Site	Year	Period	Species	PCB008	PCB018	PCB028	PCB052
30714A	Eggpool	BI	1995	1990s	CT	**0.06**	1.22	61.84	26.91
30722A	Eggpool	BI	1995	1990s	CT	7.77	18.58	299.21	264.39
30724A	Eggpool	RI	1995	1990s	CT	4.69	**0.06**	28.00	2.84
30737A	Eggpool	RI	1995	1990s	CT	5.79	**0.08**	15.49	5.27
30715A	Eggpool	BI	1996	1990s	CT	1.98	**0.07**	28.84	6.49
30744A	Eggpool	BI	1996	1990s	CT	5.94	**0.06**	17.06	17.95
30725A	Egg	BI	1996	1990s	RT	4.13	**0.07**	3.94	0.12
30750A	Egg	BI	1996	1990s	RT	5.47	**0.08**	7.30	5.77
30762A	Egg	BI	1996	1990s	RT	1.46	**0.08**	20.52	3.51
30773A	Egg	BI	1996	1990s	RT	4.37	**0.09**	2.56	0.04
30781A	Egg	BI	1996	1990s	RT	2.56	**0.08**	21.24	1.69
30788A	Egg	BI	1996	1990s	RT	1.31	**0.09**	7.57	1.29
30796A	Egg	BI	1996	1990s	RT	6.72	**0.08**	18.90	3.73
30803A	Egg	BI	1996	1990s	RT	4.32	**0.08**	13.96	6.13
30731A	Eggpool	RI	1996	1990s	CT	3.55	**0.07**	35.01	25.61
30738A	Egg	RI	1996	1990s	RT	7.54	**0.07**	17.09	8.07
30756A	Egg	RI	1996	1990s	RT	2.11	**0.08**	8.11	0.98
30768A	Egg	RI	1996	1990s	RT	4.10	**0.07**	90.35	56.22
30778A	Egg	RI	1996	1990s	RT	11.71	**0.08**	25.61	4.15
30785A	Egg	RI	1996	1990s	RT	5.90	**0.08**	10.35	2.09
30792A	Egg	RI	1996	1990s	RT	5.53	**0.08**	7.21	0.73
30799A	Egg	RI	1996	1990s	RT	4.74	**0.07**	16.18	0.03
30806A	Egg	RI	1996	1990s	RT	2.30	**0.08**	12.69	0.75

100

101

Table S1 (continued).

Lab ID	PCB044	PCB066	PCB101	PCB118	PCB153	PCB105	PCB138	PCB187
30714A	2.92	66.07	123.57	255.49	431.76	54.78	292.94	59.64
30722A	29.95	255.79	430.91	604.07	764.19	163.39	514.58	107.34
30724A	**0.02**	41.18	55.72	288.55	534.19	61.22	345.69	71.58
30737A	0.40	36.28	54.00	196.60	360.07	44.13	237.17	63.00
30715A	0.17	43.25	79.31	264.02	489.86	56.25	314.80	68.08
30744A	2.73	26.07	44.80	196.78	381.71	36.22	242.41	52.28
30725A	**0.02**	9.78	9.48	96.72	228.82	18.19	143.27	38.30
30750A	0.11	18.38	49.19	126.04	269.15	24.66	175.49	48.44
30762A	**0.03**	48.23	65.19	272.97	515.31	60.01	336.45	90.44
30773A	**0.03**	9.48	12.90	103.91	248.28	18.53	145.89	34.31
30781A	**0.03**	49.71	120.01	214.89	350.14	47.94	240.44	53.28
30788A	**0.03**	18.60	21.71	178.44	472.47	30.31	278.26	66.82
30796A	**0.03**	38.60	77.41	226.26	441.96	49.23	291.29	85.53
30803A	**0.03**	32.23	66.76	288.61	724.17	53.02	422.83	104.65
30731A	0.96	79.60	146.77	486.79	715.96	122.90	475.84	102.72
30738A	0.06	55.96	72.56	415.16	668.33	90.28	449.25	106.72
30756A	**0.03**	22.21	55.12	131.69	271.68	26.49	173.16	46.71
30768A	0.46	146.00	333.67	776.47	1043.04	211.13	735.52	169.85
30778A	**0.03**	78.39	96.55	603.24	975.47	126.93	655.42	141.87
30785A	**0.03**	34.30	43.13	376.14	690.70	69.41	433.57	79.97
30792A	**0.03**	16.18	33.67	102.65	296.24	20.21	169.25	73.79
30799A	**0.03**	42.26	25.05	352.88	606.49	66.33	404.48	81.15
30806A	**0.03**	24.36	32.15	119.21	260.41	24.23	158.20	55.82

106 **Table S1 (continued).**

107

Lab ID	PCB128	PCB180	PCB170	PCB195	PCB206	PCB209	Total PCBs	p,p'-DDE
30714A	56.56	94.09	36.75	3.12	6.56	2.13	1576.39	118.91
30722A	136.78	161.18	75.03	5.42	10.61	3.18	3852.38	138.78
30724A	78.00	122.78	54.27	3.53	4.75	0.50	1697.55	116.48
30737A	49.66	73.93	31.21	2.56	4.35	1.09	1181.11	86.35
30715A	65.94	120.72	48.00	4.22	6.10	1.87	1599.98	178.40
30744A	49.18	79.41	31.97	3.06	4.85	1.50	1193.99	80.52
30725A	23.30	43.75	16.83	1.04	2.47	0.02	640.26	28.94
30750A	30.47	45.58	17.54	1.66	2.93	0.59	828.87	73.03
30762A	68.01	108.05	46.38	3.20	6.22	0.43	1646.48	69.97
30773A	24.93	48.24	17.18	0.98	2.09	0.03	673.83	45.35
30781A	51.82	56.09	23.54	1.30	2.96	0.39	1238.11	92.02
30788A	42.03	81.91	31.86	2.10	3.52	0.37	1238.69	41.66
30796A	61.71	90.68	38.80	2.61	4.94	1.02	1439.48	96.13
30803A	69.64	127.40	47.05	3.55	5.50	0.83	1970.77	117.90
30731A	118.42	141.46	66.24	4.49	6.83	1.19	2534.39	138.60
30738A	107.17	130.02	61.36	3.94	5.84	1.54	2200.96	70.68
30756A	30.23	51.12	17.85	1.58	3.03	0.38	842.56	96.69
30768A	193.76	245.05	118.61	8.08	9.47	1.91	4143.75	179.19
30778A	150.93	175.30	78.34	4.44	5.01	0.78	3134.23	101.18
30785A	80.58	105.60	41.08	2.75	4.49	0.84	1980.99	61.94
30792A	26.23	77.89	24.34	2.81	6.57	2.32	865.73	93.47
30799A	71.66	100.44	41.45	2.70	4.86	1.07	1821.84	38.20
30806A	24.89	58.24	17.98	1.86	5.07	1.99	800.26	41.48

108

Table S1 (continued).

