Table S1 Genetic and epigenetic diversity of *M. micrantha* populations based on six matrices

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Population | *N* | *Na* | *Ne* | *I* | *%P* | *He* | *UHe* |
| *AFLP* |  |  |  |  |  |  |  |
| DG2 | 15 | 0.722 | 1.123 | 0.129 | 35.1% | 0.079 | 0.082 |
| DG3 | 15 | 0.675 | 1.129 | 0.128 | 32.7% | 0.081 | 0.083 |
| DG4 | 15 | 0.769 | 1.128 | 0.135 | 38.1% | 0.083 | 0.086 |
| HK1 | 15 | 0.556 | 1.076 | 0.087 | 27.3% | 0.052 | 0.053 |
| HK3 | 15 | 0.606 | 1.091 | 0.099 | 29.8% | 0.060 | 0.062 |
| HK4 | 15 | 0.571 | 1.079 | 0.090 | 28.2% | 0.054 | 0.055 |
| HK5 | 10 | 0.464 | 1.075 | 0.081 | 22.4% | 0.049 | 0.052 |
| HK6 | 15 | 0.819 | 1.119 | 0.132 | 40.4% | 0.079 | 0.082 |
| HK7 | 11 | 0.617 | 1.113 | 0.114 | 29.9% | 0.071 | 0.075 |
| HK8 | 10 | 0.786 | 1.125 | 0.137 | 39.0% | 0.083 | 0.087 |
| MA1 | 15 | 0.333 | 1.046 | 0.052 | 16.2% | 0.031 | 0.032 |
| MA4 | 16 | 0.521 | 1.065 | 0.077 | 25.8% | 0.045 | 0.047 |
| NLD2 | 15 | 0.744 | 1.120 | 0.125 | 36.3% | 0.077 | 0.079 |
| NLD3 | 16 | 0.713 | 1.115 | 0.121 | 35.2% | 0.074 | 0.077 |
| NLD5 | 15 | 0.672 | 1.114 | 0.119 | 32.6% | 0.073 | 0.076 |
| NLD6 | 16 | 0.692 | 1.111 | 0.117 | 33.3% | 0.072 | 0.074 |
| SZ1 | 16 | 0.813 | 1.109 | 0.124 | 40.5% | 0.073 | 0.075 |
| SZ4 | 15 | 0.597 | 1.106 | 0.108 | 28.4% | 0.067 | 0.070 |
| SZ5 | 15 | 0.648 | 1.116 | 0.118 | 31.7% | 0.073 | 0.076 |
| ZH1 | 15 | 0.572 | 1.105 | 0.105 | 28.0% | 0.066 | 0.068 |
| ZH2 | 16 | 0.596 | 1.096 | 0.102 | 28.9% | 0.063 | 0.065 |
| Average | 15 | 0.642 | 1.103 | 0.110 | 31.4% | 0.067 | 0.069 |
| Total | 306 | 2.000 | 1.116 | 0.141 | 100.0% | 0.079 | 0.080 |
| *Salmon* |  |  |  |  |  |  |  |
| DG2 | 15 | 0.765 | 1.125 | 0.134 | 37.9% | 0.082 | 0.084 |
| DG3 | 15 | 0.711 | 1.129 | 0.132 | 35.2% | 0.082 | 0.085 |
| DG4 | 15 | 0.796 | 1.128 | 0.138 | 39.8% | 0.084 | 0.087 |
| HK1 | 15 | 0.834 | 1.117 | 0.134 | 41.5% | 0.080 | 0.082 |
| HK3 | 15 | 0.780 | 1.120 | 0.132 | 38.7% | 0.080 | 0.083 |
| HK4 | 15 | 0.812 | 1.115 | 0.131 | 40.4% | 0.078 | 0.080 |
| HK5 | 10 | 0.702 | 1.121 | 0.129 | 34.6% | 0.079 | 0.083 |
| HK6 | 15 | 0.838 | 1.109 | 0.128 | 41.8% | 0.075 | 0.078 |
| HK7 | 11 | 0.628 | 1.105 | 0.113 | 31.1% | 0.069 | 0.072 |
| HK8 | 10 | 0.706 | 1.109 | 0.124 | 35.2% | 0.074 | 0.078 |
