

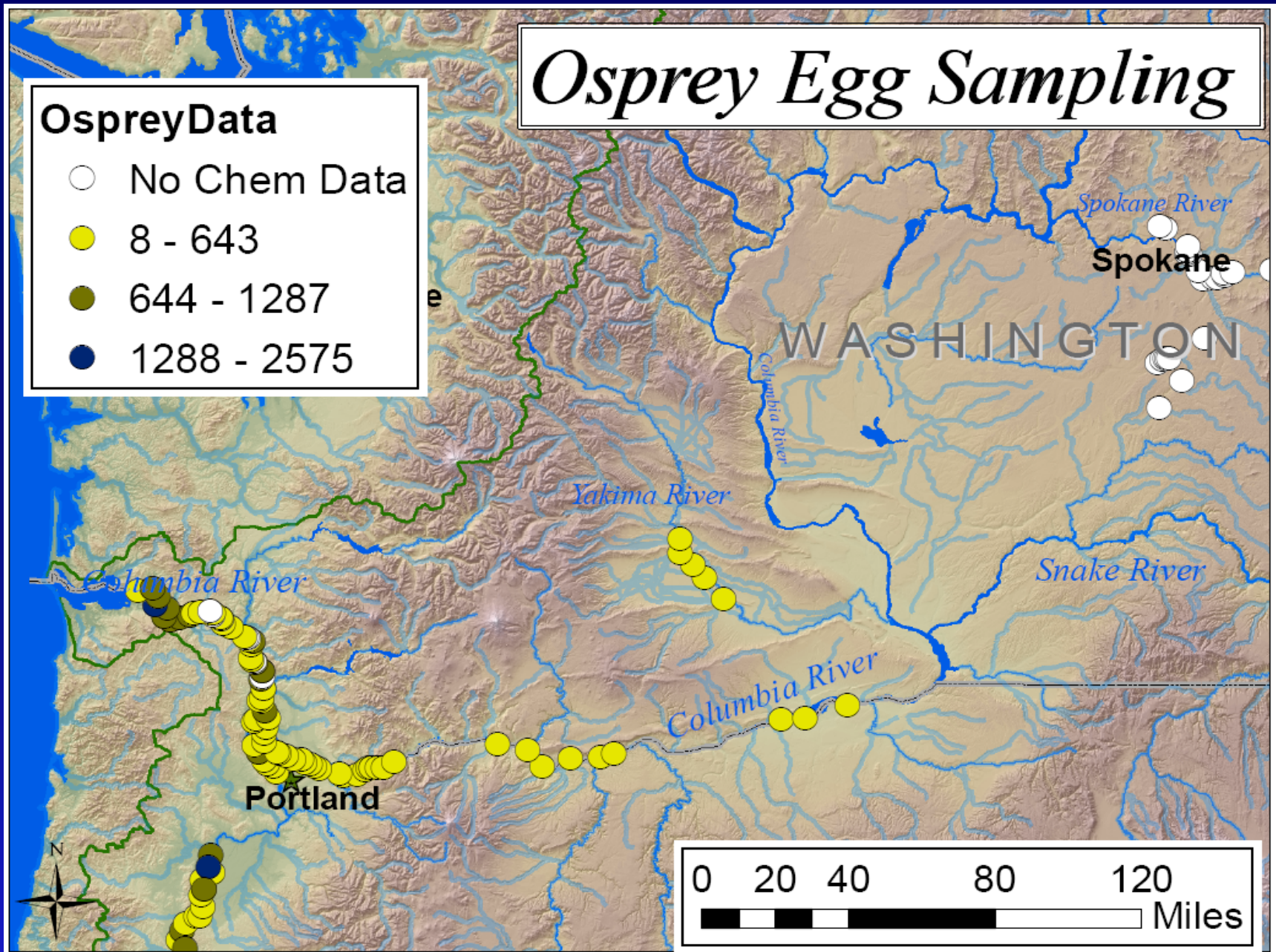
PBDEs in Osprey Eggs from the Columbia River Basin