Lab ID	Sample	Site	Year	Period	Species	PCB008	PCB018	PCB028	PCB052
30716A	Egg	BI	1998	1990s	CT	4.05	**0.06**	7.29	2.02
30732A	Egg	BI	1998	1990s	CT	1.13	**0.07**	13.76	5.49
30739A	Egg	BI	1998	1990s	CT	**0.05**	**0.06**	66.45	19.75
30745A	Egg	BI	1998	1990s	CT	4.07	**0.07**	37.86	16.37
30757A	Egg	BI	1998	1990s	CT	1.04	**0.07**	13.33	3.77
30763A	Egg	BI	1998	1990s	CT	1.33	**0.07**	19.03	1.25
30769A	Egg	BI	1998	1990s	CT	0.33	**0.07**	24.23	1.13
30774A	Egg	BI	1998	1990s	CT	0.62	**0.07**	20.50	32.44
30751A	Eggpool	BI	1998	1990s	CT	2.19	**0.07**	23.95	13.75
30845A	Eggpool	BI	1998	1990s	CT	0.91	**0.08**	16.66	18.24
30843A	Eggpool	BI	1998	1990s	RT	0.69	**0.08**	19.19	8.99
30846A	Eggpool	BI	1998	1990s	RT	2.61	**0.05**	22.45	4.13
30726A	Eggpool	RI	1998	1990s	RT	1.95	**0.05**	18.54	3.69
30718A	Egg	BI	1999	1990s	RT	0.59	**0.08**	22.46	2.01
30758A	Egg	BI	1999	1990s	RT	2.77	**0.08**	10.57	0.13
30779A	Egg	BI	1999	1990s	RT	3.49	**0.07**	19.67	1.03
30790A	Egg	BI	1999	1990s	RT	3.22	**0.08**	29.66	0.03
30801A	Egg	BI	1999	1990s	RT	1.65	**0.07**	4.41	0.25
30810A	Egg	BI	1999	1990s	RT	4.73	**0.08**	12.10	0.03
30817A	Egg	BI	1999	1990s	RT	1.85	**0.08**	10.35	3.02
30824A	Egg	BI	1999	1990s	RT	3.77	**0.08**	6.50	0.32
30727A	Eggpool	BI	1999	1990s	RT	2.27	**0.07**	24.74	2.59

Table S1 (continued).

Lab ID	PCB044	PCB066	PCB101	PCB118	PCB153	PCB105	PCB138	PCB187
30716A	**0.02**	24.79	45.99	156.84	269.92	36.16	181.02	44.47
30732A	**0.03**	33.79	83.88	179.10	322.23	39.13	213.37	54.09
30739A	1.27	113.10	282.07	395.76	608.59	100.55	414.70	126.47
30745A	0.64	58.54	131.03	285.28	490.13	60.98	329.03	76.48
30757A	**0.03**	27.85	59.49	170.68	324.39	33.98	207.66	41.62
30763A	**0.03**	44.35	81.27	275.30	495.94	58.23	328.91	58.59
30769A	**0.02**	57.31	103.33	303.54	594.08	67.07	393.19	106.94
30774A	1.70	56.99	173.43	299.65	526.05	67.21	358.02	86.42
30751A	0.40	49.33	114.46	287.26	531.61	55.26	338.02	70.71
30845A	0.71	38.29	92.21	213.04	430.53	43.60	283.22	62.26
30843A	0.25	47.54	106.74	265.78	505.50	55.78	330.57	67.41
30846A	**0.02**	47.58	99.86	239.02	415.29	56.27	290.12	85.50
30726A	**0.02**	40.81	77.12	235.07	419.62	53.98	280.84	76.68
30718A	**0.03**	54.45	59.89	291.10	570.80	69.22	370.20	120.12
30758A	**0.03**	24.77	49.25	168.73	357.88	30.54	225.10	43.28
30779A	**0.03**	41.72	90.77	201.49	384.95	39.41	250.48	60.59
30790A	**0.03**	56.60	92.43	345.17	686.81	65.71	423.65	94.71
30801A	**0.03**	21.55	16.93	238.89	513.10	41.17	323.95	83.10
30810A	**0.03**	22.31	35.83	153.89	315.55	25.53	201.93	47.15
30817A	**0.03**	33.20	72.86	265.31	495.10	53.22	323.66	90.07
30824A	**0.03**	17.31	32.27	131.82	329.90	24.48	203.24	43.90
30727A	**0.03**	57.28	91.04	346.60	618.76	70.15	406.06	114.94

Table S1 (continued).

Lab ID	PCB128	PCB180	PCB170	PCB195	PCB206	PCB209	Total PCBs	p,p'-DDE
30716A	40.72	53.18	22.55	1.57	3.37	0.88	894.88	77.95
30732A	42.80	61.42	23.78	1.86	4.02	1.50	1081.43	141.12
30739A	101.20	124.62	54.06	4.46	7.92	2.44	2423.53	212.89
30745A	75.36	102.28	43.22	3.44	6.43	2.04	1723.24	112.42
30757A	40.45	63.35	23.09	1.80	4.54	1.20	1018.32	95.87
30763A	66.97	98.16	41.65	2.93	4.34	1.01	1579.37	150.86
30769A	86.97	163.99	71.33	5.81	6.79	1.27	1987.41	173.43
30774A	72.84	90.92	34.90	2.64	3.80	0.59	1828.78	145.99
30751A	68.43	93.16	35.78	3.06	4.98	1.72	1694.13	145.26
30845A	50.51	70.38	28.36	2.09	3.25	0.63	1354.97	124.23
30843A	64.74	95.66	37.11	2.78	4.17	0.83	1613.82	146.02
30846A	64.40	95.31	40.43	3.42	6.10	1.92	1474.48	101.54
30726A	61.82	85.49	38.70	2.77	5.20	1.00	1403.36	72.31
30718A	80.91	133.28	54.54	4.61	8.73	2.40	1845.40	85.39
30758A	41.15	57.72	22.77	1.37	3.11	0.37	1039.60	45.90
30779A	49.11	68.70	27.42	1.82	4.43	1.17	1246.36	88.54
30790A	87.44	132.59	52.47	3.40	5.50	1.18	2080.66	89.75
30801A	56.39	92.27	36.61	2.60	4.92	1.33	1439.22	27.09
30810A	37.34	53.63	21.30	1.30	3.01	0.57	936.30	59.04
30817A	71.31	99.60	43.38	2.90	5.03	1.28	1572.26	67.58
30824A	35.39	64.73	24.65	1.78	4.22	0.74	925.13	55.71
30727A	91.32	133.99	56.56	4.40	7.81	1.15	2029.77	96.22

Table S1 (continued).

Lab ID	Sample	Site	Year	Period	Species	PCB008	PCB018	PCB028	PCB052
30733A	Egg	RI	1999	1990s	CT	1.15	**0.06**	44.50	2.37
30770A	Egg	RI	1999	1990s	CT	**0.04**	**0.06**	31.24	1.13
30782A	Egg	RI	1999	1990s	CT	**0.05**	**0.06**	127.59	233.31
30793A	Egg	RI	1999	1990s	CT	**0.05**	**0.06**	53.00	39.09
30804A	Egg	RI	1999	1990s	CT	**0.06**	**0.08**	17.46	0.35
30812A	Egg	RI	1999	1990s	CT	0.66	**0.06**	14.04	17.26
30820A	Egg	RI	1999	1990s	CT	0.90	**0.08**	15.20	16.74
30827A	Egg	RI	1999	1990s	CT	**0.05**	**0.07**	22.90	8.26
30764A	Eggpool	RI	1999	1990s	CT	1.07	**0.07**	16.03	3.48
30746A	Egg	RI	1999	1990s	RT	1.19	**0.08**	7.29	0.49
30775A	Egg	RI	1999	1990s	RT	1.12	**0.07**	8.30	1.50
30786A	Egg	RI	1999	1990s	RT	0.31	**0.08**	43.14	5.38
30797A	Egg	RI	1999	1990s	RT	**0.06**	**0.08**	39.53	2.82
30808A	Egg	RI	1999	1990s	RT	3.20	**0.07**	23.28	1.79
30815A	Egg	RI	1999	1990s	RT	**0.06**	**0.08**	17.87	0.79
30822A	Egg	RI	1999	1990s	RT	1.18	**0.07**	9.52	0.61
30829A	Egg	RI	1999	1990s	RT	1.13	**0.07**	13.58	0.70
30740A	Eggpool	RI	1999	1990s	RT	2.42	**0.07**	17.33	1.64
30752A	Eggpool	RI	1999	1990s	RT	0.78	**0.07**	17.60	1.63

Table S1 (continued).

