Supplementary 1: Primers for amplification of successful microsatellite regions

| Primer | Primer sequence |
| --- | --- |
| 9-N1658-F | TTCCCCTTAGGTTTATGGGC |
| 9-N1658-R | TTGTGGACTGTTGGTCAGGA |
| 12-N1859-F | CTGCTGACCTGCTGCTGA |
| 12-N1859-R | ATGGCAGCTTCCTTACCTCA |
| 13-N2161-F | GGCAACATGCTGACCTGAAT |
| 13-N2161-R | GCGAGCAAGGTTAATGGTGT |
| 15-N2263-F | GGCAGATTAAGCAAGCCTCA |
| 15-N2263-R | AGGCAACAATATCACGGTCC |
| 18-N2542-F | TTCCACCTCATTCACCTTCC |
| 18-N2542-R | CATGCACGCAGCCTATACAT |
| 27-N4870-F | GGCACTTCAAGAAAACGAGG |
| 27-N4870-R | ACGACGGAAAGACGCTACAC |
| 38-N7114-F | TCGGAACAGTTGATGTCAGG |
| 38-N7114-R | CGTGACCTCTGAGACAGACC |
| 43-N7938-F | GGAGGGTTTTGATCCAGTGA |
| 43-N7938-R | CAGTACACATCCACCCACCTT |
| 45-N8560-F | TGCGTCTTCTGTCCAATGAG |
| 45-N8560-R | TGCATGTTGGGTTTTACTTCTG |
| 48-N11437-F | GTTAAAGCTGCAAAGGCGAC |
| 48-N11437-R | AGCAGACAATTTCAGCCGTT |
| 49-N11550-F | ACATTTGTTGCTGCTCATGC |
| 49-N11550-R | TCATCATAACACCGAAGGCA |
| 50-N11694-F | CAACCTGCTCCTGCTGAGG |
| 50-N11694-R | TGGCTCACAGATTATGTTTTGG |

Supplementary 2: Fixation indices

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| --- | --- | --- | --- |
| Locus | Fst | Fit | Fis |
| 9-N1658 | 0.0029 | 0.1683 | 0.1659 |
| 12-N1859 | 0.0045 | 0.3196 | 0.3165 |
| 13-N2161 | 0.0081 | 0.4553 | 0.4509 |
| 15-N2263 | -0.0060 | 0.4518 | 0.4551 |
| 18-N2542 | 0.0017 | 0.0998 | 0.0983 |
| 27-N4870 | -0.0032 | 0.0755 | 0.0784 |
| 38-N7114 | -0.0070 | 0.2161 | 0.2216 |
| 43-N7938 | 0.0175 | 0.1914 | 0.1770 |
| 45-N8560 | 0.0081 | 0.0792 | 0.0717 |
| 48-N11437 | 0.0092 | -0.0292 | -0.0387 |
| 49-N1550 | 0.0004 | 0.0023 | 0.0019 |
| 50-N11694 | -0.0011 | 0.1052 | 0.1062 |
| All Loci (mean) | 0.0029 | 0.1779 | 0.1754 |

Supplementary 3: FST results (lower left quadrant) from pairwise comparisons between populations based on the CR sequence. Significant (following Bonferroni adjustment) results are highlighted in bold. *p*-values are presented in the upper right quadrant, significant values (*p*<0.05) are presented in bold. Individuals from the regions studied in this project are shown in grey. Australian and New Zealand populations in white.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | East Tasmania | East Victoria | East Coast Deep Water | New South Wales | New Zealand | South Australia | South Tasmania | West Tasmania | West Victoria | Yakhont | McNish | RSA | Crawfprd |
| East Tasmania | -  | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.38350 | 1.00000 | 0.84812 | 0.15704 |
| East Victoria | -0.00224 | -  | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.96005 | 1.00000 | 0.86996 | 1.00000 | 1.00000 | 0.28964 |
| East Coast Deep Water | -0.01514 | -0.01350 | -  | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.67314 | 1.00000 | 0.49556 | 0.08879 |
| New South Wales | -0.00667 | 0.01912 | -0.01006 |  - | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.07462 | 0.22906 | **0.03224** | **0.00000** |
| New Zealand | 0.00021 | 0.00960 | 0.00195 | 0.02122 |  - | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 0.08242 | 0.12740 |
| South Australia | -0.01143 | -0.00358 | -0.01441 | -0.01587 | 0.01247 |  - | 1.00000 | 1.00000 | 1.00000 | 0.14027 | 0.81848 | 0.14417 | **0.01157** |
| South Tasmania | 0.01401 | 0.01090 | 0.00616 | 0.02703 | -0.01743 | 0.01638 | -  | 1.00000 | 1.00000 | 1.00000 | 0.37453 | **0.03601** | 0.06955 |
| West Tasmania | 0.01795 | 0.02298 | -0.00046 | 0.00463 | 0.00539 | 0.01626 | 0.00174 | -  | 1.00000 | 0.42341 | 0.07462 | **0.00130** | **0.00260** |
| West Victoria | -0.01757 | -0.04697 | -0.02813 | 0.01996 | -0.01623 | -0.03010 | -0.02160 | 0.01990 | -  | 1.00000 | 1.00000 | 1.00000 | 1.00000 |
| Yakhont | 0.04731 | 0.02709 | 0.03473 | 0.08700 | 0.00850 | 0.05733 | 0.01148 | 0.04399 | 0.00635 | -  | 1.00000 | 0.26507 | 1.00000 |
| McNish | 0.00748 | -0.00023 | 0.01165 | 0.06308 | 0.02600 | 0.02807 | 0.04004 | 0.06824 | -0.02622 | 0.02429 | -  | 1.00000 | 1.00000 |
| RSA | 0.03307 | 0.02074 | 0.03958 | **0.10177** | 0.06333 | 0.05444 | **0.07999** | **0.11385** | -0.00916 | 0.05526 | -0.01964 |  - | 1.00000 |
| Crawford | 0.06619 | 0.04372 | 0.07138 | **0.14714** | 0.05710 | **0.09350** | 0.06988 | **0.12666** | 0.00563 | 0.02458 | -0.00453 | -0.00111 | -  |