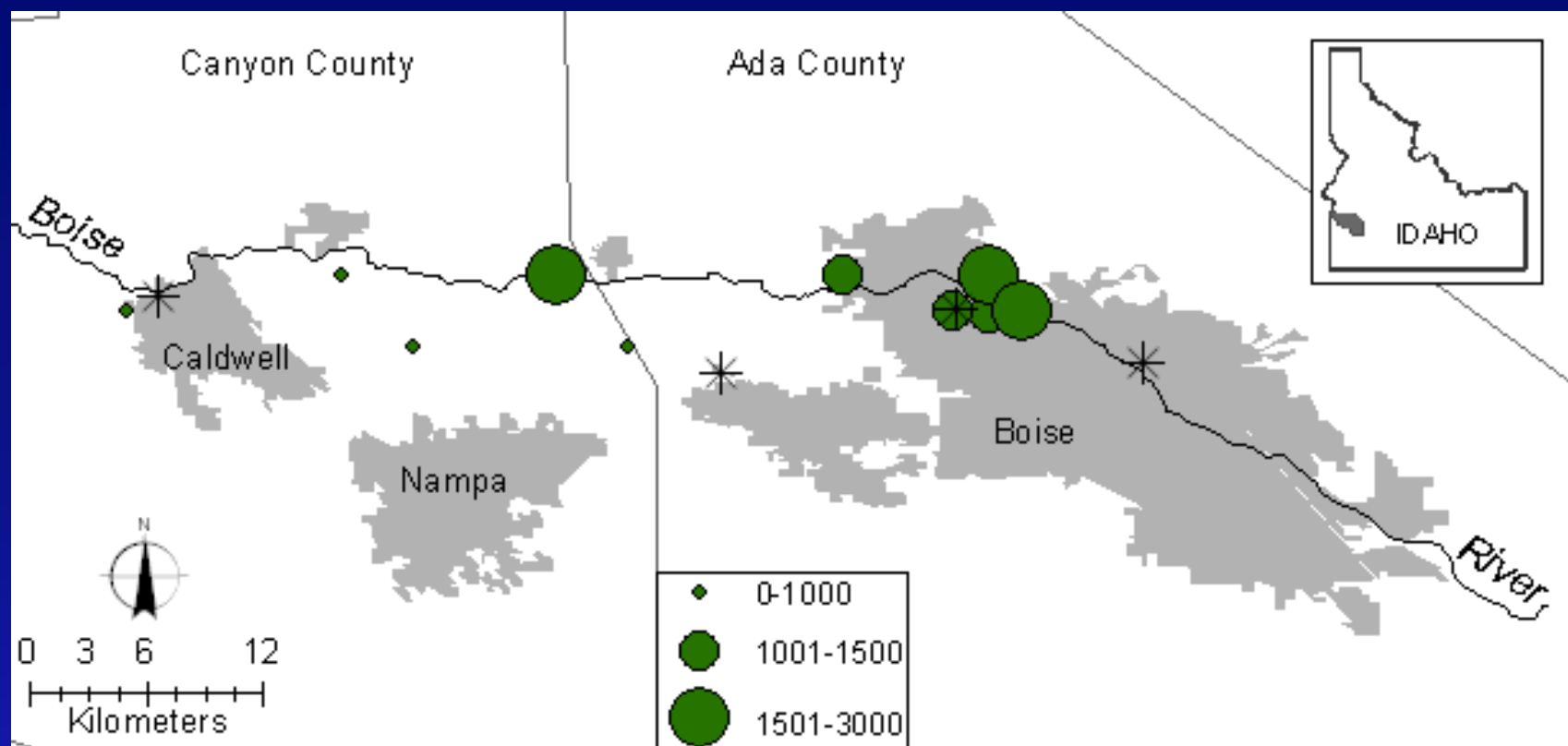


Osprey Egg Sampling

OspreyData

- No Chem Data
- 8 - 643
- 644 - 1287
- 1288 - 2575

