

14. Cumulative degree days summary results for Grande Ronde River summer steelhead under year 2017 temperatures for the Columbia River with simulated additional coldwater refuges

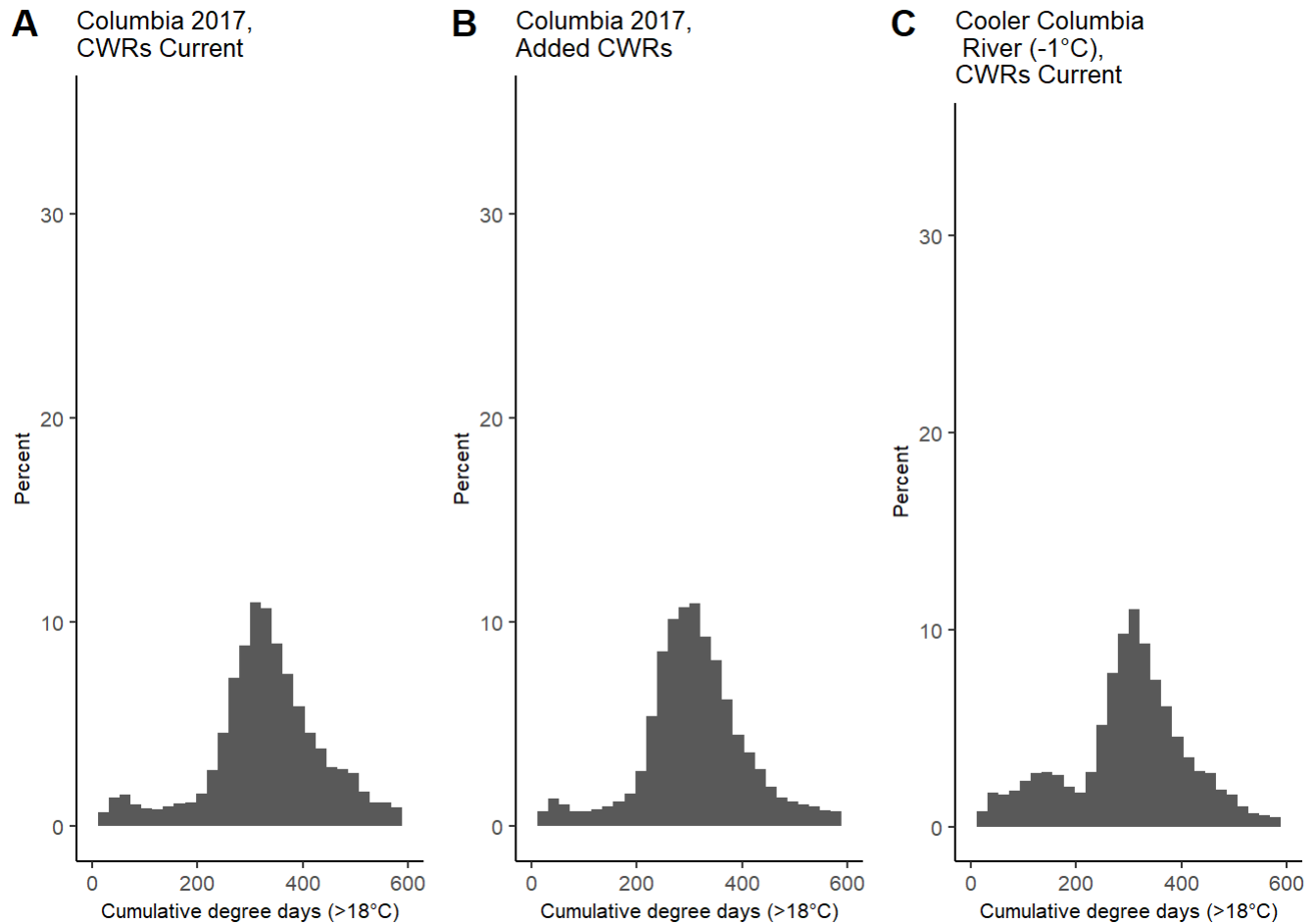


Fig. 14.1 Histograms of modeled Grande Ronde River summer steelhead accumulated degrees day over 18°C from Bonneville to the Snake River confluence in the Columbia River.

