

Table 4. Results of simulations under the PRF growth and selection model

Demography	γ	Mean $\hat{\gamma}$ (SD)	Mean $\hat{\tau}$ (SD)	Mean $\hat{\nu}$ (SD)	Power, %
$\tau = 0.01, \nu = 0.10$	-10	-9.987 (1.49)	0.0101 (4.37e-04)	0.1004 (2.85e-03)	100.00
	-5	-5.017 (1.56)	0.0100 (4.51e-04)	0.1002 (2.88e-03)	90.80
	-1	-0.948 (1.54)	0.0100 (4.38e-04)	0.1003 (2.75e-03)	9.50
	0	-0.014 (1.60)	0.0100 (4.52e-04)	0.1001 (2.85e-03)	5.10
	1	0.972 (1.64)	0.0100 (4.70e-04)	0.1002 (2.96e-03)	10.00
	5	5.022 (1.81)	0.0100 (4.39e-04)	0.1003 (2.65e-03)	87.30
	10	9.915 (2.08)	0.0100 (4.45e-04)	0.1001 (2.83e-03)	100.00
$\tau = 0.01, \nu = 0.25$	-10	-10.078 (0.82)	0.0100 (8.89e-04)	0.2494 (1.13e-02)	100.00
	-5	-5.083 (0.66)	0.0100 (9.67e-04)	0.2491 (1.24e-02)	100.00
	-1	-0.994 (0.57)	0.0100 (9.20e-04)	0.2495 (1.14e-02)	41.50
	0	-0.008 (0.61)	0.0100 (9.31e-04)	0.2492 (1.19e-02)	5.80
	1	0.997 (0.65)	0.0100 (9.24e-04)	0.2495 (1.18e-02)	40.00
	5	5.044 (0.93)	0.0100 (9.44e-04)	0.2494 (1.19e-02)	100.00
	10	10.013 (1.49)	0.0100 (8.99e-04)	0.2499 (1.15e-02)	100.00
$\tau = 0.10, \nu = 0.10$	-10	-10.044 (1.10)	0.0999 (1.96e-03)	0.1000 (2.07e-03)	100.00
	-5	-5.057 (1.18)	0.0999 (1.92e-03)	0.1000 (2.10e-03)	98.90
	-1	-1.018 (1.24)	0.0999 (1.95e-03)	0.1000 (2.07e-03)	13.50
	0	-0.004 (1.29)	0.1000 (1.87e-03)	0.0999 (2.01e-03)	6.30
	1	1.034 (1.26)	0.1000 (1.94e-03)	0.1001 (2.02e-03)	14.30
	5	5.048 (1.39)	0.0999 (1.87e-03)	0.1000 (2.06e-03)	96.60
	10	10.116 (1.54)	0.1000 (1.95e-03)	0.0999 (2.05e-03)	100.00
$\tau = 0.10, \nu = 0.25$	-10	-10.055 (0.64)	0.0998 (3.04e-03)	0.2500 (3.98e-03)	100.00
	-5	-5.023 (0.55)	0.1000 (3.18e-03)	0.2498 (3.86e-03)	100.00
	-1	-1.002 (0.55)	0.0999 (3.09e-03)	0.2500 (3.89e-03)	41.80
	0	-0.007 (0.59)	0.0999 (3.25e-03)	0.2499 (3.86e-03)	6.00
	1	1.007 (0.64)	0.0999 (3.08e-03)	0.2500 (4.04e-03)	41.20
	5	5.011 (0.86)	0.0998 (3.11e-03)	0.2501 (4.04e-03)	100.00
	10	10.021 (1.32)	0.1000 (3.23e-03)	0.2498 (3.94e-03)	100.00

Four demographic scenarios are considered corresponding to very recent ($\tau = 0.01$) or recent growth ($\tau = 0.10$) of very large ($\nu = 0.10$) or moderate ($\nu = 0.25$) effect for mutations of varying selective intensity ranging from very deleterious ($\gamma = -10$) to adaptive ($\gamma = 10$). In each iteration, 36,000 neutral (class 1) SNPs and 900 selected (class 2) SNPs were simulated in a sample of size $n = 100$ chromosomes. For each parameter combination, 1,000 replicates were generated and maximum likelihood estimates retained. Power refers to the proportion of replicate data sets that reject neutrality ($\gamma = 0$) for class 2 SNPs.