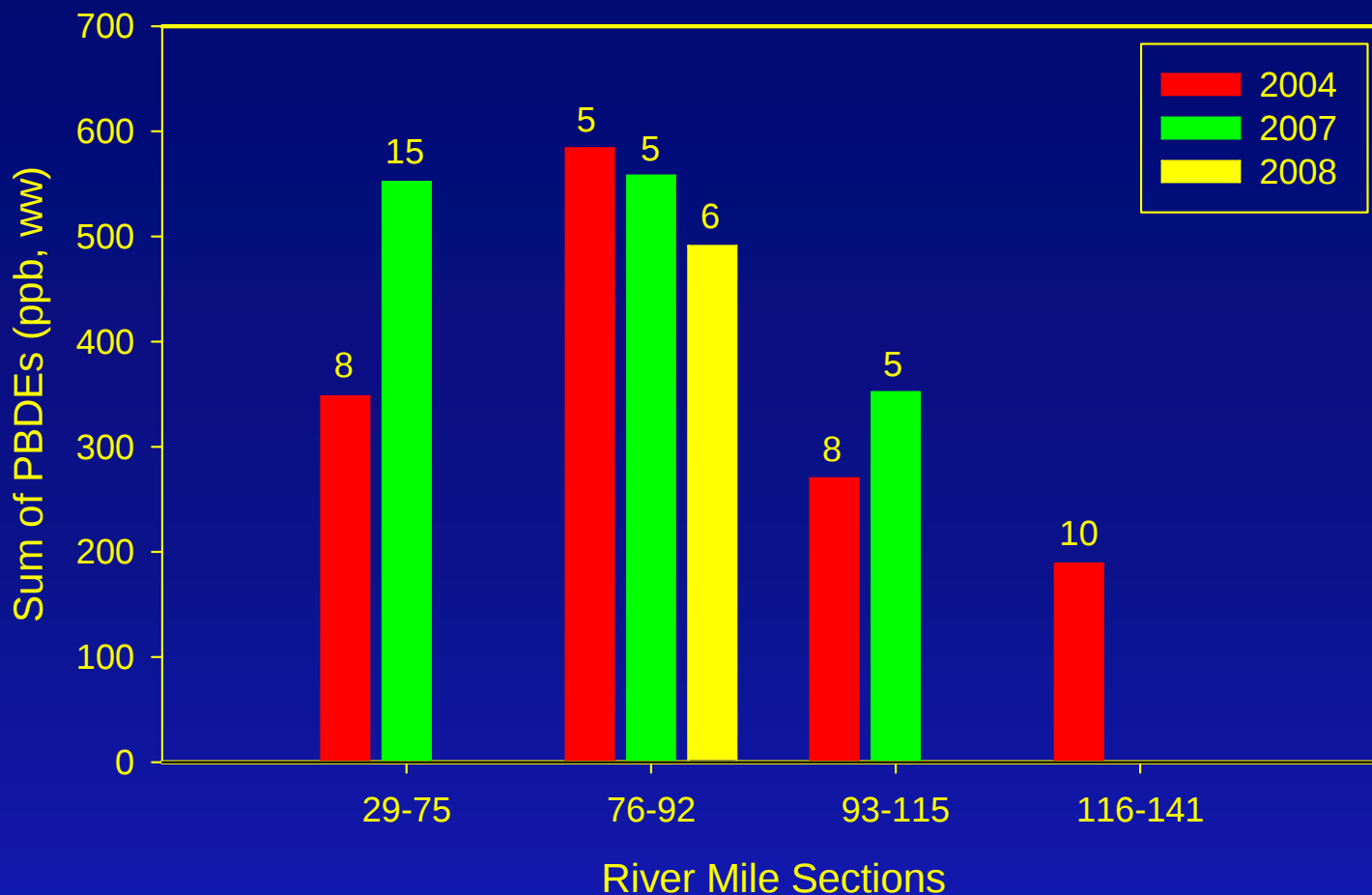




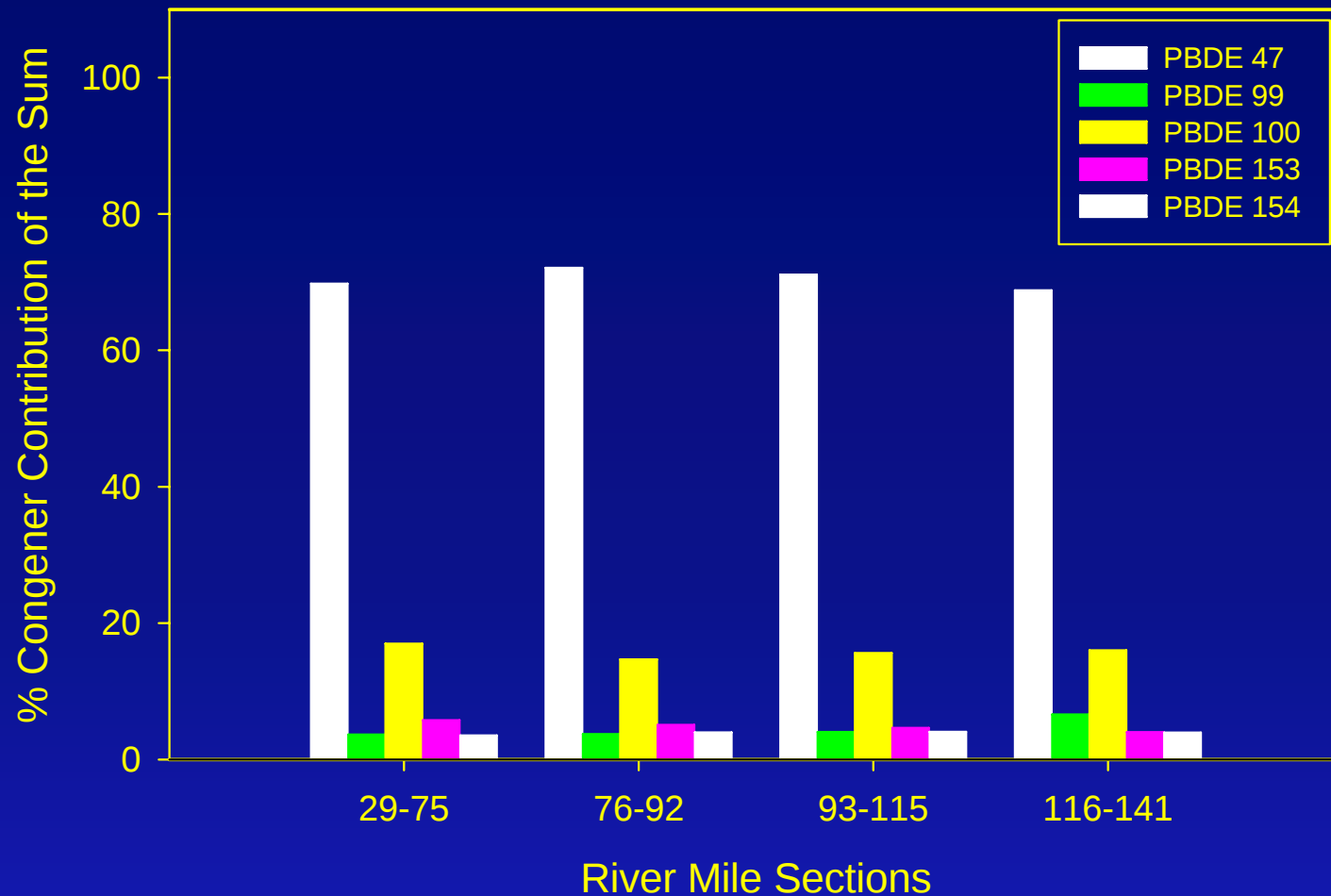
Geometric means and ranges () of PBDE concentrations (ppb, wet weight) in osprey eggs collected from the main stem of the lower Columbia River , 2004-2008.