Lab ID	PCB044	PCB066	PCB101	PCB118	PCB153	PCB105	PCB138	PCB187
30733A	**0.02**	171.25	151.88	872.20	1200.37	220.37	823.69	192.62
30770A	**0.02**	77.02	78.25	419.61	751.33	101.63	514.03	172.45
30782A	23.49	137.40	331.80	391.97	502.67	112.89	366.11	106.94
30793A	0.98	127.48	282.53	696.39	1162.25	141.43	767.30	221.03
30804A	**0.03**	36.86	68.90	236.20	484.36	44.65	294.13	54.73
30812A	0.06	32.06	81.50	253.67	494.23	48.38	322.83	81.24
30820A	0.85	36.08	104.41	253.01	533.77	45.99	326.25	74.57
30827A	**0.03**	62.59	131.57	266.20	444.67	73.79	315.38	125.75
30764A	**0.03**	42.18	78.43	277.78	498.02	58.47	328.33	90.97
30746A	**0.03**	14.79	39.07	80.93	158.82	17.42	104.23	28.80
30775A	**0.03**	25.19	52.87	240.42	497.42	42.14	309.45	76.34
30786A	**0.03**	89.28	223.43	386.48	660.89	84.26	429.54	108.06
30797A	**0.03**	82.18	90.40	454.61	718.22	101.40	497.07	132.99
30808A	**0.03**	54.46	99.51	287.49	558.77	56.83	355.47	84.43
30815A	**0.03**	36.67	30.50	189.51	352.39	40.60	232.56	58.11
30822A	**0.03**	20.72	51.42	116.14	257.95	26.05	164.86	49.84
30829A	**0.02**	35.20	45.50	152.37	258.84	38.46	183.94	58.54
30740A	**0.02**	34.78	53.92	218.92	433.75	45.40	274.31	74.54
30752A	**0.02**	45.44	69.22	293.50	536.72	60.39	352.38	90.24

Table S1 (continued).

Lab ID	PCB128	PCB180	PCB170	PCB195	PCB206	PCB209	Total PCBs	p,p'-DDE
30733A	247.20	274.27	141.81	10.04	11.35	2.27	4367.41	153.41
30770A	126.68	177.93	85.67	6.44	8.79	1.59	2553.92	116.74
30782A	103.40	112.10	61.03	4.21	6.23	1.31	2622.56	107.56
30793A	170.82	253.28	101.08	9.76	16.84	5.62	4048.97	168.01
30804A	52.71	79.26	30.19	2.26	4.14	1.10	1407.45	90.55
30812A	69.14	115.36	49.29	3.64	4.44	0.93	1588.78	99.86
30820A	64.41	105.02	41.78	4.20	11.68	5.74	1640.67	64.67
30827A	72.97	151.59	66.79	7.93	20.11	6.27	1776.91	162.17
30764A	70.37	113.77	50.00	4.28	9.46	3.51	1646.24	109.51
30746A	19.32	30.86	11.29	0.72	1.66	0.02	517.01	62.58
30775A	60.23	88.82	37.07	2.68	5.09	1.50	1450.24	75.86
30786A	92.96	98.03	39.92	2.73	4.91	1.30	2270.75	145.33
30797A	117.58	135.72	65.23	3.93	6.66	1.56	2450.08	81.96
30808A	67.91	96.47	35.02	3.34	6.36	2.45	1736.86	94.28
30815A	44.49	56.75	24.82	1.55	4.12	0.56	1091.46	42.20
30822A	29.72	53.28	19.47	1.68	3.15	0.39	806.09	73.77
30829A	39.71	53.71	23.24	1.63	3.49	0.47	910.59	68.28
30740A	58.40	87.35	37.78	2.87	5.35	1.46	1350.30	69.58
30752A	76.25	103.40	45.40	3.32	6.32	2.05	1704.74	74.44

Table S1 (continued).

Lab ID	Sample	Site	Year	Period	Species	PCB008	PCB018	PCB028	PCB052
30760A	Egg	BI	2005	2000s	CT	**0.07**	**0.18**	19.15	57.76
30791A	Egg	BI	2005	2000s	CT	**0.07**	**0.09**	20.10	3.41
30805A	Egg	BI	2005	2000s	CT	0.23	**0.08**	24.72	0.03
30816A	Egg	BI	2005	2000s	CT	**0.07**	**0.09**	19.15	1.53
30826A	Egg	BI	2005	2000s	CT	0.71	**0.08**	10.82	3.12
30833A	Egg	BI	2005	2000s	CT	1.27	**0.08**	11.88	0.80
30838A	Egg	BI	2005	2000s	CT	**0.06**	**0.08**	10.65	9.31
30844A	Egg	BI	2005	2000s	CT	0.19	**0.08**	5.93	0.31
30748A	Egg	BI	2005	2000s	RT	0.96	**0.08**	2.98	0.61
30787A	Egg	BI	2005	2000s	RT	0.35	**0.08**	7.38	0.03
30802A	Egg	BI	2005	2000s	RT	**0.06**	**0.08**	5.96	0.04
30814A	Egg	BI	2005	2000s	RT	1.21	**0.08**	4.90	0.03
30823A	Egg	BI	2005	2000s	RT	**0.06**	**0.08**	5.49	0.03
30832A	Egg	BI	2005	2000s	RT	0.34	**0.08**	8.25	0.03
30836A	Egg	BI	2005	2000s	RT	0.33	**0.08**	5.00	0.03
30841A	Egg	BI	2005	2000s	RT	0.71	**0.09**	9.21	0.04
30784A	Eggpool	BI	2005	2000s	RT	0.43	**0.09**	9.99	0.61

Table S1 (continued).

Lab ID	PCB044	PCB066	PCB101	PCB118	PCB153	PCB105	PCB138	PCB187
30760A	11.95	39.95	171.62	282.89	535.25	58.55	337.88	110.82
30791A	**0.03**	48.95	67.42	291.50	709.08	65.74	478.68	163.48
30805A	**0.03**	29.62	22.86	158.36	363.39	31.57	214.55	35.62
30816A	**0.03**	69.50	73.63	402.50	683.03	87.52	442.32	115.02
30826A	**0.03**	21.66	52.74	122.51	273.30	24.77	171.73	53.75
30833A	**0.03**	28.55	31.88	164.81	377.69	37.90	254.08	79.54
30838A	**0.03**	23.14	49.24	147.47	335.01	28.96	208.97	50.46
30844A	**0.03**	18.51	28.39	137.56	314.24	28.20	207.93	67.16
30748A	**0.03**	12.54	18.02	123.21	316.54	20.94	187.76	57.04
30787A	**0.03**	20.41	29.75	180.25	442.72	33.12	268.60	75.06
30802A	**0.03**	20.06	15.99	176.73	412.13	30.77	249.82	68.26
30814A	**0.03**	16.61	19.54	142.71	322.74	27.02	200.47	61.43
30823A	**0.03**	11.46	11.64	94.40	249.79	17.14	146.57	38.37
30832A	**0.03**	18.69	17.10	156.63	400.52	26.79	246.08	65.02
30836A	**0.03**	14.07	12.72	138.33	382.13	25.24	230.93	84.71
30841A	**0.03**	21.55	30.94	172.65	414.12	31.59	256.35	85.67
30784A	**0.03**	23.24	45.77	165.13	408.15	30.55	237.73	71.11

Table S1 (continued).

