Table A2.2. Mean ± SE for survival rate (%) of *P.angulosus* fed one of four dietary treatments (formulated, *Ecklonia maxima*, mixed, or *Ulva lacinulata*) under one of two temperature (ambient ~15oC or warm ~18 oC). Statistically significant differences between dietary treatment groups are shown by different letters based on Kruskal-Wallis test followed by a post hoc Dunn’s test pairwise comparisons. Statistically significant differences between temperature treatment groups based on (one-sided) (ambient < warm) Mann-Whitney U test is shown as stars alongside the week number. No letters or stars indicate that there were no significant differences.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Temperature | Ambient | | | | Warm | | | |
| Diet | F | K | M | U | F | K | M | U |
| Week |  |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |  |
| 10 \*\* |  |  |  |  |  |  |  |  |
| 18 \*\* |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |

Table A2.2. Mean ± SE of *P. angulosus* gonad quantity (GSI) (%) values. Statistically significant differences between dietary treatment groups are shown by different letters based on ANOVA test followed by a post hoc Tukey test pairwise comparisons. Statistically significant differences between temperature treatment groups based are shown as stars alongside the week number. No letters or stars indicate that there were no significant differences.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Temperature | Ambient | | | | Warm | | | |
| Diet | F | K | M | U | F | K | M | U |
| Week |  |  |  |  |  |  |  |  |
| 9 (n = 32) | 18.18 ± 2.93 B | 3.08 ± 0.64 A | 11.18 ± 1.33 B | 5.61 ± 1.04 A | 19.08 ± 1.85 B | 3.49 ± 0.70 A | 9.28 ± 1.19 B | 3.82 ± 1.19 A |
| 19 (n = 24) | 21.98 ± 2.84 C | - | 20.30 ± 0.86 A | 8.80 ± 0.81 B | 25.63 ± 1.44 C | - | 17.43 ± 0.66 A | 10.59 ± 0.86 B |
| 26 (n = 24) | 29.06 ± 0.76 C | - | 20.19 ± 1.05 A | 11.57 ± 0.94 B | 25.09 ± 1.22 C | - | 21.44 ± 1.03 A | 12.69 ± 0.50 B |

Table A2.3. Mean ± SE of *P. angulosus* gonad development (gonad stage) values. Statistically significant differences between dietary treatment groups are shown by different letters based on Kruskal-Wallis test followed by a post hoc Dunn’s test pairwise comparisons. Statistically significant differences between temperature treatment groups based are shown as stars alongside the week number. No letters or stars indicate that there were no significant differences.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Temperature | Ambient | | | | Warm | | | |
| Diet | F | K | M | U | F | K | M | U |
| Week |  |  |  |  |  |  |  |  |
| 9 (n = 32) | 1.50 ± 0.29 b | 4.00± 0.41 a | 2.00 ± 0.41 b | 4.25 ± 0.63 a | 2.25 ± 0.25 b | 4.00 ± 0.00 a | 3.75 ± 0.75 b | 3.75 ± 0.25 a |
| 19 (n = 24) | 2.75 ± 0.25 a | - | 3.25 ± 0.25 a | 4.00 ± 0.41 b | 3.00 ± 0.00 a | - | 3.00 ± 0.00 a | 4.25 ± 0.25 a |
| 26 (n = 24) | 3.50 ± 0.50 a | - | 3.00 ± 0.00 a | 5.00 ± 0.00 b | 3.50 ± 0.50 a | - | 3.25 ± 0.25 a | 4.75 ± 0.25 b |

ANOVA (F-values), Kruskal-Wallis (H-values), Welch ANOVA (*F-values)*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | L\* (Lightness/Intensity) | |  | a\* (Redness/Hue) | |  | b\* (Yellowness/Chroma) | |  |
| Week | Temperature | Diet | Sex | Temperature | Diet | Sex | Temperature | Diet |  |
| 9 | t = -0.34 | F = 3.50 \* |  | t (≠variance) = 1.10 | *F = 0.66* |  |  | F = 1.02 |  |
| 19 | t = -0.19 | F = 4.43 \* |  | t = 0.68 | F = 6.27 \*\* |  |  | H = 8.15 \* |  |
| 26 | Z = 0.24 | H = 18.91 \*\*\* |  | t = -0.24 | F = 18.85 \*\*\* |  |  | H = 26.91 \*\*\* |  |