Year	N	47	99	100	153	154	183	Sum
River Miles 29-75 (Estuary)								
2004	8	243 (32.8-619)	12.7 (1.39-42.1)	59.2 (7.73-174)	20.1 (1.90-63.7)	12.3 (1.28-39.2)	NC (ND-0.29)	348 (45.1-938)
2007	15	351 (108-720)	19.5 (6.00-55.0)	121 (28.0-352)	28.9 (4.00-116)	24.9 (5.00-71.0)	NC (ND-0.63)	552 (151-1302)
River Miles 76-92 (St. Helens)								
2004	5	421 (253-592)	21.8 (13.7-43.7)	86.0 (52.5-119)	29.6 (10.9-50.0)	23.3 (12.6-39.5)	ND	584 (339-813)
2007	5	358 (296-482)	23.6 (10.0-32.0)	113.9 (92.0-159)	30.5 (23.0-51.0)	29.1 (21.0-40.0)	0.12 (0.09-0.18)	558 (442-736)
2008	6	295 (213-467)	23.5 (17.0-35.0)	109 (75.0-203)	30.2 (19.0-45.0)	30.7 (20.0-60.0)	NC (ND-0.19)	491 (348-810)
River Miles 93-115 (Portland/Vancouver)								
2004	8	192 (121-336)	10.9 (4.40-17.8)	42.2 (25.1-74.8)	12.5 (7.01-24.0)	11.0 (5.42-23.6)	ND	270 (173-468)
2008	5	214 (112-354)	19.9 (11.0-35.0)	77.6 (34.0-137)	15.8 (5.00-30.0)	21.6 (7.00-37.0)	0.09 (ND-0.25)	352 (171-581)
River Miles 116-141 (Above Portland/Vancouver)								
2004	10	130 (59.8-385)	12.5 (4.56-53.1)	30.2 (12.7-102)	7.58 (3.32-27.3)	7.44 (2.71-21.4)	NC (ND-0.32)	189 (83.1-396)

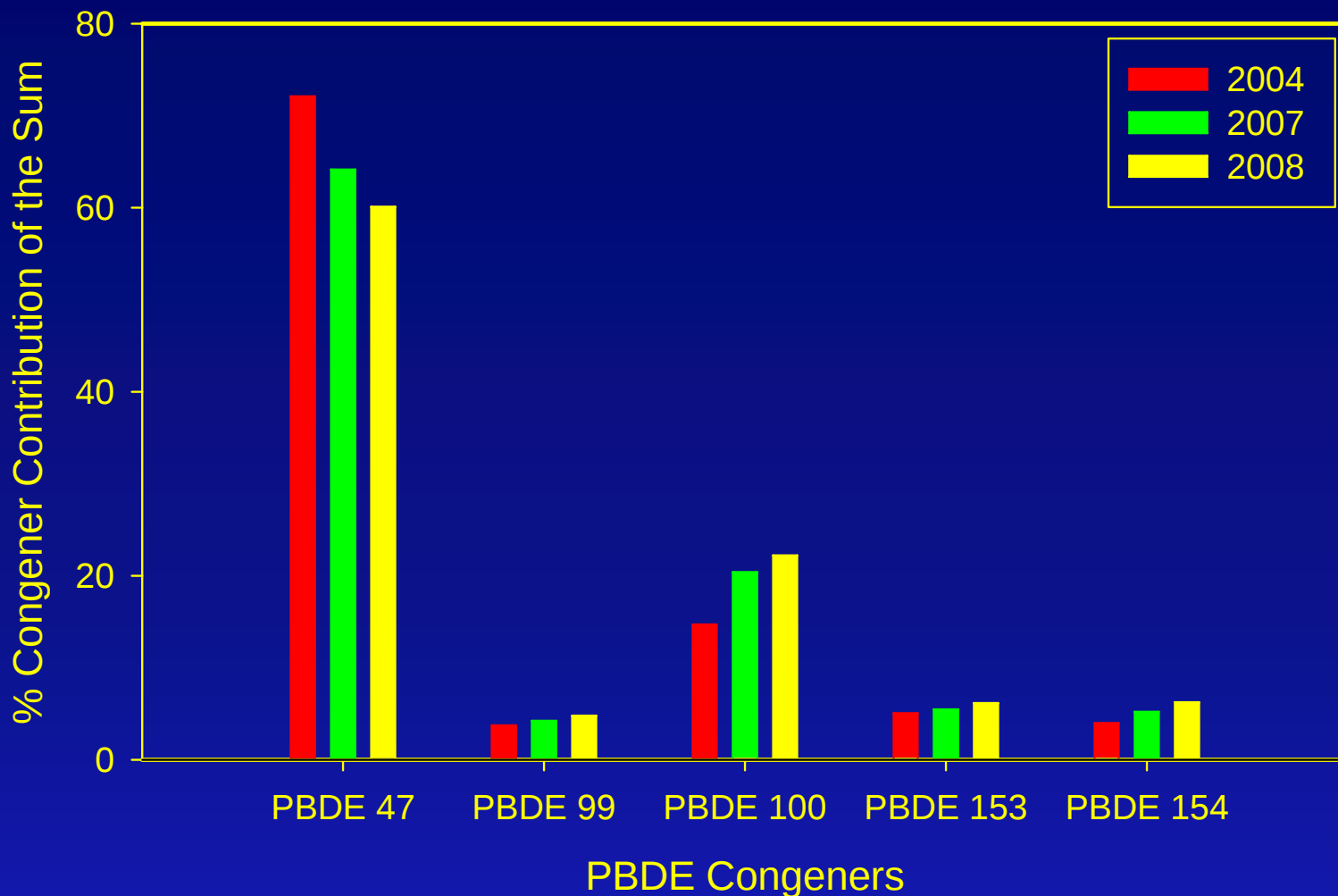
ND = congener not detected, NC = mean not calculated as >50% NDs.