Lab ID	PCB128	PCB180	PCB170	PCB195	PCB206	PCB209	Total PCBs	p,p'-DDE
30760A	70.62	119.88	46.62	4.34	8.33	2.16	1878.02	143.03
30791A	81.30	338.39	136.58	17.91	10.10	0.98	2433.80	195.62
30805A	38.54	78.55	28.03	2.28	5.76	2.09	1036.31	92.64
30816A	103.96	146.96	62.01	5.60	11.02	2.82	2226.77	152.80
30826A	31.03	61.72	22.27	2.15	5.62	1.95	859.97	75.94
30833A	40.54	137.02	50.93	5.89	9.02	2.74	1234.65	120.48
30838A	37.23	64.07	24.07	1.91	2.59	0.47	993.74	123.72
30844A	35.53	82.90	30.38	3.94	9.85	4.77	975.88	76.77
30748A	31.81	64.88	23.59	2.78	9.50	5.61	878.85	45.06
30787A	47.80	83.60	32.71	2.99	7.94	3.49	1236.30	69.82
30802A	41.82	72.94	27.70	2.21	5.49	2.10	1132.19	29.93
30814A	37.23	76.89	28.53	3.04	9.64	4.48	956.58	55.14
30823A	23.03	43.10	15.69	1.08	3.14	0.51	661.61	24.67
30832A	37.12	73.51	28.11	2.49	6.69	2.50	1089.99	36.74
30836A	35.82	95.06	32.58	3.89	13.21	6.33	1080.51	34.55
30841A	45.16	94.37	36.83	3.89	9.05	3.35	1215.59	77.79
30784A	41.84	71.37	26.66	2.56	6.87	3.33	1145.43	64.54

Table S1 (continued).

Lab ID	Sample	Site	Year	Period	Species	PCB008	PCB018	PCB028	PCB052
30734A	Egg	RI	2005	2000s	CT	0.93	**0.08**	6.21	0.44
30780A	Egg	RI	2005	2000s	CT	0.67	**0.09**	44.99	1.05
30798A	Egg	RI	2005	2000s	CT	**0.06**	**0.08**	198.51	19.65
30811A	Egg	RI	2005	2000s	CT	0.59	**0.07**	5.73	0.03
30821A	Egg	RI	2005	2000s	CT	**0.06**	**0.08**	15.84	3.76
30830A	Egg	RI	2005	2000s	CT	**0.06**	**0.08**	150.98	12.16
30835A	Egg	RI	2005	2000s	CT	1.32	**0.08**	8.48	4.21
30840A	Egg	RI	2005	2000s	CT	**0.06**	**0.08**	7.17	0.03
30719A	Egg	RI	2005	2000s	RT	0.38	**0.08**	2.79	0.50
30772A	Egg	RI	2005	2000s	RT	**0.07**	**0.10**	5.59	0.41
30794A	Egg	RI	2005	2000s	RT	**0.06**	**0.08**	3.10	0.89
30809A	Egg	RI	2005	2000s	RT	0.43	**0.08**	7.28	0.81
30818A	Egg	RI	2005	2000s	RT	**0.06**	**0.08**	3.20	0.34
30828A	Egg	RI	2005	2000s	RT	**0.06**	**0.08**	7.59	0.19
30834A	Egg	RI	2005	2000s	RT	1.71	**0.08**	7.17	0.03
30839A	Egg	RI	2005	2000s	RT	0.82	**0.08**	2.01	0.03
30776A	Eggpool	RI	2005	2000s	RT	0.77	**0.07**	10.63	3.21

Table S1 (continued).

Lab ID	PCB044	PCB066	PCB101	PCB118	PCB153	PCB105	PCB138	PCB187
30734A	**0.03**	14.36	21.62	110.33	284.41	20.61	157.05	32.08
30780A	**0.03**	57.37	65.59	272.32	480.50	57.62	300.74	64.52
30798A	**0.03**	146.30	303.28	556.06	803.12	122.51	501.30	111.92
30811A	**0.03**	12.32	17.77	100.40	274.20	17.86	145.43	32.15
30821A	**0.03**	34.02	58.14	208.14	432.39	40.63	258.51	62.84
30830A	**0.03**	117.11	227.94	444.84	667.50	102.54	440.59	98.78
30835A	**0.03**	20.90	52.62	95.46	221.84	22.11	146.30	59.39
30840A	**0.03**	15.97	20.55	121.02	296.33	21.99	173.06	37.36
30719A	**0.03**	8.57	19.31	92.54	216.73	15.85	126.78	36.08
30772A	**0.03**	16.62	28.83	164.29	347.87	30.36	217.65	54.16
30794A	**0.03**	11.48	19.77	116.40	350.14	20.35	200.40	72.85
30809A	**0.03**	25.71	37.48	250.53	554.96	44.04	335.49	118.81
30818A	**0.03**	8.25	12.50	68.64	200.20	12.54	118.54	41.47
30828A	**0.03**	27.58	14.04	189.09	377.72	33.91	236.01	57.18
30834A	**0.03**	19.11	32.91	126.02	309.72	24.32	193.09	65.20
30839A	**0.03**	8.09	10.93	98.17	257.67	17.53	158.48	36.96
30776A	**0.03**	27.89	48.02	190.15	430.75	37.12	260.10	86.73

153 **Table S1 (continued).**

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Lab ID	PCB128	PCB180	PCB170	PCB195	PCB206	PCB209	Total PCBs	p,p'-DDE
30734A	28.77	65.71	24.52	2.15	4.43	0.79	774.50	60.49
30780A	68.31	101.93	42.33	3.34	7.98	2.43	1571.79	99.44
30798A	118.68	149.04	64.51	4.31	9.17	3.23	3111.75	78.31
30811A	25.20	69.21	24.72	2.44	5.41	1.56	735.12	53.29
30821A	49.14	88.07	33.74	3.64	15.21	6.83	1311.09	59.84
30830A	103.79	143.83	63.96	5.06	13.63	4.94	2597.81	68.00
30835A	23.52	46.16	14.42	1.95	5.80	2.32	726.90	125.08
30840A	29.94	61.24	22.56	1.95	8.57	2.39	820.29	51.35
30719A	22.10	42.64	15.26	1.37	4.27	1.66	606.95	49.86
30772A	42.32	62.41	25.83	1.62	5.57	1.67	1005.42	54.98
30794A	30.79	77.68	27.32	3.50	11.32	5.87	952.02	25.48
30809A	63.77	133.84	46.94	6.15	27.51	15.71	1669.56	84.50
30818A	17.89	48.26	16.35	1.78	8.95	5.07	564.15	17.60
30828A	38.12	71.20	28.28	2.45	7.73	3.52	1094.79	18.51
30834A	33.23	67.53	22.81	2.60	7.58	3.01	916.17	64.14
30839A	27.60	54.84	20.98	1.82	6.40	2.83	705.26	37.92
30776A	49.30	90.25	34.79	3.61	10.67	4.90	1288.99	84.48

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Table S2: PCB congeners in New Bedford Harbor upper sediment cores (ng g^{-1} dry weight) collected, dated and analyzed as described [15], where values shown in bold are ½ minimum detection limit (MDL). (**Values for 1996 are presented as the average of three core slices dated to that year.)