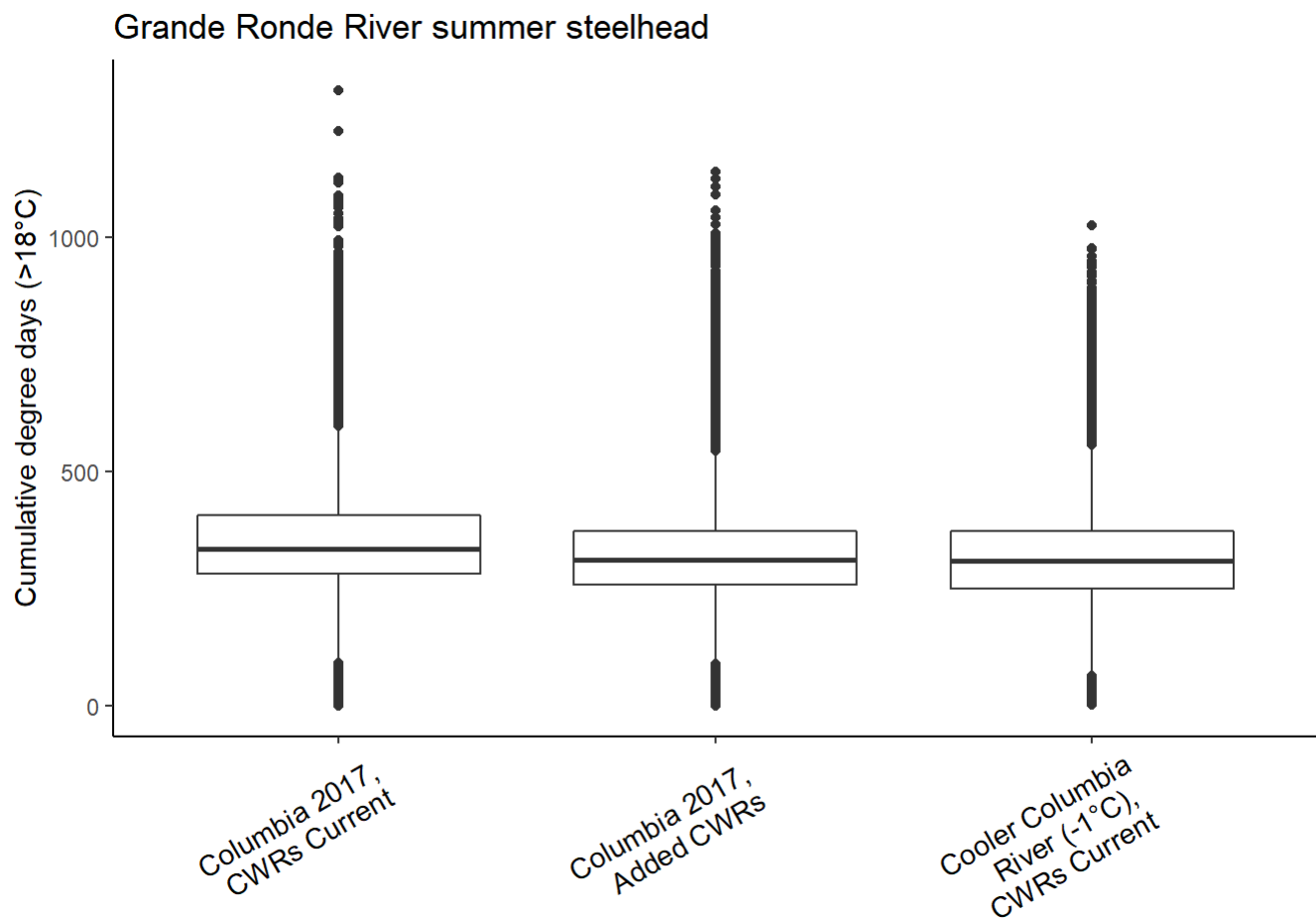


Fig. 14.2 Boxplots of modeled Grande Ronde River summer steelhead accumulated degrees day over 18°C from Bonneville to the Snake River confluence in the Columbia River.

Table 14.1 Cumulative degree days (>18°C) used across different HexSim thermalscapes summarized for Grande Ronde River summer steelhead.