Sum of PBDE concentrations (ppb, ww) in osprey eggs collected from the main stem of the lower Columbia River, 2004-2008.



Percent congener contribution of the sum of PBDEs in osprey eggs collected from the main stem of the lower Columbia River, 2004.



Percent congener contribution of the sum of PBDEs in osprey eggs collected from river mile section 76-92 of the lower Columbia River for the years 2004-2008.

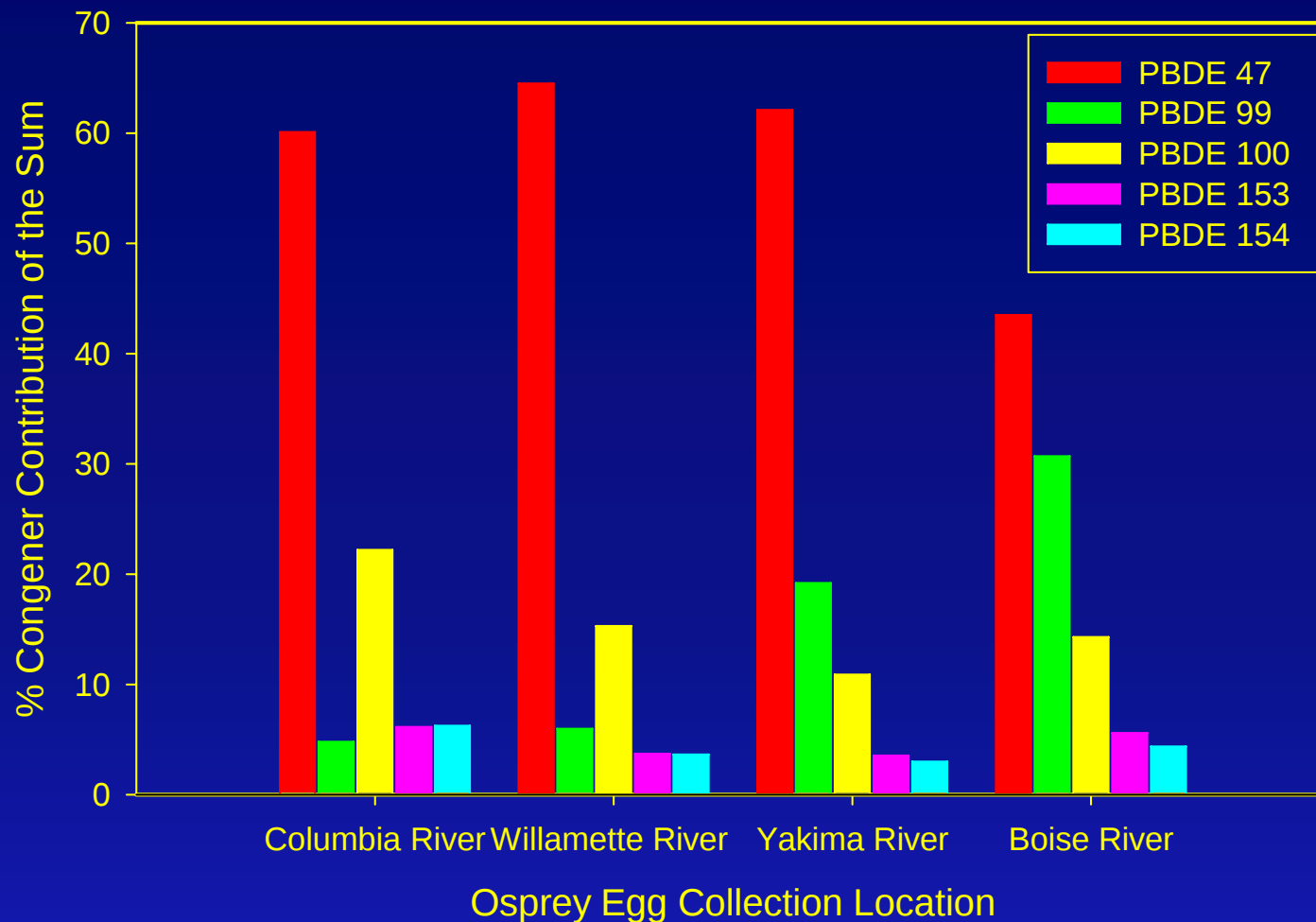
Geometric means and ranges () of PBDE concentrations (ppb wet weight) in osprey eggs collected from tributaries of the Columbia River, 2002-2008.