| MA1 | 15 | 0.652 | 1.100 | 0.110 | 32.3% | 0.066 | 0.069 |
| MA4 | 16 | 0.822 | 1.104 | 0.123 | 41.0% | 0.072 | 0.074 |
| NLD2 | 15 | 0.809 | 1.125 | 0.137 | 40.5% | 0.082 | 0.085 |
| NLD3 | 16 | 0.774 | 1.121 | 0.131 | 38.5% | 0.079 | 0.082 |
| NLD5 | 15 | 0.699 | 1.123 | 0.128 | 34.6% | 0.079 | 0.082 |
| NLD6 | 16 | 0.808 | 1.123 | 0.135 | 40.0% | 0.081 | 0.084 |
| SZ1 | 16 | 0.777 | 1.100 | 0.118 | 38.8% | 0.069 | 0.072 |
| SZ4 | 15 | 0.643 | 1.107 | 0.114 | 31.6% | 0.070 | 0.072 |
| SZ5 | 15 | 0.684 | 1.115 | 0.121 | 33.9% | 0.074 | 0.077 |
| ZH1 | 15 | 0.695 | 1.106 | 0.116 | 34.4% | 0.070 | 0.072 |
| ZH2 | 16 | 0.671 | 1.103 | 0.113 | 33.1% | 0.068 | 0.070 |
| Average | 15 | 0.743 | 1.115 | 0.126 | 36.9% | 0.076 | 0.079 |
| Total | 306 | 2.000 | 1.119 | 0.152 | 100.0% | 0.084 | 0.084 |
| *H* |  |  |  |  |  |  |  |
| DG2 | 15 | 0.492 | 1.061 | 0.073 | 24.6% | 0.043 | 0.044 |
| DG3 | 15 | 0.463 | 1.065 | 0.073 | 23.1% | 0.044 | 0.045 |
| DG4 | 15 | 0.567 | 1.069 | 0.082 | 28.4% | 0.048 | 0.049 |
| HK1 | 15 | 0.741 | 1.090 | 0.109 | 37.0% | 0.063 | 0.065 |
| HK3 | 15 | 0.627 | 1.083 | 0.097 | 31.2% | 0.057 | 0.059 |
| HK4 | 15 | 0.741 | 1.089 | 0.108 | 37.0% | 0.062 | 0.064 |
| HK5 | 10 | 0.612 | 1.093 | 0.104 | 30.4% | 0.062 | 0.066 |
| HK6 | 15 | 0.648 | 1.059 | 0.081 | 32.4% | 0.045 | 0.046 |
| HK7 | 11 | 0.463 | 1.055 | 0.070 | 23.1% | 0.040 | 0.042 |
| HK8 | 10 | 0.514 | 1.060 | 0.078 | 25.7% | 0.045 | 0.047 |
| MA1 | 15 | 0.617 | 1.087 | 0.099 | 30.8% | 0.059 | 0.061 |
| MA4 | 16 | 0.762 | 1.085 | 0.106 | 38.1% | 0.060 | 0.062 |
| NLD2 | 15 | 0.596 | 1.058 | 0.077 | 29.8% | 0.043 | 0.044 |
| NLD3 | 16 | 0.566 | 1.066 | 0.080 | 28.3% | 0.046 | 0.047 |
| NLD5 | 15 | 0.453 | 1.067 | 0.075 | 22.6% | 0.045 | 0.046 |
| NLD6 | 16 | 0.603 | 1.069 | 0.084 | 30.1% | 0.048 | 0.050 |
| SZ1 | 16 | 0.552 | 1.053 | 0.071 | 27.6% | 0.039 | 0.041 |
| SZ4 | 15 | 0.412 | 1.050 | 0.060 | 20.5% | 0.035 | 0.036 |
| SZ5 | 15 | 0.445 | 1.055 | 0.065 | 22.2% | 0.038 | 0.039 |
| ZH1 | 15 | 0.517 | 1.059 | 0.073 | 25.7% | 0.042 | 0.043 |
| ZH2 | 16 | 0.482 | 1.058 | 0.071 | 24.1% | 0.041 | 0.042 |
| Average | 15 | 0.565 | 1.068 | 0.083 | 28.2% | 0.048 | 0.049 |
| Total | 306 | 2.000 | 1.068 | 0.102 | 100.0% | 0.052 | 0.052 |
| *M* |  |  |  |  |  |  |  |