Scenario	Minimum	25% quantile	Median	75% quantile	Maximum
Columbia 2017, CWRs Current	1	282	335	408	1315
Cooler Columbia River (-1°C), CWRs Current	3	250	310	373	1025
Columbia 2017, Added CWRs	1	259	311	374	1142

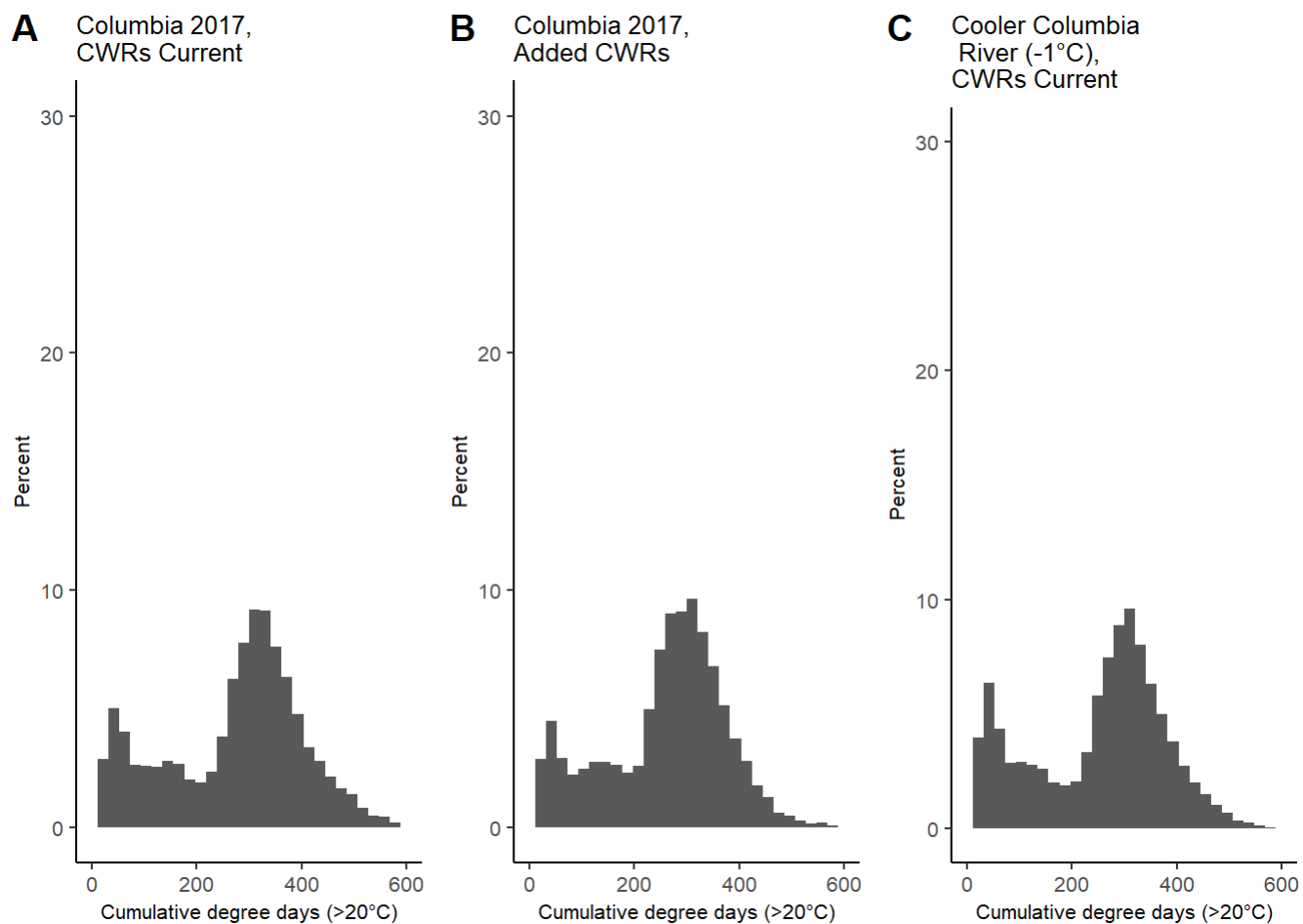


Fig. 14.3 Histograms of modeled Grande Ronde River summer steelhead accumulated degrees day over 20°C from Bonneville to the Snake River confluence in the Columbia River.