Location	Year	N	47	99	100	153	154	183	Sum
Yakima River	2002	5	239 (139-303)	73.9 (34.1-178)	42.0 (23.1-56.2)	13.7 (7.59-24.1)	11.6 (5.25-19.3)	ND	385 (209-576)
Willamette Reservoirs	2002	7	54.0 (30.1-174)	18.4 (8.01-32.9)	12.2 (8.08-32.9)	4.80 (2.85-13.8)	4.21 (3.17-11.0)	NC	97.7 (55.2-275)
Willamette River	2006	10	562 (265-1020)	52.1 (11.2-498)	133 (53.4-396)	32.4 (10.3-85.7)	31.7 (12.2-90.3)	ND	871 (494-1826)
Willamette River	2008	23	239 (88.0-604)	36.7 (5.80-226)	71.3 (18.0-188)	22.6 (3.90-85.0)	26.9 (5.50-84.0)	NC	414 (135-1102)
Multnomah Channel	2008	6	209 (126-367)	26.6 (10.0-91.0)	68.0 (37.0-140)	14.7 (7.70-68.0)	19.1 (10.0-102)	NC	343 (201-769)
Portland Harbor	2008	5	233 (149-367)	52.2 (18.0-91.0)	78.4 (25.7-140)	24.4 (4.90-68.0)	35.4 (9.30-102)	0.17 (ND-0.52)	434 (207-769)
Boise River	2008	11	495 (289-984)	349 (162-887)	163 (80.0-363)	63.6 (23.0-215)	49.7 (31.0-124)	0.68 (0.38-1.90)	1138 (693-2575)