| DG2 | 15 | 0.746 | 1.117 | 0.126 | 36.8% | 0.076 | 0.079 |
| DG3 | 15 | 0.672 | 1.117 | 0.121 | 33.0% | 0.075 | 0.078 |
| DG4 | 15 | 0.781 | 1.110 | 0.124 | 39.0% | 0.074 | 0.077 |
| HK1 | 15 | 0.463 | 1.060 | 0.071 | 22.9% | 0.042 | 0.043 |
| HK3 | 15 | 0.539 | 1.076 | 0.086 | 26.7% | 0.051 | 0.053 |
| HK4 | 15 | 0.460 | 1.057 | 0.068 | 22.7% | 0.040 | 0.041 |
| HK5 | 10 | 0.375 | 1.062 | 0.067 | 18.2% | 0.041 | 0.043 |
| HK6 | 15 | 0.691 | 1.092 | 0.106 | 34.4% | 0.062 | 0.065 |
| HK7 | 11 | 0.553 | 1.092 | 0.099 | 27.2% | 0.060 | 0.063 |
| HK8 | 10 | 0.604 | 1.090 | 0.102 | 30.1% | 0.061 | 0.064 |
| MA1 | 15 | 0.276 | 1.036 | 0.042 | 13.5% | 0.025 | 0.025 |
| MA4 | 16 | 0.396 | 1.044 | 0.054 | 19.6% | 0.031 | 0.032 |
| NLD2 | 15 | 0.737 | 1.122 | 0.128 | 36.9% | 0.078 | 0.081 |
| NLD3 | 16 | 0.710 | 1.103 | 0.114 | 35.2% | 0.069 | 0.071 |
| NLD5 | 15 | 0.690 | 1.104 | 0.114 | 34.0% | 0.069 | 0.071 |
| NLD6 | 16 | 0.684 | 1.101 | 0.111 | 33.6% | 0.067 | 0.069 |
| SZ1 | 16 | 0.685 | 1.087 | 0.102 | 34.2% | 0.060 | 0.062 |
| SZ4 | 15 | 0.639 | 1.104 | 0.111 | 31.1% | 0.068 | 0.070 |
| SZ5 | 15 | 0.683 | 1.110 | 0.117 | 33.8% | 0.072 | 0.074 |
| ZH1 | 15 | 0.550 | 1.087 | 0.093 | 27.0% | 0.057 | 0.059 |
| ZH2 | 16 | 0.543 | 1.084 | 0.091 | 26.6% | 0.055 | 0.057 |
| Average | 15 | 0.594 | 1.088 | 0.097 | 29.4% | 0.059 | 0.061 |
| Total | 306 | 2.000 | 1.094 | 0.124 | 100.0% | 0.067 | 0.068 |
| *U* |  |  |  |  |  |  |  |
| DG2 | 15 | 0.398 | 1.057 | 0.065 | 19.7% | 0.039 | 0.040 |
| DG3 | 15 | 0.412 | 1.066 | 0.070 | 20.4% | 0.043 | 0.045 |
| DG4 | 15 | 0.469 | 1.064 | 0.072 | 23.3% | 0.043 | 0.044 |
| HK1 | 15 | 0.416 | 1.045 | 0.058 | 20.7% | 0.033 | 0.034 |
| HK3 | 15 | 0.403 | 1.049 | 0.058 | 20.1% | 0.034 | 0.035 |
| HK4 | 15 | 0.470 | 1.050 | 0.064 | 23.5% | 0.036 | 0.037 |
| HK5 | 10 | 0.346 | 1.042 | 0.053 | 17.1% | 0.030 | 0.032 |
| HK6 | 15 | 0.677 | 1.076 | 0.094 | 33.8% | 0.053 | 0.055 |
| HK7 | 11 | 0.454 | 1.063 | 0.073 | 22.4% | 0.043 | 0.045 |
| HK8 | 10 | 0.644 | 1.076 | 0.096 | 32.0% | 0.055 | 0.058 |
| MA1 | 15 | 0.253 | 1.028 | 0.035 | 12.6% | 0.020 | 0.021 |
| MA4 | 16 | 0.438 | 1.044 | 0.058 | 21.9% | 0.032 | 0.033 |
| NLD2 | 15 | 0.529 | 1.056 | 0.070 | 26.3% | 0.039 | 0.041 |
| NLD3 | 16 | 0.445 | 1.053 | 0.063 | 22.2% | 0.036 | 0.033 |
| NLD5 | 15 | 0.404 | 1.056 | 0.064 | 19.9% | 0.038 | 0.039 |