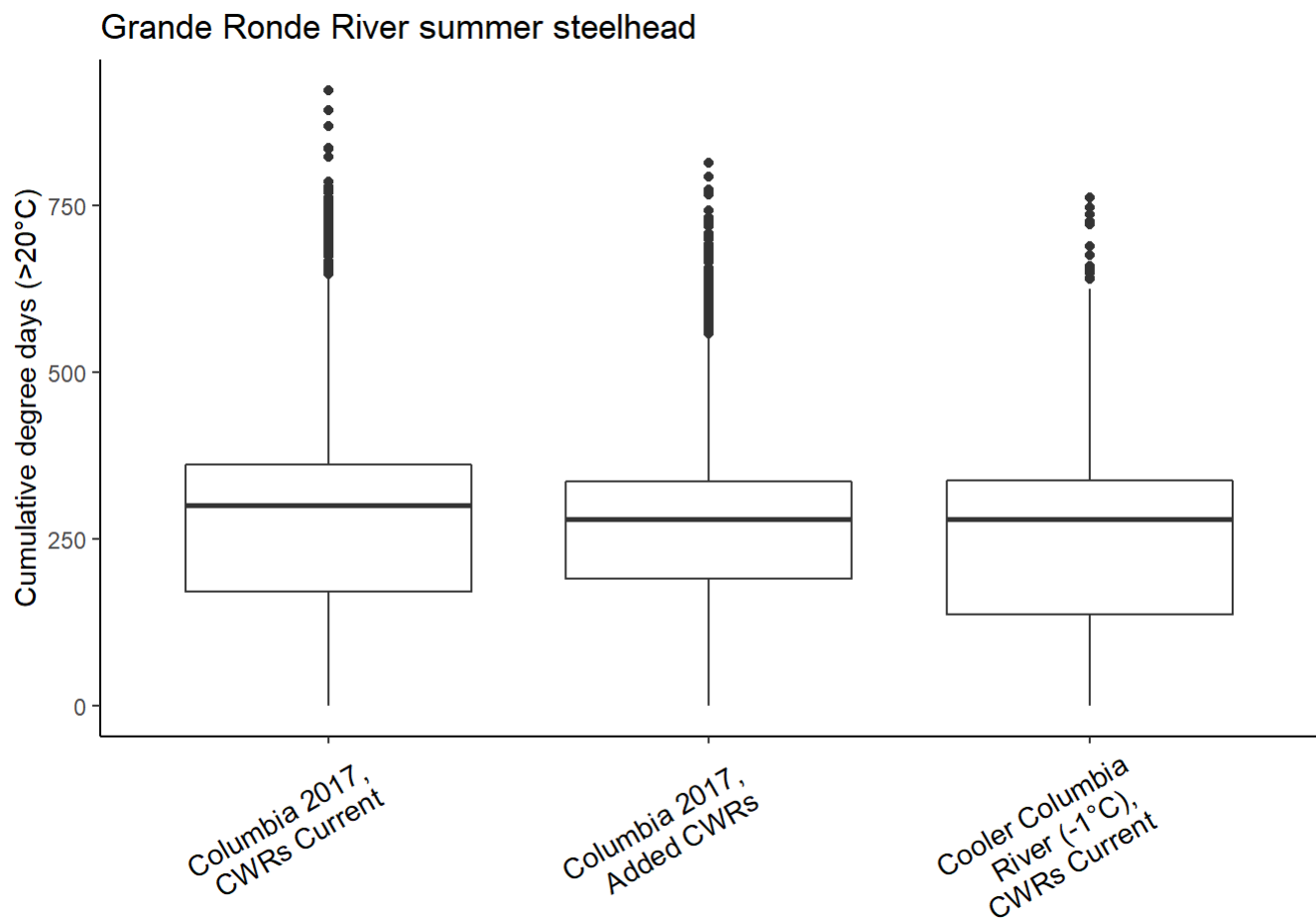


Fig. 14.4 Boxplots of modeled Grande Ronde River summer steelhead accumulated degrees day over 20°C from Bonneville to the Snake River confluence in the Columbia River.

Table 14.2 Cumulative degree days (>20°C) used across different HexSim thermalscapes summarized for Grande Ronde River summer steelhead.

