

Supplemental table 2: List of reefs from the Australian Institute of Marine Science Temperature Logger (Australian Institute of Marine Science (AIMS) 2020) dataset that were used to determine the thermal regime of low- and high-latitude regions. Only temperature loggers that were placed between 7-15m deep were sampled. Latitude and longitude are measured in decimal degrees.

| Site | Subsite id | Series | Latitude | Longitude | Latitude |
|-------------------------|------------|------------|----------|-----------|---------------|
| Davies Reef | 2630 | DAVSL1 | -18.806 | 147.6686 | Low-latitude |
| Davies Reef | 3272 | DAVAWSL2 | -18.8313 | 147.634 | Low-latitude |
| Myrmidon Reef | 2726 | MYRSL1 | -18.2572 | 147.3813 | Low-latitude |
| Orpheus Island | 14957 | ORPHCH2 | -18.6017 | 146.4881 | Low-latitude |
| Rib Reef | 10200 | RIBSL1 | -18.4719 | 146.8788 | Low-latitude |
| John Brewer | 2723 | JBRSL1 | -18.6188 | 147.0815 | Low-latitude |
| Kelso Reef | 2620 | KELSL1 | -18.4221 | 146.9846 | Low-latitude |
| Dip Reef | 2633 | DIPSL1 | -18.3999 | 147.4519 | Low-latitude |
| Green Island, Qld | 2672 | GRESL1 | -16.7755 | 145.9803 | Low-latitude |
| Moore Reef | 2708 | MORSL1 | -16.8477 | 146.2358 | Low-latitude |
| Arlington Reef | 2738 | ARLSL1 | -16.6461 | 146.1107 | Low-latitude |
| Frankland Islands | 3177 | FRNKSL2 | -17.227 | 146.0904 | Low-latitude |
| Pandora Reef | 3247 | PANSL1 | -18.8168 | 146.4346 | Low-latitude |
| Pandora Reef | 10016 | PANSL2 | -18.8116 | 146.43 | Low-latitude |
| Snapper Island North | 3291 | SNAPISL1 | -16.2919 | 145.4965 | Low-latitude |
| Chicken Reef | 2635 | CHISL1 | -18.6521 | 147.7217 | Low-latitude |
| Flinders Reef | 14617 | FLINDERSL2 | -17.7123 | 148.4509 | Low-latitude |
| Havannah Island | 14975 | HAVSL2 | -18.8315 | 146.5374 | Low-latitude |
| Thetford Reef | 10635 | THETSL1 | -16.7988 | 146.1981 | Low-latitude |
| Thetford Reef | 13535 | THETFL1 | -16.7995 | 146.1951 | Low-latitude |
| 19-131 Reef | 12196 | 19131SL1 | -19.7662 | 149.3802 | Low-latitude |
| 19-131 Reef | 15438 | 19131SL3 | -19.7728 | 149.376 | Low-latitude |
| 19-138 Reef | 12198 | 19138SL1 | -19.8069 | 149.4305 | Low-latitude |
| Rebe Reef | 12208 | REBESL1 | -19.7919 | 150.1612 | Low-latitude |
| St Crispin Reef | 12421 | STCRISPSL1 | -16.0713 | 145.8453 | Low-latitude |
| Opal Reef | 12579 | OPALSL1 | -16.2034 | 145.9065 | Low-latitude |
| Peart Reef | 12657 | PEARTSL1 | -17.4665 | 146.4031 | Low-latitude |
| Feather Reef | 12655 | FEATHSL1 | -17.5179 | 146.3905 | Low-latitude |
| Hedley Reef | 13638 | HEDLSL1 | -17.2251 | 146.479 | Low-latitude |
| McCulloch Reef | 12777 | MCCULLSL1 | -17.2841 | 146.4796 | Low-latitude |
| Farquharson Reef | 13637 | FARQSL1 | -17.7912 | 146.5324 | Low-latitude |
| Taylor Reef | 13636 | TAYLORSL1 | -17.8107 | 146.5716 | Low-latitude |
| Roxburgh Reef | 12761 | ROXSL1 | -18.4283 | 147.0593 | Low-latitude |
| Helix Reef | 12656 | HELIXSL1 | -18.6201 | 147.2976 | Low-latitude |
| Grub Reef | 12758 | GRUBSL1 | -18.6216 | 147.4327 | Low-latitude |
| Knife Reef | 12775 | KNIFESL1 | -18.5711 | 147.5772 | Low-latitude |
| Hastings Reef | 13898 | HASTSL1 | -16.4995 | 146.0223 | Low-latitude |
| Agincourt Reef Number 1 | 14835 | AG1SL1 | -16.0384 | 145.8688 | Low-latitude |
| Pine Island | 3080 | PINESL1 | -20.378 | 148.8884 | High-latitude |
| Seaforth Island | 3087 | SEAFSL1 | -20.4685 | 149.0389 | High-latitude |

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| Shute and Tancred Islands | 3679 | SHTANSL1 | -20.3009 | 148.7983 | High-latitude |
| 20-104 Reef | 12204 | 20104SL1 | -20.0294 | 149.6951 | High-latitude |
| Border Island | 12210 | BORDERSL1 | -20.1819 | 149.0377 | High-latitude |
| 21-245 Reef | 12398 | 21245SL1 | -21.2965 | 152.4465 | High-latitude |
| 21-062 Reef | 12422 | 21062SL1 | -21.0266 | 150.8538 | High-latitude |
| 21-139 Reef | 12435 | 21139SL1 | -21.4547 | 151.4654 | High-latitude |
| 21-187 Reef | 12436 | 21187SL1 | -21.4054 | 151.6384 | High-latitude |
| Tern Reef | 12763 | TERNSL1 | -20.899 | 150.0289 | High-latitude |
| Penrith Reef | 12760 | PENRITHSL1 | -21.0032 | 149.8875 | High-latitude |
| 21-591 Reef | 12757 | 21591SL1 | -21.0266 | 150.3807 | High-latitude |
| 21-550 Reef | 12586 | 21550SL1 | -21.9612 | 152.3168 | High-latitude |
| Gannet Cay Reef | 13639 | GANNETSL1 | -21.9758 | 152.4797 | High-latitude |