| NLD6 | 16 | 0.458 | 1.062 | 0.070 | 22.7% | 0.042 | 0.043 |
| SZ1 | 16 | 0.593 | 1.056 | 0.073 | 29.6% | 0.040 | 0.042 |
| SZ4 | 15 | 0.319 | 1.052 | 0.055 | 15.8% | 0.034 | 0.035 |
| SZ5 | 15 | 0.329 | 1.052 | 0.055 | 16.4% | 0.034 | 0.035 |
| ZH1 | 15 | 0.360 | 1.055 | 0.059 | 17.9% | 0.036 | 0.037 |
| ZH2 | 16 | 0.414 | 1.050 | 0.059 | 20.5% | 0.034 | 0.035 |
| Average | 15 | 0.440 | 1.055 | 0.065 | 21.9% | 0.038 | 0.039 |
| Total | 306 | 2.000 | 1.057 | 0.083 | 100.0% | 0.042 | 0.042 |
| *HMU* |  |  |  |  |  |  |  |
| DG2 | 15 | 0.545 | 1.077 | 0.087 | 27.0% | 0.052 | 0.054 |
| DG3 | 15 | 0.013 | 0.003 | 0.002 | 25.4% | 0.002 | 0.002 |
| DG4 | 15 | 0.513 | 1.081 | 0.087 | 30.3% | 0.053 | 0.055 |
| HK1 | 15 | 0.012 | 0.003 | 0.003 | 28.8% | 0.002 | 0.002 |
| HK3 | 15 | 0.606 | 1.080 | 0.092 | 27.1% | 0.054 | 0.056 |
| HK4 | 15 | 0.013 | 0.003 | 0.002 | 29.4% | 0.002 | 0.002 |
| HK5 | 10 | 0.577 | 1.070 | 0.085 | 23.5% | 0.049 | 0.051 |
| HK6 | 15 | 0.013 | 0.002 | 0.002 | 33.3% | 0.001 | 0.002 |
| HK7 | 11 | 0.545 | 1.073 | 0.084 | 24.2% | 0.050 | 0.051 |
| HK8 | 10 | 0.013 | 0.003 | 0.002 | 28.6% | 0.002 | 0.002 |
| MA1 | 15 | 0.590 | 1.069 | 0.085 | 21.1% | 0.049 | 0.051 |
| MA4 | 16 | 0.013 | 0.002 | 0.002 | 28.6% | 0.001 | 0.002 |
| NLD2 | 15 | 0.475 | 1.071 | 0.080 | 31.0% | 0.048 | 0.051 |
| NLD3 | 16 | 0.012 | 0.003 | 0.002 | 28.8% | 0.002 | 0.002 |
| NLD5 | 15 | 0.668 | 1.073 | 0.092 | 25.4% | 0.052 | 0.054 |
| NLD6 | 16 | 0.013 | 0.002 | 0.002 | 29.3% | 0.001 | 0.001 |
| SZ1 | 16 | 0.488 | 1.068 | 0.079 | 30.1% | 0.047 | 0.049 |
| SZ4 | 15 | 0.012 | 0.002 | 0.002 | 22.5% | 0.001 | 0.002 |
| SZ5 | 15 | 0.573 | 1.073 | 0.090 | 24.2% | 0.052 | 0.055 |
| ZH1 | 15 | 0.013 | 0.002 | 0.002 | 24.2% | 0.001 | 0.002 |
| ZH2 | 16 | 0.425 | 1.057 | 0.066 | 23.9% | 0.039 | 0.040 |
| Average | 15 | 0.292 | 0.563 | 0.045 | 27.0% | 0.027 | 0.028 |
| Total | 306 | 2.000 | 1.073 | 0.104 | 100.0% | 0.054 | 0.054 |

*N* = Number of samples

*Na* = Number of different alleles

*Ne* = Number of effective alleles = 1 / (p^2 + q^2)

*I* = Shannon's information index = -1\* (p \* Ln (p) + q \* Ln(q))

*%P* = Percentage of polymorphic loci

*He* = Expected heterozygosity = 2 \* p \* q

*UHe* = Unbiased expected heterozygosity = (2N / (2N-1)) \* He