ID	Date, Calculated*	PCB008	PCB018	PCB028	PCB052	PCB044	PCB066	PCB101	PCB118	PCB153	PCB105	PCB138	PCB187	PCB128	PCB180	PCB170	PCB195	PCB206	PCB209	Sum PCBs*
NBH1a	1996**	1211	2985	9997	7074	4319	3517	4023	4329	3704	1327	2852	540	517	620	353	50	62	19	47499
NBH1a	1983	4820	9930	28400	16800	12400	7040	7260	6900	5780	2380	4860	866	938	1000	606	91.5	99.2	29.2	110200
NBH1a	1975	8300	16100	45200	23800	19200	15100	12900	12100	8710	3370	6940	1210	1320	1520	884	122	136	28.6	176941
NBH1a	1971	7650	14500	46600	21700	18200	15000	12500	12200	8300	2940	6380	1100	1140	1530	902	113	137	34.7	170927
NBH1a	1966	6865	13750	43100	21650	18500	21600	16950	16850	10650	2830	7425	1435	1205	1845	1070	138.5	150.5	36.5	186051
NBH1a	1962	5100	9240	31500	13600	12400	17900	12000	13100	7450	2360	4970	886	827	1300	821	87.5	108	24.8	133674
NBH1a	1954	1700	3390	9320	5480	4560	7510	6560	7510	4890	1430	3030	602	484	866	499	69.8	74.2	25.2	58000
NBH1a	1941	960	1865	6280	2775	2475	4520	3360	3975	2240	632.5	1610	251.5	331	415.5	262	34.15	51.8	22.15	32061
NBH1a	1937	556	1060	3490	1620	1380	2740	2360	2830	1610	427	1220	167	256	288	186	22.3	34.9	14.8	20262
NBH1a	1924	33.9	57.2	130	117	72.1	140	214	248	153	75.9	146	15.4	33.0	26.0	15.7	2.29	3.12	2.01	1485
NBH1a	1907	1.1	2.1	3.6	4.2	0.9	3.6	6.1	6.7	4.5	1.5	3.6	0.6	1.0	0.7	0.6	0.1	0.1	0.3	41.4
NBH1a	1869	**0.4**	1.5	1.1	0.7	1.6	0.7	**0.4**	0.5	0.5	**0.4**	0.6	0.2	0.2	0.5	1.1	0.1	0.1	**1.0**	11.7
NBH1a	1840	10.6	21.8	50.5	33.8	21.8	20.6	26.8	26.3	23.2	5.4	14.3	3.3	2.3	3.8	2.5	0.6	1.1	0.4	269.2
NBH1a	1836	204	437	1230	739	604	511	580	587	468	163	307	59.4	46.6	78.7	46.3	5.84	7.34	2.21	6076

Table S3: Results of General Linear Models for dependence of PCB congeners and DDE in tern eggs on year and species (data for 1972–2005) and in upper NBH sediment core sample [15]; data from 1971 – 1996 (data for PCB018 and PCB044 are omitted because most of the values for 1994–2005 were below the minimum detection limits (MDLs) for tern eggs, Table S1). Values for $Log_{10}K_{ow}$ (the log of the partition coefficient between n-octanol and water) are derived from [16, 17].

Analyte		k_1		k_2		k_3 (CT effect)		CT/RT ratio	Sediment Core k_1	
	Log_{10} K_{OW}*	Estimate	p-value	Estimate	p-value	Estimate	p-value		Estimate	p-value
PCB008	5.03	**-0.182**	<0.0001	**-0.005**	0.002	-0.435	0.092	0.647	**-0.078**	0.033
PCB028	5.55	**-0.114**	<0.0001	**0.002**	0.027	**0.522**	0.000	**1.686**	**-0.064**	0.017
PCB052	5.86	**-0.193**	<0.0001	-0.003	0.089	**1.486**	<0.0001	**4.422**	**-0.048**	0.040
PCB066	6.01	**-0.091**	<0.0001	**0.002**	0.006	**0.282**	0.014	**1.326**	**-0.062**	0.016
PCB101	6.33	**-0.079**	<0.0001	**0.000**	0.632	**0.367**	0.006	**1.443**	**-0.049**	0.016
PCB105	6.39	**-0.076**	<0.0001	**0.002**	0.004	**0.198**	0.038	**1.219**	**-0.036**	0.047
PCB118	6.46	**-0.056**	<0.0001	**0.001**	0.021	**0.175**	0.038	**1.192**	**-0.044**	0.017
PCB128	6.63	**-0.057**	<0.0001	**0.001**	0.013	0.139	0.108	1.149	-0.035	0.052
PCB138	6.71	**-0.043**	<0.0001	**0.001**	0.000	0.107	0.116	1.113	**-0.035**	0.030
PCB153	6.79	**-0.033**	<0.0001	**0.001**	0.000	0.109	0.093	1.115	**-0.035**	0.020
PCB170	7.09	**-0.050**	<0.0001	**0.002**	<0.0001	**0.166**	0.035	**1.180**	**-0.039**	0.009
PCB180	7.17	**-0.040**	<0.0001	**0.002**	<0.0001	**0.165**	0.015	**1.179**	**-0.038**	0.011
PCB187	7.01	**-0.028**	<0.0001	**0.002**	<0.0001	-0.027	0.682	0.973	**-0.032**	0.035
PCB195	7.34	**-0.034**	<0.0001	**0.003**	<0.0001	**0.235**	0.002	**1.265**	**-0.035**	0.036
PCB206	7.8	-0.005	0.430	**0.004**	<0.0001	0.129	0.078	1.137	**-0.033**	0.010
PCB209	7.88	**0.035**	0.008	**0.006**	<0.0001	**0.275**	0.050	**1.317**	-0.021	0.056
Total PCBs		**-0.051**	<0.0001	**0.002**	<0.0001	**0.167**	0.031	1.182	**-0.054**	0.019
pp'-DDE		**-0.052**	<0.0001	**0.001**	0.004	**0.378**	<0.0001	1.459		

165 **Table S4**: Principal Components Analysis (PCA) of PCB congener patterns in common (CT)
166 and roseate (RT) tern eggs (n=100) from Buzzards Bay, MA, USA. The values tabulated are the
167 loadings of each congener on PC1 and PC2, with larger absolute values in bold.

