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Fig 1. A) Fraser River Chinook (FRC) Salmon Run abundance (CPUE: catch per unit effort), B) mean vessel count (all boats observed with 0.5 m of the whales) plotted by Julian date across years, C) Change in SRKW fecal thyroid hormone (triidothyronine, T3 ng/g dry feces) by Julian date (left panel) and early spring Columbia River Chinook abundance (right panel), and D) Change in SRKW fecal glucocorticoid (GC ng/g dry feces) hormone concentration by Julian date. Dashed blue lines represent the standard error surrounding each curve. Vertical red line in left panel, Fig C indicates the mean peak in FRC abundance and the mean peak in boat abundance in Fig B and D.

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when the SRKWs arrived in early summer, presumably after feeding on the early spring CRC. T3 sharply declined shortly thereafter, presumably because FRC abundance was still low, plateauing around the time that FRC CPUE begins to rise. T3 concentrations then slightly declined again in September, just after the FRC peak.

GC concentration was best predicted by the quadratic of Julian date (p = 0.004), showing the U-shaped pattern indicative of nutritional stress, with the trough at day 220, near the FRC peak. GC was not correlated with CRC, supporting the hypothesis that the GC response reflects more immediate conditions compared to T3.

3.2 Pregnancy occurrence and loss indices

Twelve females sampled during pregnancy were subsequently confirmed to give birth (37% of detected pregnancies) by photo-identification between 2008 and 2015. However, one of those females (J28) was subsequently reclassified as a High T unsuccessful pregnancy because her