Table 1. School detection settings used to estimate the density of krill schools during the 2023/24 austral summer glider deployments.

|  |  |
| --- | --- |
| Minimum total school height (meters) | 2 |
| Minimum candidate length (meters) | 1.5 |
| Minimum candidate height (meters) | 2 |
| Maximum vertical linking distance (meters) | 2 |
| Maximum horizontal linking distance (meters) | 3 |
| Minimum total school length (meters) | 7.5 |

Table 2. Krill length frequencies from Gentoo penguins on King George Island.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Length (mm) | Frequency | | Length (mm) | Frequency |
| 20 | 0.000 |  | 41 | 0.073 |
| 21 | 0.000 |  | 42 | 0.063 |
| 22 | 0.002 |  | 43 | 0.037 |
| 23 | 0.000 |  | 44 | 0.044 |
| 24 | 0.000 |  | 45 | 0.077 |
| 25 | 0.000 |  | 46 | 0.042 |
| 26 | 0.000 |  | 47 | 0.066 |
| 27 | 0.005 |  | 48 | 0.044 |
| 28 | 0.002 |  | 49 | 0.028 |
| 29 | 0.007 |  | 50 | 0.044 |
| 30 | 0.009 |  | 51 | 0.028 |
| 31 | 0.009 |  | 52 | 0.028 |
| 32 | 0.005 |  | 53 | 0.005 |
| 33 | 0.023 |  | 54 | 0.005 |
| 34 | 0.035 |  | 55 | 0.009 |
| 35 | 0.063 |  | 56 | 0.005 |
| 36 | 0.044 |  | 57 | 0.002 |
| 37 | 0.033 |  | 58 | 0.000 |
| 38 | 0.049 |  | 59 | 0.000 |
| 39 | 0.047 |  | 60 | 0.000 |
| 40 | 0.063 |  |  |  |

Table 3. Antarctic krill density and biomass estimates, standard deviations and the number of profiles in the survey analysis.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Glider | 70 kHz  density (g/m2) | 70 kHz STD | 70 kHz biomass  (tons) | 120 kHz  density (g/m2) | 120 kHz STD | 120 kHz biomass  (tons) | Survey profiles  (N) |
| AMLR03 | 44.76 | 97.44 | 4.0282e+05 | 35.66 | 79.43 | 3.2092e+05 | 321 |
| AMLR04 | 44.15 | 117.42 | 3.9731e+05 | 41.84 | 130.77 | 3.7655e+05 | 323 |

Table 4. Antarctic krill density estimates and standard deviation of school analysis.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Glider | 70 kHz  density (g/m2) | 70 kHz STD | 70 kHz school count | 120 kHz  density (g/m2) | 120 kHz STD | 120 kHz  school count |
| AMLR03 | 39.66 | 92.59 | 971 | 31.93 | 75.24 | 710 |
| AMLR04 | 38.34 | 103.64 | 788 | 34.95 | 99.71 | 582 |

Table 5. Table of bootstrapped densities with lower and upper confidence intervals and the number of binned data samples. grid\_ll.1\_lt\_.1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Glider | 70 kHz density | Lower CI | Upper CI | 120 kHz density | Lower CI | Upper CI | Number of samples |
| AMLR03 | 48.84 | 38.24 | 63.39 | 38.05 | 29.39 | 49.38 | 115 |
| AMLR04 | 42.55 | 31.14 | 66.10 | 41.34 | 27.54 | 63.47 | 117 |

Table 5. Table of bootstrapped densities with lower and upper confidence intervals and the number of binned data samples for the survey. grid\_ll.2\_lt\_.1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Glider | 70 kHz density | Lower CI | Upper CI | 120 kHz density | Lower CI | Upper CI | Number of samples |
| AMLR03 | 56.13 | 43.01 | 90.61 | 44.29 | 32.03 | 70.17 | 74 |
| AMLR04 | 49.32 | 31.97 | 97.67 | 48.91 | 29.90 | 125.47 | 72 |

Table 6. Table of bootstrapped densities with lower and upper confidence intervals and the number of binned data samples for the schools survey. grid\_ll.2\_lt\_.1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Glider | 70 kHz density | Lower CI | Upper CI | 120 kHz density | Lower CI | Upper CI | Number of samples |
| AMLR03 | 50.37 | 35.37 | 82.68 | 38.87 | 27.91 | 62.71 | 74 |
| AMLR04 | 43.95 | 26.59 | 99.43 | 42.72 | 24.02 | 120.12 | 72 |