PCB congener	PC1	PC2
PCB008	0.066	−0.011
PCB018	0.063	−0.081
PCB028	**0.497**	−0.225
PCB044	0.157	−0.141
PCB052	**0.411**	−0.032
PCB066	**0.353**	−0.082
PCB101	**0.301**	**0.674**
PCB105	**-0.454**	0.164
PCB118	-0.003	**0.321**
PCB128	-0.184	−0.052
PCB138	-0.220	0.107
PCB153	0.172	−0.024
PCB170	-0.023	−0.215
PCB180	-0.114	**−0.404**
PCB187	0.009	0.11
PCB195	-0.014	−0.144
PCB206	-0.053	−0.196
PCB209	-0.041	−0.190

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Table S5: Numbers of amino acid (above diagonal) and nucleotide (below diagonal) differences in coding sequence of roseate tern (RT) AHR1 variants as compared to the common tern (CT) and chicken (CH) AHR1.

nucleotide\amino acid	RT AHR1*1	RT AHR1*2	RT AHR1*3	CT AHR1	CH AHR1
RT AHR1*1		1	6	0	68
RT AHR1*2	1		7	1	68
RT AHR1*3	9	10		6	74
CT AHR1	12	13	20		68
CH AHR1	228	225	234	226	

Table S6: Numbers of breeding pairs of common (CT) and roseate (RT) terns at the two nesting sites in Buzzards Bay, Massachusetts, that have been included in this study: Bird Island and Ram Island; methods and data sources as described in SI.

SPECIES	YEAR	PERIOD	Bird Island	Ram Island		SPECIES	YEAR	PERIOD	Bird Island	Ram Island
CT	1952	1950	3,000	2000		RT	1952	1950	1,800	1,300
CT	1953	1950	3,000	2500		RT	1953	1950	1,400	1,700
CT	1954	1950	2,800	1500		RT	1954	1950	1,400	1,000
CT	1955	1950	2,400	2000		RT	1955	1950	1,200	1,200
CT	1956	1950	2,000	2000		RT	1956	1950	1,400	1,000
CT	1968	1960	200	600		RT	1968	1960	400	800
CT	1969	1960	200	500		RT	1969	1960	400	700
CT	1970	1970	250	300		RT	1970	1970	600	700
CT	1971	1970	350	250		RT	1971	1970	1,300	120
CT	1972	1970	310	220		RT	1972	1970	1,100	170
CT	1973	1970	390	25		RT	1973	1970	1,600	0
CT	1974	1970	350	72		RT	1974	1970	1,200	0
CT	1975	1970	400	0		RT	1975	1970		
CT	1976	1970	470	0		RT	1976	1970		
CT	1977	1970	400	0		RT	1977	1970	900	0
CT	1978	1970	500	0		RT	1978	1970	1,290	0
CT	1979	1970	550	0		RT	1979	1970	1,500	0
CT	1980	1980	600	0		RT	1980	1980	1,400	0
CT	1981	1980	600	0		RT	1981	1980		
CT	1982	1980	650	0		RT	1982	1980		
CT	1983	1980	720	0		RT	1983	1980		
CT	1984	1980	810	0		RT	1984	1980	1,650	0
CT	1985	1980	1040	0		RT	1985	1980	1,450	0
CT	1986	1980	1129	0		RT	1986	1980	1,700	0
CT	1987	1980	1337	0		RT	1987	1980	1,558	0
CT	1988	1980	1613	0		RT	1988	1980	1,572	0
CT	1989	1980	1879	0		RT	1989	1980	1,473	0
CT	1990	1990	1803	0		RT	1990	1990	1,550	0
CT	1991	1990	1780	0		RT	1991	1990	1,728	0
CT	1992	1990	1595	2		RT	1992	1990	1,379	0
CT	1993	1990	1829	98		RT	1993	1990	1,319	0
CT	1994	1990	1803	157		RT	1994	1990	1,314	76
CT	1995	1990	1590	431		RT	1995	1990	1,447	197
CT	1996	1990	1780	1085		RT	1996	1990	1,715	719
CT	1997	1990	2033	920		RT	1997	1990	1,432	253
CT	1998	1990	1903	1307		RT	1998	1990	1,113	543

CT	1999	1990	1836	1887		RT	1999	1990	1,148	630
CT	2000	2000	1880	2030		RT	2000	2000	1,130	988
CT	2001	2000	2136	2065		RT	2001	2000	1,062	626
CT	2002	2000	1702	2307		RT	2002	2000	505	952
CT	2003	2000	2054	1997		RT	2003	2000	904	557
CT	2004	2000	1825	2938		RT	2004	2000	554	936
CT	2005	2000	1857	2278		RT	2005	2000	680	724
CT	2006	2000	1866	2129		RT	2006	2000	1,111	463
CT	2007	2000	1863	2214		RT	2007	2000	919	661
CT	2008	2000	1576	2354		RT	2008	2000	747	563

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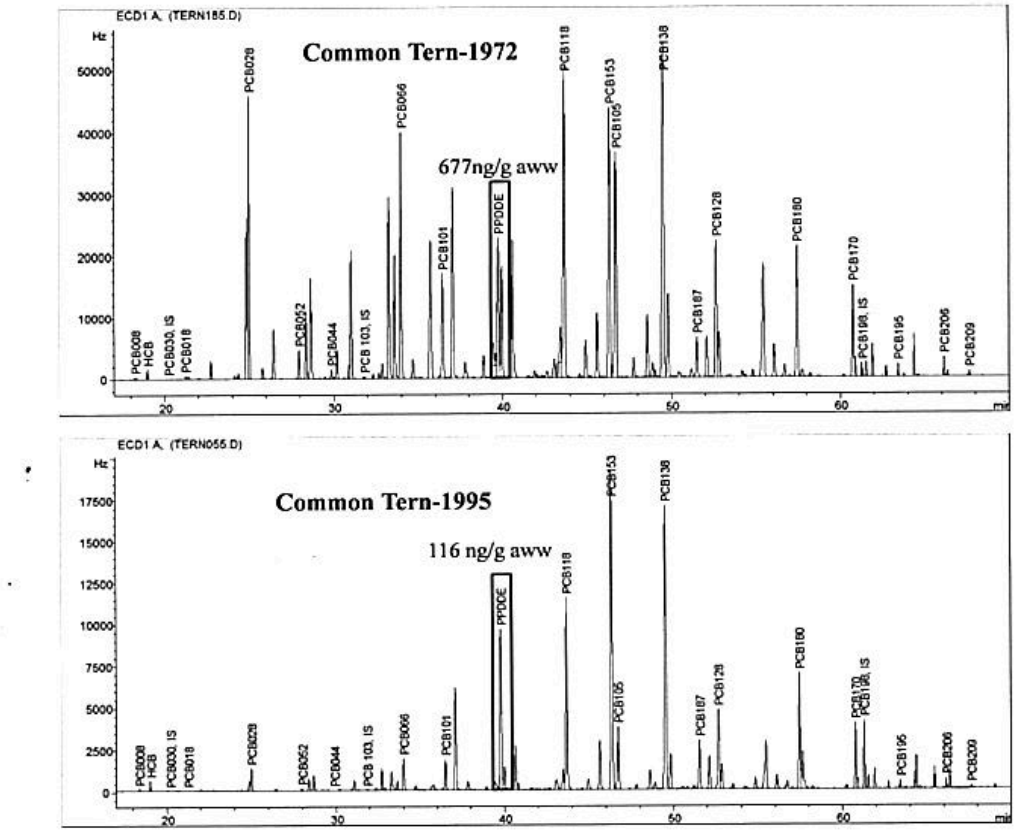
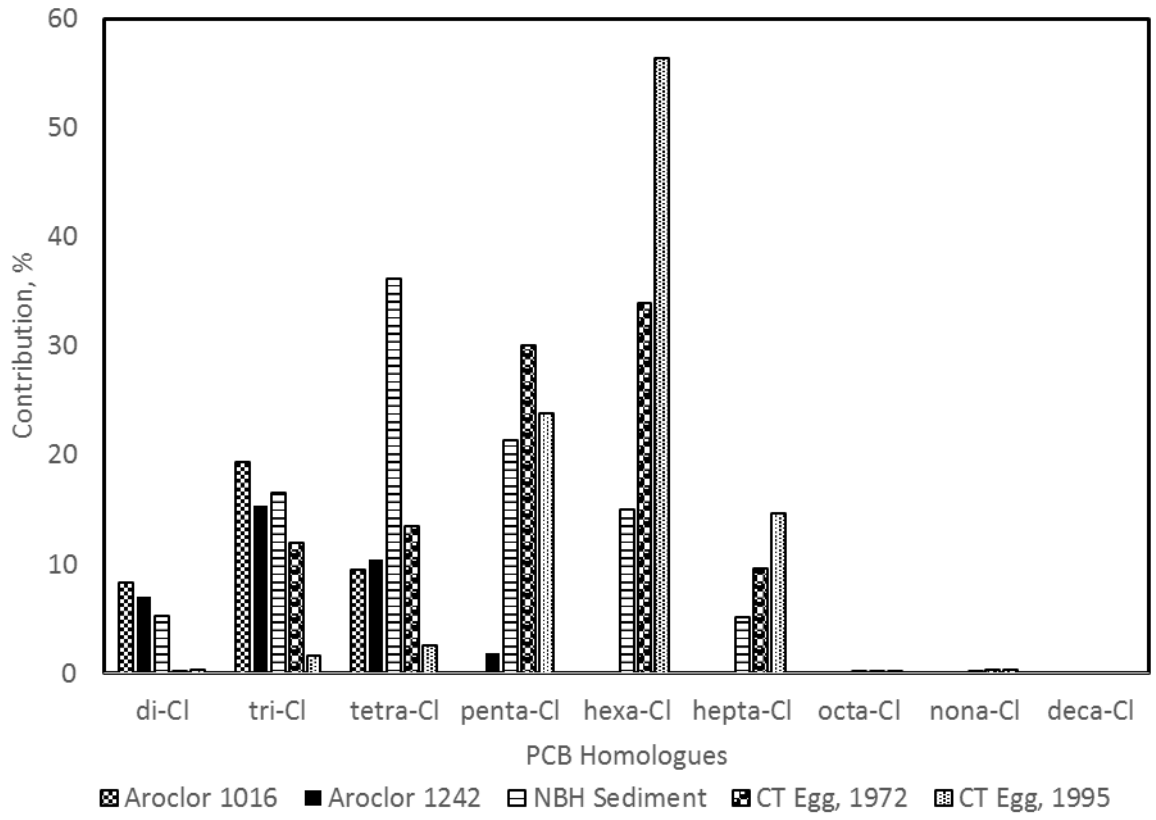
Supplemental Figures

