TABLES

**Table 1.** Trial data for 23 trials conducted on post-release survival of spot prawns in the Broughton Archipelago, BC. Air temperature and salinity measurements were taken at the start of each trial set-up. Salinity was measured from the sea surface or, for trials XX-XX, from the seawater-filled tote that prawns were held in during trap hauling.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Trial**  **No.** | **Start-of-trial** | | | | | | | | **End-of-trial** | | |
|  |  |  | **Number of prawns** | | | | | | **Number of prawns** | | |
|  | **Air temp (oC)** | **Sal-inity (ppm)** | **‘Immediate’**  **release** | **30 min** | **60 min** | **90 min** | **120 min** | **Total** | **Total remaining** | **Lost** | **No band** |
| **1** | 12.9 | 31.2 | 80 | 76 | 81 | 80 | 0 | 317 | 274 | 43 | 44 |
| **2** | 12.9 | 29.9 | 37 | 55 | 55 | 55 | 0 | 202 | 188 | 14 | 24 |
| **3** | 15.2 | 30.4 | 40 | 78 | 79 | 82 | 0 | 279 | 257 | 22 | 26 |
| **4** | 10.7 | 31.3 | 60 | 60 | 63 | 60 | 0 | 243 | 215 | 28 | 22 |
| **5** | 13 | 28.6 | 40 | 40 | 40 | 40 | 0 | 160 | 153 | 7 | 10 |
| **6** | 14.1 | 31.3 | 36 | 36 | 35 | 35 | 0 | 142 | 104 | 38 | 4 |
| **7** | 14.3 | 31.4 | 50 | 50 | 50 | 50 | 50 | 250 | 209 | 41 | 17 |
| **8** | 12.8 | 30.3 | 70 | 70 | 70 | 70 | 0 | 280 | 285 | -5 | 14 |
| **9** | 13.6 | 26.2 | 39 | 39 | 39 | 39 | 0 | 156 | 117 | 39 | 9 |
| **10** | 15.5 | 30 | 54 | 54 | 54 | 54 | 54 | 270 | 201 | 69 | 24 |
| **11** |  |  |  |  |  |  |  |  |  |  |  |
| **12** |  |  |  |  |  |  |  |  |  |  |  |
| **13** | 12 | 24.5 | 56 | 56 | 56 | 56 | 0 | 224 | 212 | 12 | 6 |
| **14** | 12.3 | 26 | 30 | 30 | 30 | 30 | 0 | 120 | 108 | 12 | 3 |
| **15** | 11.9 | 27.5 | 70 | 70 | 70 | 70 | 70 | 350 | 295 | 55 | 3 |
| **16** | 13.5 | 30 | 70 | 70 | 70 | 70 | 70 | 350 | 348 | 2 | 15 |
| **17** | 14.3 | 29 | 60 | 60 | 60 | 60 | 60 | 300 | 272 | 28 | 11 |
| **18** | 11.5 | 25.6 | 70 | 69 | 70 | 70 | 70 | 349 | 344 | 5 | 12 |
| **19** | 17.8 | 25.1 | 70 | 70 | 70 | 70 | 70 | 350 | 309 | 41 | 7 |
| **20** | 25.7 | 25.4 | 70 | 70 | 70 | 70 | 70 | 350 | 345 | 5 | 10 |
| **21** | 22.2 | 24.7 | 44 | 44 | 44 | 44 | 0 | 176 | 176 | 0 | 5 |
| **22** | 25.4 | 25.4 | 70 | 70 | 70 | 70 | 70 | 350 | 343 | 7 | 4 |
| **23** | 18.7 | 25.9 | 60 | 60 | 60 | 60 | 60 | 300 | 297 | 3 | 3 |

**Table 2.** Statistics from generalised mixed-effects models fit to post-trial survival data for spot prawns. Models included combinations of three fixed effects: duration of air exposure (treatment), air temperature during exposure (temperature), and carapace length (length). All models included a random effect on the intercept for trial-trap number. Models with interaction terms include all lower-order effects and all models include an intercept term. Differences in BIC from the top model are listed under BIC; indicates the model weight.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rank** | **Model** | **BIC** |  | **Cumulative** |
| 1 | Treatment x Temperature + Temperature x Length | 0 | 0.73 | 0.73 |
| 2 | Treatment x Temperature + Length | 2.4 | 0.22 | 0.95 |
| 3 | Treatment x Temperature | 6.4 | 0.03 | 0.98 |
| 4 | Treatment x Temperature + Treatment x Length + Temperature x Length | 8.1 | 0.01 | 0.99 |
| 5 | Treatment x Temperature + Treatment x Length | 9.1 | 0.01 | 1 |
| 6 | Temperature x Length + Treatment | 31.9 | 0 | 1 |
| 7 | Length + Treatment + Temperature | 32.4 | 0 | 1 |
| 8 | Treatment + Temperature | 37.5 | 0 | 1 |
| 9 | Treatment x Length + Temperature | 38.5 | 0 | 1 |
| 10 | Treatment x Length + Temperature x Length | 39.4 | 0 | 1 |
| 11 | Treatment + Length | 70.4 | 0 | 1 |
| 12 | Treatment x Length | 76.6 | 0 | 1 |
| 13 | Treatment | 77.4 | 0 | 1 |
| 14 | Temperature + Length | 1470.7 | 0 | 1 |
| 15 | Temperature | 1477.1 | 0 | 1 |
| 16 | Temperature x Length | 1477.7 | 0 | 1 |
| 17 | Length | 1508.1 | 0 | 1 |
| 18 | Null | 1516.3 | 0 | 1 |

FIGURES

Figure 1 <- Unbanded vs banded length violin plot

Figure 2<- Length NAs per treatment

Figure 3 <- prawn loss per treatment

Figure 4 <- Loss thought experiment

Figure 5 <- Treatment Survival histogram

Figure 6 <- Temp survival

Figure 7 <- Length survival

Figure 8 <- Stage Dist?

Figure 9 <- Reflex Dist

Figure 10 <- predicted release mortality stacked barplot---- discussion?

Figure 11<- 3 panel Survival curves by temperature with temperature-binned survival average points.

Figure 12<- Survival 9 curves, showing relative influence of length and temperature

Table 1 <- Trial summary table

Table 2 <- BIC Table

Table 3 <- Model Comparison table

Appendix 1 <- multi-page trial summary