

Table S1. Oligonucleotide ISSR primers used for diversity analysis in common reed sites and populations, primer annealing temperature, number of scored and polymorphic bands, percentage of polymorphic loci identified per primer and scored DNA fragments size range

| ISSR primer | Sequence | Annealing temperature | All fragments scored | Polymorphic fragments | P, % | Size of DNA fragments (bp) |
|-------------|-------------------------|-----------------------|----------------------|-----------------------|------|----------------------------|
| ISSR-B | (AG) ₈ CG | 51 | 25 | 23 | 92 | 320-1300 |
| ISSR I-50a | CCA(GTC) ₄ | 47 | 33 | 31 | 94 | 440-1750 |
| ISSR I-18 | GTGC(TC) ₇ | 51 | 26 | 25 | 96 | 490-1480 |
| ISSR-E | (CCA) ₅ | 47 | 21 | 20 | 95 | 460-1300 |
| UBC 881 | (GGGT) ₃ GTG | 49 | 28 | 26 | 93 | 310-1600 |
| UBC 817 | (CA) ₈ A | 45 | 28 | 26 | 93 | 340-1500 |
| UBC 825 | (AC) ₈ T | 45 | 33 | 31 | 94 | 360-2000 |
| sum | | | 194 | 182 | 94 | |
| average | | | 27.71 | 26 | | |

P – percentage of polymorphic loci.

Table S2. Water hydro-chemical and physical characteristics of common reed sampling sites