Figure S1: Representative chromatograms used for quantifying DDE in tern eggs, showing samples collected in 1972 (upper panel) and 1995 (lower panel).

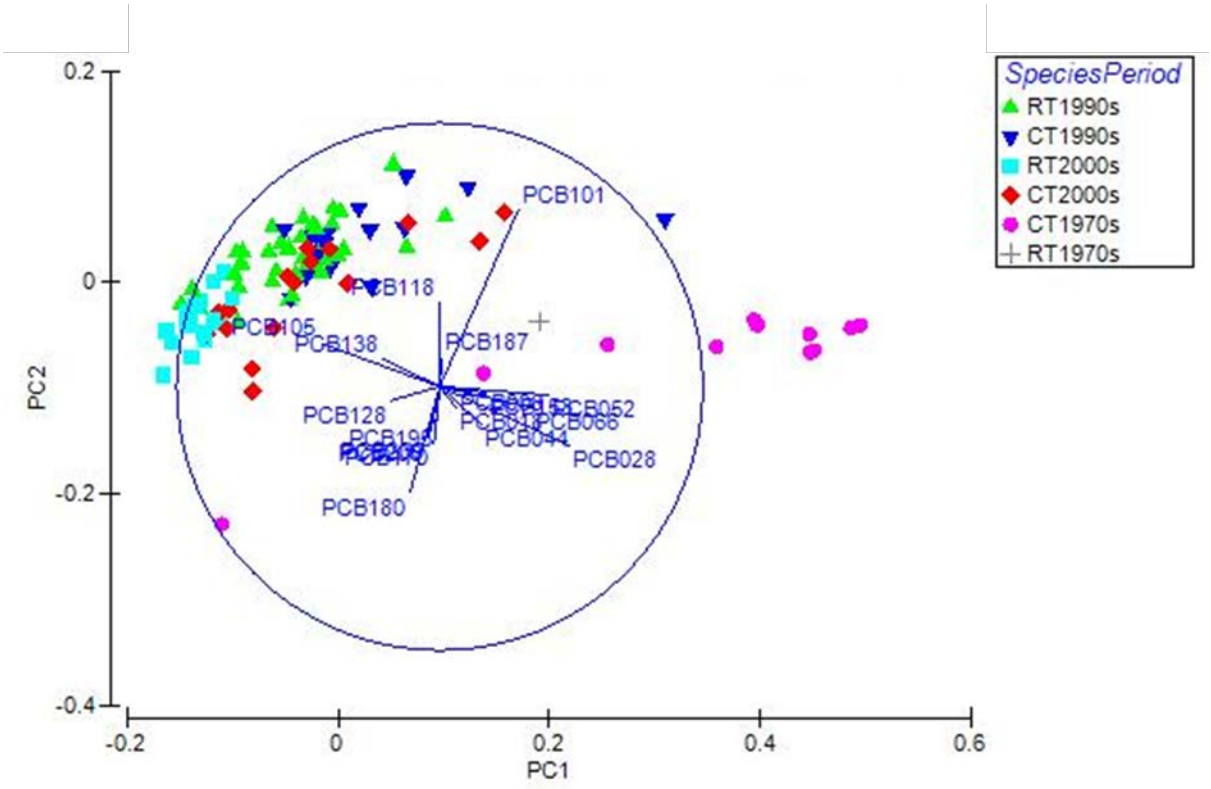


185 **Figure S2:** Representative samples showing PCB homologue distributions in Aroclors 1016 and
186 1242, New Bedford Harbor (NBH) sediment, and Common Tern (CT) eggs from 1972 and 1995.