Scenario	Minimum	25% quantile	Median	75% quantile	Maximum
Columbia 2017, CWRs Current	1	172	302	362	924
Cooler Columbia River (-1°C), CWRs Current	1	138	280	338	762
Columbia 2017, Added CWRs	1	190	280	337	814

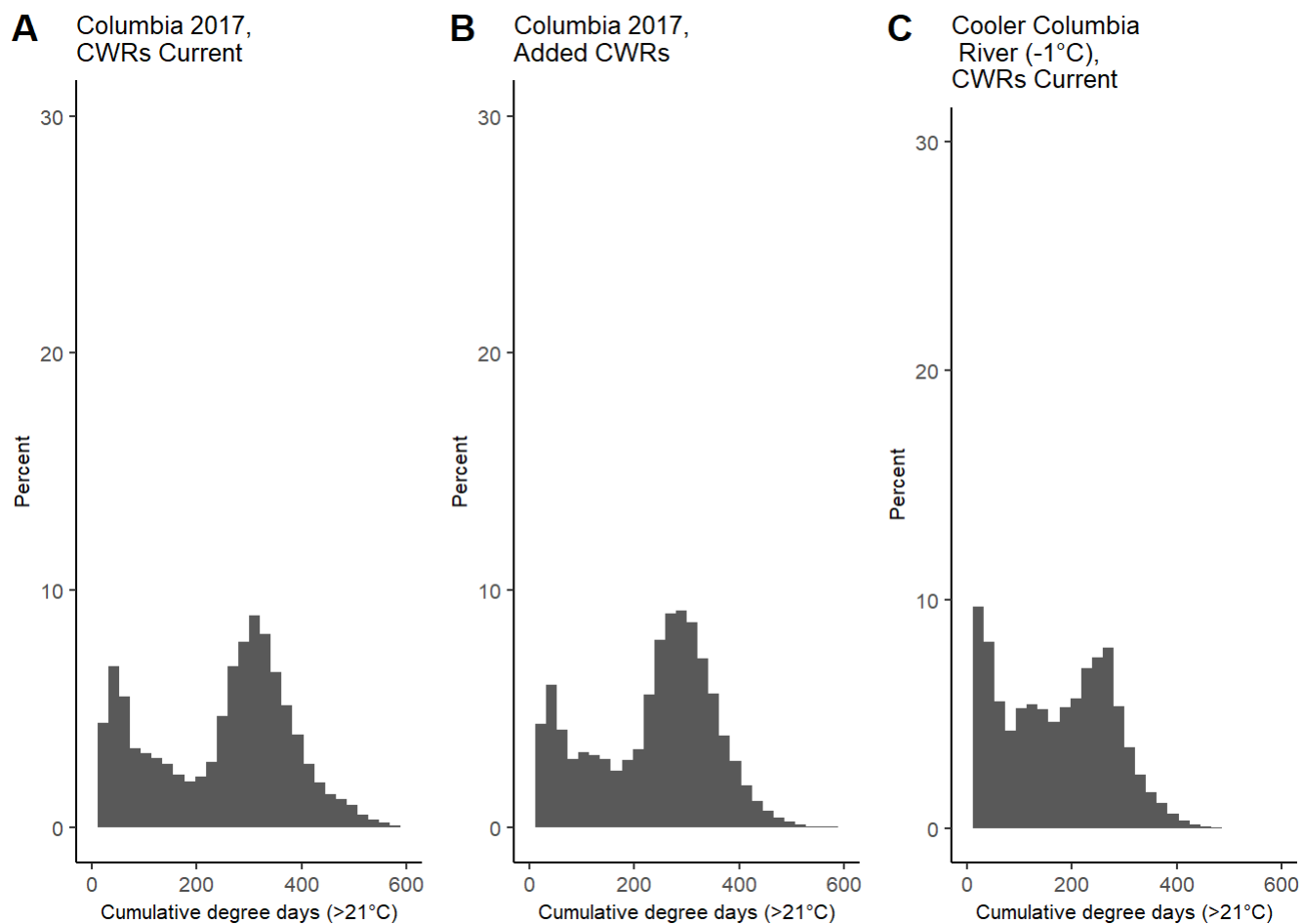


Fig. 14.5 Histograms of modeled Grande Ronde River summer steelhead accumulated degrees day over 21°C from Bonneville to the Snake River confluence in the Columbia River.

