**Supplementary Table 1.** Population density of *Mesanophrys* sp. at different salinities.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Salinities** | **Population density (Ind/mL**) | | | | | | | | | | | |
| **1d** | **2d** | **3d** | **4d** | **5d** | **6d** | **7d** | **8d** | **9d** | **10d** | **11d** | **12d** |
| **5‰** | 3000±163.d | 2385±295.9d | 1825±125.8 f | 1150±173f | 975±170.78 f | 725±50e | 600±81.65e | 500±216.0e | 500±244.9d | 425±221.4c | 200±81.5d | 0±0c |
| **10‰** | 4250±208.1c | 9300±739.3b | 11325±478.7d | 13025±263d | 11675±471.7d | 7975±531.5c | 7100±535.4c | 6650±506.6c | 5775±275.3b | 2550±665.83b | 1350±129.1c | 600±294ab |
| **20‰** | 6525±464.5a | 12300±374.1a | 18250±704.7a | 25525±427.2a | 32075±650a | 26075±623.8a | 21825±427.2a | 17325±442.5a | 12025±411.3a | 7450±341.57a | 5200±365.1a | 2250±238a |
| **30‰** | 6025±763.2ab | 11975±512.3a | 16800±547.7b | 22775±590.9b | 27800±668.33b | 26075±386.22a | 22025±250a | 16800±216.0a | 11200±369.68a | 7375±478.71a | 4825±170.7a | 2200±294a |
| **40‰** | 5050±479.5bc | 10350±420.3b | 13650±443.4c | 17700±577.35c | 18400±432.05c | 16700±163.3b | 14875±561.9b | 12050±404.1b | 5025±590.9b | 3225±330.4b | 2150±129.1b | 500±294ab |
| **50‰** | 2500±336.6d | 3875±464.5c | 4600±216.0e | 5050±251.66e | 6675±585.2e | 3825±309.5d | 3100±336.65d | 2750±298.6d | 2625±208.17c | 2325±250b | 450±57.74d | 150±58.0b |

Values represent mean (±standard deviation) of four replicates (n=4). Different letters within a column indicate significant differences among at each time point (*P* < 0.01), using post hoc Bonferroni test.

**Supplementary Table 2.** Population density of *Mesanophrys* sp. at different temperatures

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Temperature (°C)** | **Population density (Ind/mL**) | | | | | | | | | | | |
| **1d** | **2d** | **3d** | **4d** | **5d** | **6d** | **7d** | **8d** | **9d** | **10d** | **11d** | **12d** |
| **4°C** | 5950± 342b | 10225±263c | 15975±330b | 17400±365c | 20100±258c | 19500±383b | 17425±386c | 16200±392b | 14150 ± 31c | 11975±310c | 5700±245b | 975±96a |
| **8°C** | 5875±263b | 11350±443b | 15800±283b | 17750±191c | 21550±252b | 19600±283b | 18200±365b | 17400±294c | 15500±346b | 12025±411b | 6100±408b | 1000±82a |
| **12°C** | 7475±525a | 12150±311a | 21800±245a | 27875±427a | 31375±263a | 28350±311a | 24300±216a | 19375±613a | 17325±443a | 13025±206a | 7600±163a | 1050±129a |
| **16°C** | 5475±411bc | 10300±258c | 15025±479c | 18325±359b | 20000±283c | 18500±392c | 17275±512c | 12025±411d | 7600±163d | 5275±250d | 2150±129c | 625±275b |
| **20°C** | 5275±340bc | 2075±171d | 1875±310d | 1075±310d | 750±129d | 425±222d | 0±0d | 0±0e | 0±0e | 0±0e | 0±0e | 0±0e |
| **24°C** | 4600±141c | 2250±342d | 1175±189e | 675±222e | 275±171e | 0±0e | 0±0d | 0±0e | 0±0e | 0±0e | 0±0e | 0±0e |
| **26°C** | 3725±206d | 1975±275d | 1150±191e | 350±129e | 300±81e | 0±0e | 0±0d | 0±0e | 0±0e | 0±0e | 0±0e | 0±0e |

Values represent mean (±standard deviation) of four replicates (n=4). Different letters within column indicate significant differences among at each time point (*P* < 0.01), using post hoc Bonferroni test.

**Supplementary Table 3.** Poplation density of *Mesanophrs* sp. at different pH levels

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **pH** | **Population density (Ind/mL**) | | | | | | | | | | | |
| **1d** | **2d** | **3d** | **4d** | **5d** | **6d** | **7d** | **8d** | **9d** | **10d** | **11d** | **12d** |
| **4.5** | 3050±  310.9ef | 2510±  204.2e | 1825±  125.8h | 1150±  173.2h | 975±  170.7i | 700±  81.64h | 575±  95.74g | 500±  216.0f | 500±  244.9f | 425±  221.7g | 200±  81.64f | 0±0d |
| **5.5** | 4250±  208.16ef | 8125±  275.37d | 10375±  478.71f | 12200±  594.41f | 8125±  320.15g | 6800±  496.65f | 6550±  378.5e | 5200±  366.6c | 2350±  310.9e | 1350±  129ef | 675±  170.7f | 350±  1290d |
| **6.5** | 5050±  478.9de | 10350±  420.31c | 13650±  443.47e | 17700±  577.35e | 18500±  529.15f | 16350±  310.91e | 14875±  561.9d | 11450±  420.31c | 5300±  258.1d | 3225±  330.40d | 2125±  170.7e | 625±  221.7d |
| **7.5** | 7425±  639.9b | 12425±  895.8b | 20000±  883.17b | 24825±  793.20b | 28475±  518.81c | 18775±  903.23c | 16150±  718.79cd | 10525±  834.16d | 8650±  838.6d | 6425±  298.6c | 5125±  556.0c | 1625±  411.2c |
| **8.0** | 11325±  991.2a | 19950±  903.6 a | 31700±  680.07a | 38825±  758.83a | 40150±  700a | 28500±  883.17a | 26475 ±  763.2a | 20875±  665.20a | 15300±  499.16a | 11900±  336.6a | 7575±  330.4a | 5050±  478.7a |
| **8.5** | 9375±  613.05c | 12825±  618.46b | 24675±  741.05c | 25150±  723.41bc | 30725±5  37.74b | 26200±  571.5b | 16500±  648.07bc | 14075±  842.12b | 10850±  903.6b | 8500±  976.38b | 6150±  493.2b | 2675±  590.9b |
| **9.0** | 6275±  485.62cd | 12750±  718.79b | 18275±  485.63d | 23575±  970.8c | 26250±  809.83d | 21400±  621.82d | 17575±  634.42bc | 15875±  208.16c | 11525±  704.74c | 7475±  350c | 5525±  434.9d | 2275±  386.2bc |
| **9.5** | 4375±  330.40e | 9125±  537.74cd | 12400±  298.60e | 20125±  580.22d | 25450±  221.73e | 20123±  443.47c | 16775±  834.166b | 11075±  834.16b | 9025±  485.6b | 6500±  752.7bc | 3725±  573.7bc | 2225±  250c |
| **10** | 2500±  336.5g | 3875±  464.6e | 4600±  216.02g | 5050±  251.66g | 6675±  585.23h | 3825±  309.56g | 3100±  336.65f | 2750±  208.16e | 2625±  298.6e | 2325±  250de | 450±  56.78f | 150±  57.7d |

Values represent mean (±standard deviation) of four replicates (n=4). Different letters within a column indicate significant differences among at each time point (*P* < 0.01), using post hoc Bonferroni test.