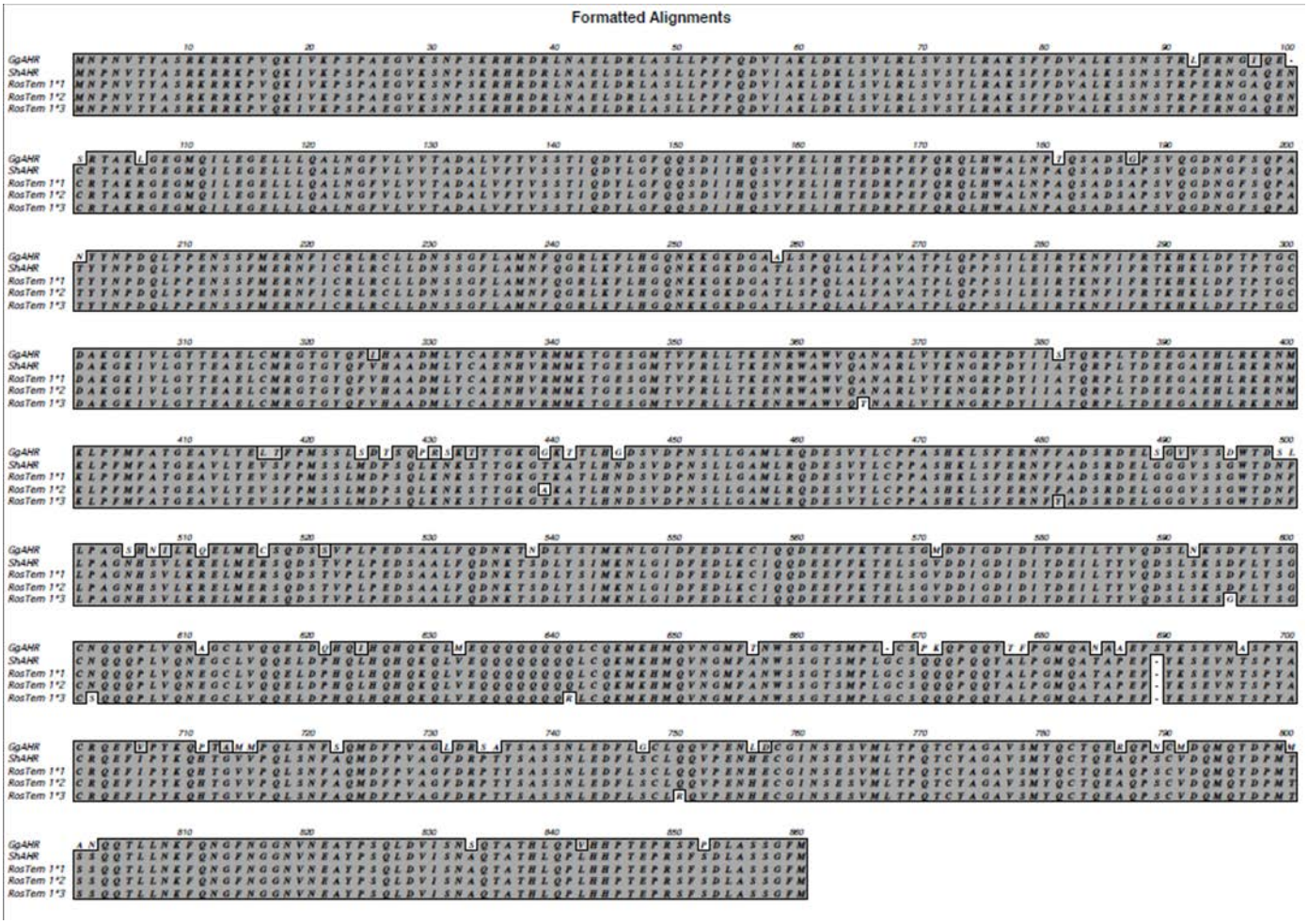
187

188 **Figure S3:** Principal Components (PC) plot of PCB congener patterns in single eggs of common
189 terns (CT) and roseate terns (RT) collected from Buzzards Bay in the periods 1970s, 1990s and
190 2000s, where the coordinates of each sample on the PC axes are the principal component scores
191 and the vector length for each congener represents its contribution to the axes (Table S4).



192

193 **Figure S4:** Amino acid sequences of roseate tern AHR variants (RT 1*1, RT 1*2, RT 1*3),
194 showing differences from each other and from common terns AHR1 (ShAHR) and from chicken
195 AHR1 (GgAHR).



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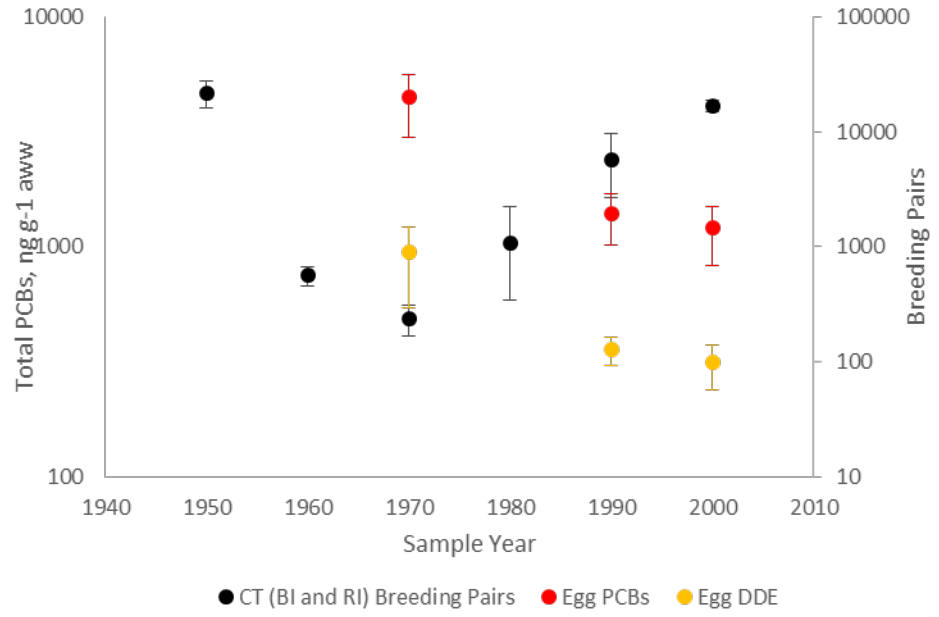
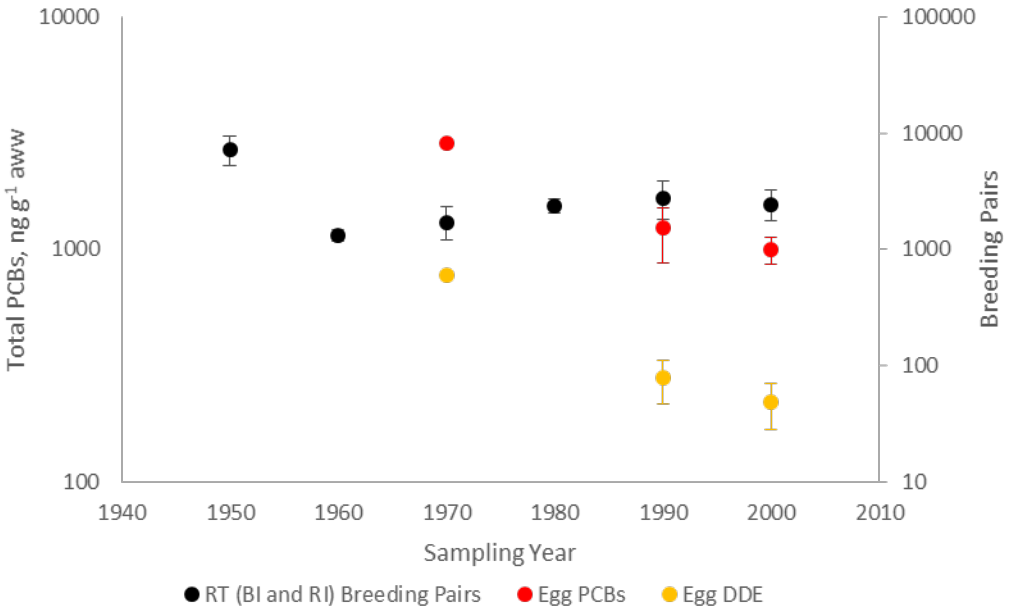
198 **Figure S5**: Decadal averages (± standard deviations) of the numbers of breeding pairs of
199 common terns (CT, top) and roseate terns (RT, bottom) and concentrations of egg PCBs and
200 DDE ng g^{-1} adjusted wet weight (aww).





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