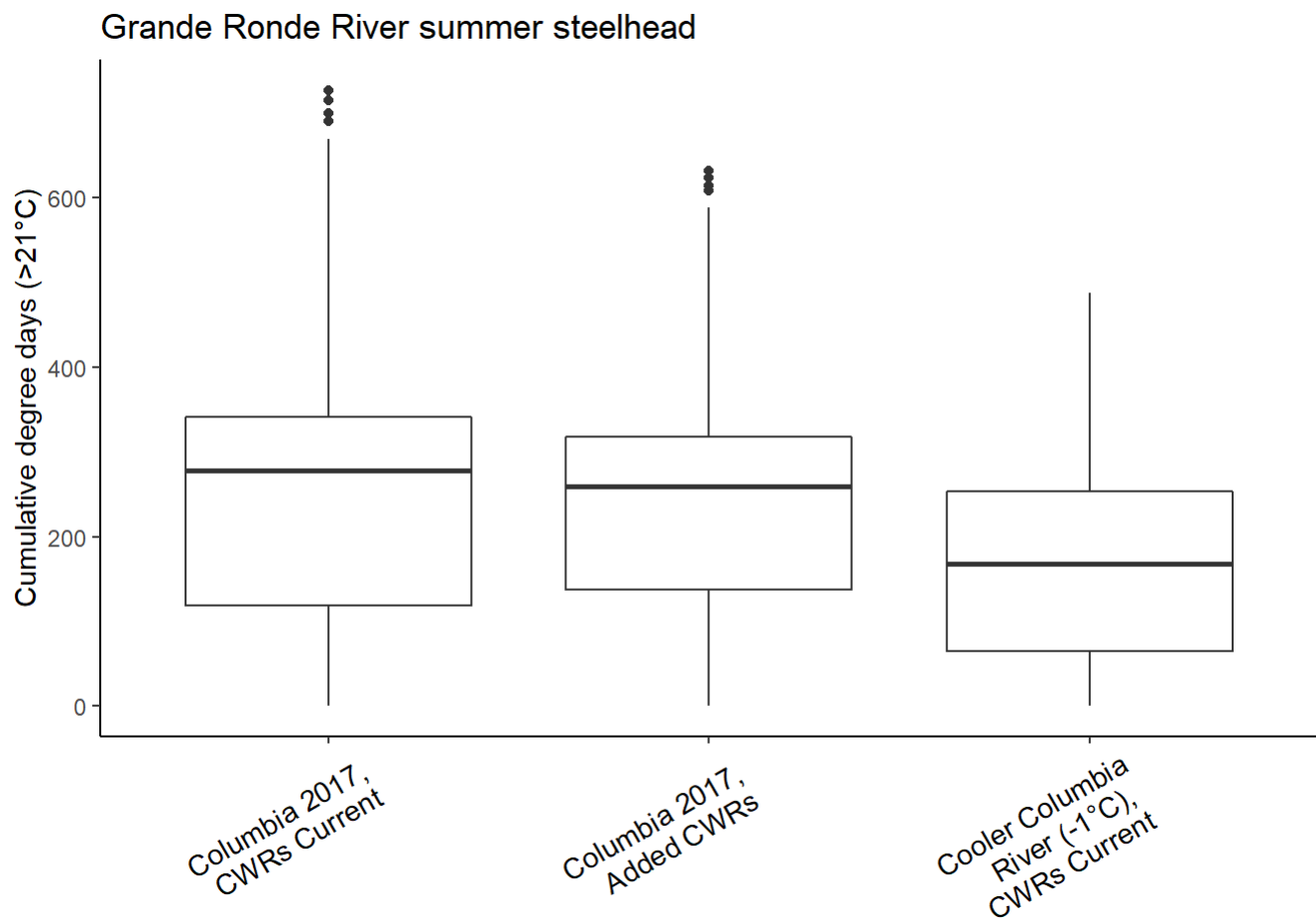


Fig. 14.6 Boxplots of modeled Grande Ronde River summer steelhead accumulated degrees day over 21°C from Bonneville to the Snake River confluence in the Columbia River.

Table 14.3 Cumulative degree days (>21°C) used across different HexSim thermalscapes summarized for Grande Ronde River summer steelhead.

Scenario	Minimum	25% quantile	Median	75% quantile	Maximum
Columbia 2017, CWRs Current	1	118	278	341	727
Cooler Columbia River (-1°C), CWRs Current	1	65	168	253	487
Columbia 2017, Added CWRs	1	137	260	318	632