| Site | pH | DO, mg/l | BOD ₇ , mg/l O ₂ | NH ₄ -N, mg/l | NO ₂ -N, mg/l | NO ₃ -N, mg/l | Mineral N, mg/l | Total N, mg/l | PO ₄ -P, mg/l | Total P, mg/l | SEC, μS/cm |
|------|-------|-------------|---|-----------------------------|-----------------------------|-----------------------------|--------------------|------------------|-----------------------------|------------------|---------------|
| VR2 | 7.717 | 8,992 | 3.417 | 0.193 | 0.013 | 1.503 | 1.709 | 2.575 | 0.029 | 0.083 | 460.333 |
| MR1 | 7.973 | 10,389 | 1.938 | 0.067 | 0.010 | 0.860 | 0.938 | 1.273 | 0.044 | 0.079 | 405.125 |
| MR2 | 7.973 | 10,389 | 1.938 | 0.067 | 0.010 | 0.860 | 0.938 | 1.273 | 0.044 | 0.079 | 405.125 |
| MR3 | 7.973 | 10,389 | 1.938 | 0.067 | 0.010 | 0.860 | 0.938 | 1.273 | 0.044 | 0.079 | 405.125 |
| MR4 | 7.982 | 9,844 | 2.064 | 0.078 | 0.009 | 0.847 | 0.925 | 1.523 | 0.039 | 0.089 | 434.194 |
| MR5 | 7.982 | 9,844 | 2.064 | 0.078 | 0.009 | 0.847 | 0.925 | 1.523 | 0.039 | 0.089 | 434.194 |
| MR6 | 8.201 | 10,941 | 2.175 | 0.062 | 0.009 | 0.866 | 0.930 | 1.609 | 0.041 | 0.089 | 425.676 |
| SK | 8.033 | 11,056 | 1.833 | 0.056 | 0.003 | 0.154 | 0.207 | 0.411 | 0.050 | 0.088 | 273.250 |
| GR1 | 7.675 | 9,925 | 3.900 | 0.183 | 0.006 | 0.388 | 0.576 | 1.250 | 0.030 | 0.113 | 286.000 |
| GR2 | 8.100 | 11,250 | 1.825 | 0.068 | 0.005 | 0.378 | 0.450 | 0.863 | 0.057 | 0.096 | 271.125 |
| VS1 | 7.713 | 8,708 | 2.383 | 0.112 | 0.015 | 1.419 | 1.546 | 2.170 | 0.033 | 0.100 | 490.667 |
| VS2 | 8.050 | 9,763 | 2.388 | 0.082 | 0.009 | 0.970 | 1.060 | 1.800 | 0.033 | 0.081 | 473.875 |
| SL1 | 7.773 | 8,959 | 2.825 | 0.154 | 0.028 | 1.638 | 1.820 | 2.409 | 0.071 | 0.132 | 477.667 |
| SL2 | 8.025 | 9,224 | 2.088 | 0.042 | 0.011 | 1.073 | 1.125 | 1.324 | 0.039 | 0.106 | 420.000 |
| SL3 | 8.025 | 9,224 | 2.088 | 0.042 | 0.011 | 1.073 | 1.125 | 1.324 | 0.039 | 0.106 | 420.000 |
| SL4 | 8.025 | 9,224 | 2.088 | 0.042 | 0.011 | 1.073 | 1.125 | 1.324 | 0.039 | 0.106 | 420.000 |
| BR | 7.298 | 8,695 | 2.725 | 0.046 | 0.016 | 1.901 | 1.963 | 2.493 | 0.035 | 0.067 | 391.500 |
| VN2 | 8.020 | 11,120 | 2.000 | 0.050 | 0.009 | 0.646 | 0.704 | 1.017 | 0.016 | 0.025 | 484.750 |
| NV1 | 7.700 | 9,063 | 1.688 | 0.083 | 0.014 | 1.523 | 1.621 | 2.578 | 0.013 | 0.032 | 614.750 |
| NV2 | 7.700 | 9,063 | 1.688 | 0.083 | 0.014 | 1.523 | 1.621 | 2.578 | 0.013 | 0.032 | 614.750 |
| NV3 | 7.700 | 9,063 | 1.688 | 0.083 | 0.014 | 1.523 | 1.621 | 2.578 | 0.013 | 0.032 | 614.750 |
| NV4 | 7.799 | 8,359 | 1.846 | 0.057 | 0.021 | 2.286 | 2.364 | 3.579 | 0.047 | 0.063 | 688.810 |
| PN1 | 7.892 | 9,592 | 2.350 | 0.048 | 0.010 | 1.641 | 1.699 | 2.615 | 0.018 | 0.054 | 667.167 |
| PN2 | 7.733 | 7,450 | 3.513 | 0.361 | 0.024 | 1.439 | 1.824 | 3.238 | 0.076 | 0.154 | 660.500 |
| SR1 | 8.073 | 9,085 | 1.988 | 0.056 | 0.014 | 1.022 | 1.093 | 1.743 | 0.025 | 0.057 | 532.125 |
| SR2 | 7.918 | 9,278 | 2.442 | 0.051 | 0.023 | 1.027 | 1.101 | 1.541 | 0.053 | 0.084 | 487.875 |
| ST2 | 8.013 | 11,486 | 2.120 | 0.043 | 0.010 | 1.203 | 1.257 | 1.897 | 0.022 | 0.085 | 486.917 |
| SP1 | 8.036 | 9,079 | 3.320 | 0.085 | 0.010 | 0.375 | 0.487 | 1.005 | 0.026 | 0.059 | 489.912 |
| SP2 | 7.960 | 8,045 | 3.432 | 0.254 | 0.022 | 0.558 | 0.834 | 1.552 | 0.068 | 0.109 | 517.625 |
| SP3 | 7.960 | 8,045 | 3.432 | 0.254 | 0.022 | 0.558 | 0.834 | 1.552 | 0.068 | 0.109 | 517.625 |
| KN1 | 7.924 | 9,987 | 1.639 | 0.028 | 0.004 | 0.174 | 0.209 | 0.489 | 0.017 | 0.041 | 352.729 |
| KN2 | 7.924 | 9,987 | 1.639 | 0.028 | 0.004 | 0.174 | 0.209 | 0.489 | 0.017 | 0.041 | 352.729 |

DO – dissolved oxygen, BOD₇ – biochemical oxygen demand, SEC – specific electrical conductivity.