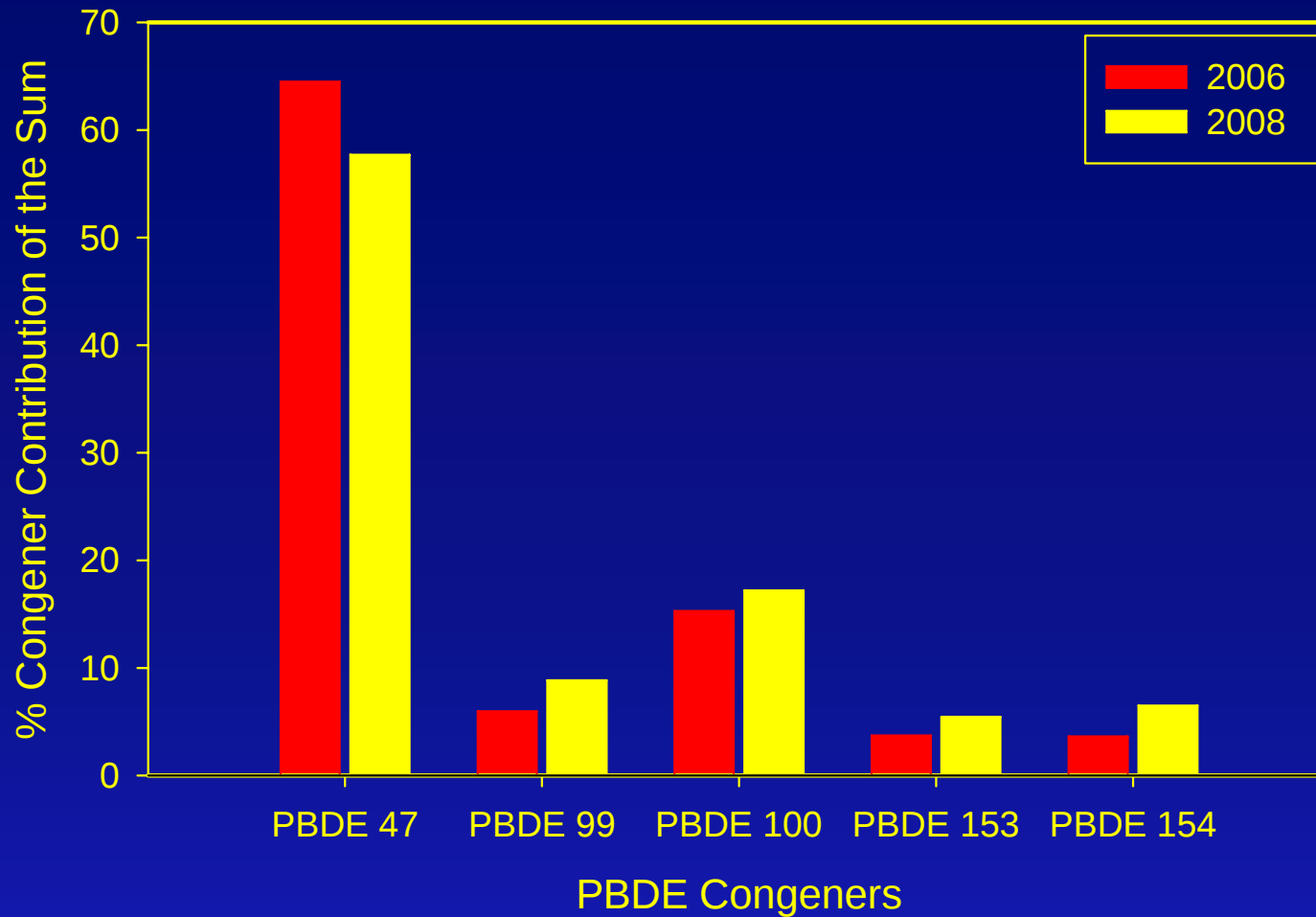
ND = congener not detected, NC = mean not calculated as >50% NDs.

Willamette River osprey eggs collected between river miles 60 to 178, Yakima River eggs between river miles 82 to 110, Boise River 20 to 45, and Spokane River 44 to 137.

2002-2006 PBDE data from Henny et al. 2009.



Percent congener contribution of the sum of PBDEs in osprey eggs collected from Columbia River and tributaries, 2004-2008. Columbia River 2008, Willamette River 2006, Yakima River 2002 and Boise River 2008.



Percent congener contribution of the sum of PBDEs in osprey eggs collected from the Willamette River for the years 2006 and 2008.

