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