Supplemental Information

Figure S1: Population forecasts in response to varying removal efforts. Size distributions show the equilibrium crab abundance in each size class, $N(y)^E$, at the end of the year after overwinter mortality when *A.* 0 traps, *B.* 28 traps, *C.* 112 traps, *D.* 560 traps, *E.* 840 traps, *F.* 1400 traps, and *G.* 2800 traps were applied evenly over a trapping season of 14 biweeks. Solid line indicates the median size-structured abundance across simulation replicates, and the shaded area indicates ±1 standard deviation across simulation replicates. Colors indicate trap type used (i.e., in panel B, the purple line shows the resulting size distribution after a trapping effort of 28 Minnow traps).

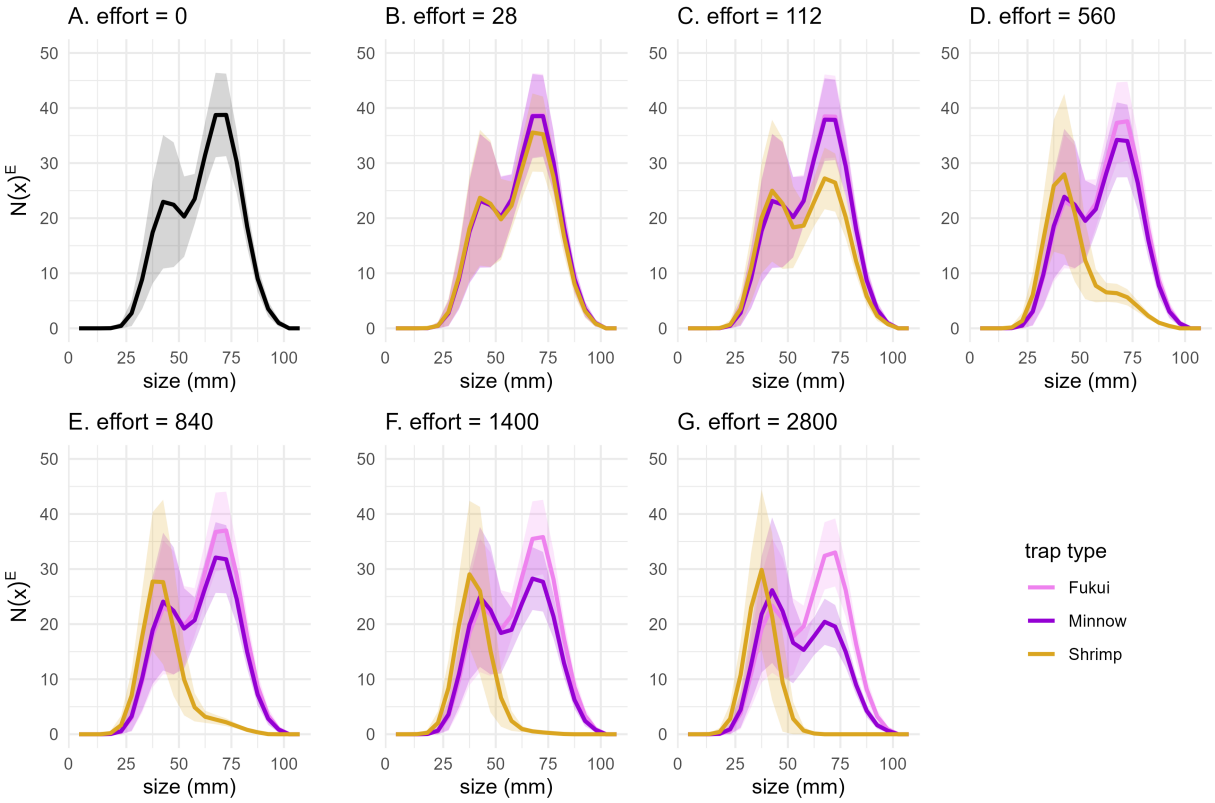

Figure S2: Population forecasts in response to varying removal efforts, relative to no removal. Size distributions show the ratio of the equilibrium crab abundance in each size class, $N(y)^E$, when no removal occurred ($N(y)^E_{effort=0}$) relative to a removal effort greater than zero ($N(y)^E_{effort>0}$). Ratios are calculated based on size-structured abundance at the end of the year after overwinter mortality when *A.* 112 traps, *B.* 560 traps, and *C.* 2800 traps were applied evenly over a trapping season of 14 biweeks. A ratio of one means that the size-structured abundance after no removal equals the size-structured abundance after application of X traps. A ratio less than one means that the application of X traps removes decreases the size-structured abundance, relative to no removal. A ratio greater than one means that the application of X traps increases the size-structured abundance, relative to no removal. Solid line indicates the median size-structured abundance across simulation replicates, and the shaded area indicates ±1 standard deviation across simulation replicates. Colors indicate trap type used (i.e., in panel B, the purple line shows the resulting size distribution ratio after a trapping effort of 0 traps, relative to 560 Minnow traps).

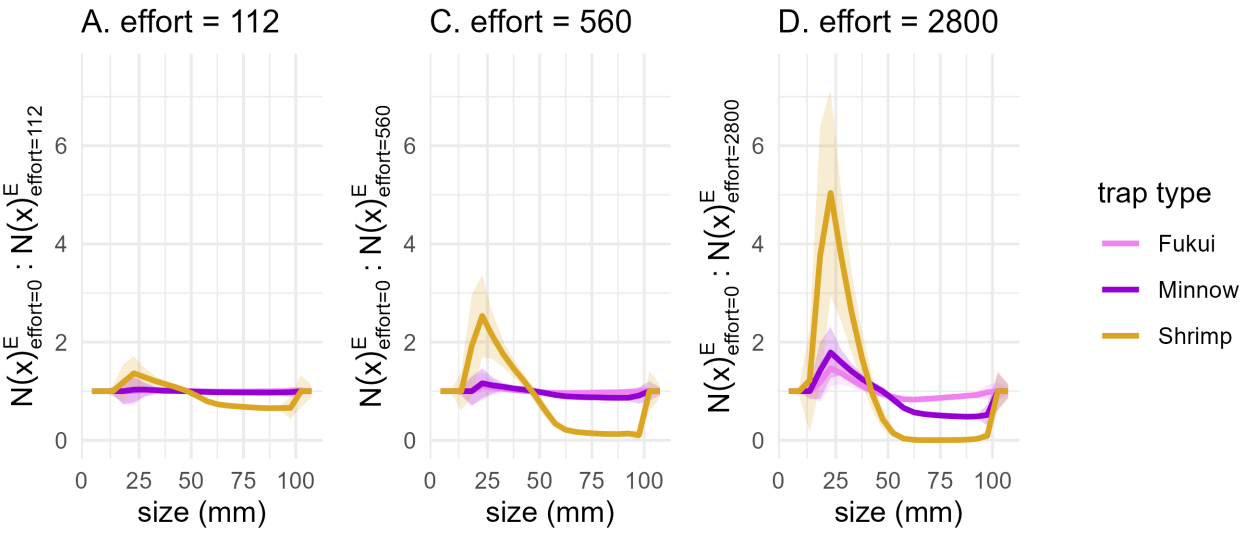

Table S1: Total equilibrium abundance across all size classes, N^E_{total} for population forecasts in response to varying removal efforts. Mean refers to the mean N^E_{total} across all simulation replicates, and sd refers to the standard deviation of N^E_{total} across all simulation replicates.

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type	effort	N^E_{total} (mean)	N^E_{total} (sd)
NA	0	302.2	59
Fukui	28	302.1	58.9
Fukui	112	301.2	58.7
Fukui	560	296.6	57.8
Fukui	840	293.8	57.4
Fukui	1400	288.4	56.2
Fukui	2800	275.4	54.1
Minnow	28	301.2	58.9
Minnow	112	298.1	58.6
Minnow	560	282	57.3
Minnow	840	272.7	56.5
Minnow	1400	255.5	55.5
Minnow	2800	220.9	54.1
Shrimp	28	287.7	57.8
Shrimp	112	250.3	55.7
Shrimp	560	157.2	54.2
Shrimp	840	138.9	53.6
Shrimp	1400	125.1	51.9
Shrimp	2800	113.9	48.2