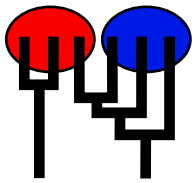
P.infestans New Data Set

MIGRATION RATE AND POPULATION SIZE ESTIMATION
using the coalescent and maximum likelihood or Bayesian inference
Migrate-n version 3.3.0 []
Program started at Fri Oct 2 13:24:01 2015
Program finished at Thu Oct 8 21:02:04 2015



Options

Datatype: Microsatellite data [Brownian motion]
Missing data: not included

Inheritance scalers in use for Thetas:
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
1.00
[The locus with a scaler of 1.0 used as reference]
Random number seed: (with internal timer) 1631738599
Start parameters:

Theta values were generated from the FST-calculation

M values were generated from the FST-calculation

Connection type matrix:
where m = average (average over a group of Thetas or M,
s = symmetric M, S = symmetric 4Nm, 0 = zero, and not estimated,
* = free to vary, Thetas are on diagonal

Population	1	2	3
1 Fake__diploid_M	*	*	*
2 Fake__diploid_T	*	*	*
3 Fake__diploid_T	*	*	*

Order of parameters:

1	Θ_1	<displayed>
2	Θ_2	<displayed>
3	Θ_3	<displayed>

4	$M_{2->1}$	<displayed>
5	$M_{3->1}$	<displayed>
6	$M_{1->2}$	<displayed>
7	$M_{3->2}$	<displayed>
8	$M_{1->3}$	<displayed>
9	$M_{2->3}$	<displayed>

Mutation rate among loci: Varying ([crudely] estimated from data)

Rates per locus: 2.74576, 2.03390, 0.40678, 0.91525, 0.40678, 0.30508, 0.71186, 0.40678, 0.91525, 1.62712, 1.01695, 0.50847

Analysis strategy: Bayesian inference

Proposal distributions for parameter

Parameter	Proposal
Theta	Metropolis sampling
M	Metropolis sampling

Prior distribution for parameter

Parameter	Prior	Minimum	Mean*	Maximum	Delta	Bins
Theta	Uniform	0.000000	50.000000	100.000000	10.000000	1500
M	Uniform	0.000000	100.000000	200.000000	20.000000	1500

Markov chain settings: Long chain

Number of chains 1

Recorded steps [a] 5000

Increment (record every x step [b] 100

Number of concurrent chains (replicates) [c] 20

Visited (sampled) parameter values [a*b*c] 10000000

Number of discard trees per chain (burn-in) 2000

Multiple Markov chains:

Static heating scheme 4 chains with temperatures 1000000.00 3.00 1.50 1.00

Swapping interval is 1

Print options:

Data file: P.infestans_newdata_for_Migrate.txt

Output file: inf_100_200_mhvlong_out

Posterior distribution raw histogram file: bayesfile

Print data: Yes

Print genealogies [only some for some data type]: None

Data summary

Datatype: Microsatellite data
[Fragment length is translated to repeats]
Number of loci: 12

Population	Locus	Gene copies data	(missing)
1 Fake__diploid_Michoacan_population	1	149	(79)
	2	120	(108)
	3	152	(76)
	4	152	(76)
	5	152	(76)
	6	152	(76)
	7	152	(76)
	8	152	(76)
	9	152	(76)
	10	152	(76)
	11	152	(76)
	12	152	(76)
2 Fake__diploid_Tlaxcala_population	1	71	(93)
	2	90	(74)
	3	110	(54)
	4	112	(52)
	5	110	(54)
	6	110	(54)
	7	110	(54)
	8	110	(54)
	9	110	(54)
	10	110	(54)
	11	110	(54)
	12	110	(54)
3 Fake__diploid_Toluca_population	1	60	(32)
	2	64	(28)
	3	62	(30)
	4	62	(30)
	5	62	(30)
	6	62	(30)
	7	63	(29)
	8	63	(29)
	9	62	(30)
	10	64	(28)

	11	62	(30)
	12	63	(29)
Total of all populations	1	280	(204)
	2	274	(210)
	3	324	(160)
	4	326	(158)
	5	324	(160)
	6	324	(160)
	7	325	(159)
	8	325	(159)
	9	324	(160)
	10	326	(158)
	11	324	(160)
	12	325	(159)

Allelic data

Fake__diploid_Michoacan_population

Indiv.	1	2	3	4	5	6	7	8	9	10	11	12
Ind-----01	?.?	13.24	11.13	15.15	14.14	12.12	10.23	11.11	12.16	14.14	11.15	11.14
Ind---0102	?.12	?.13	?.11	?.15	?.12	?.12	?.10	?.11	?.12	?.12	?.14	?.13
Ind-----02	12.?	13.?	13.?	15.?	12.?	12.?	23.?	11.?	16.?	15.?	15.?	13.?
Ind-----03	11.11	24.24	11.13	15.15	12.12	12.12	23.23	11.11	16.16	12.23	14.14	13.13
Ind---0304	?.12	?.13	?.11	?.15	?.12	?.12	?.10	?.11	?.12	?.12	?.14	?.13
Ind-----04	12.?	13.?	13.?	15.?	12.?	12.?	23.?	11.?	16.?	15.?	15.?	13.?
Ind-----05	?.?	13.24	11.13	15.15	14.14	12.12	10.23	11.11	12.16	14.14	11.15	11.14
Ind---0506	?.12	?.13	?.11	?.15	?.12	?.12	?.11	?.11	?.12	?.12	?.14	?.13
Ind-----06	12.?	13.?	13.?	15.?	12.?	12.?	23.?	11.?	16.?	15.?	15.?	13.?
Ind-----07	12.12	13.13	11.13	15.15	12.12	12.12	11.23	11.11	12.16	12.15	14.15	13.13
Ind---0708	?.11	?.24	?.12	?.15	?.12	?.12	?.23	?.11	?.16	?.22	?.14	?.13
Ind-----08	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	16.?	22.?	14.?	13.?
Ind-----09	11.11	24.24	11.13	15.15	12.12	12.12	23.23	11.11	16.16	11.21	14.14	13.13
Ind---0910	?.11	?.24	?.11	?.15	?.12	?.12	?.23	?.11	?.16	?.11	?.14	?.13
Ind-----10	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	16.?	21.?	14.?	13.?
Ind-----11	11.11	13.24	11.13	15.15	12.12	12.12	15.23	11.11	15.17	14.15	11.11	11.13
Ind---1112	?.11	?.13	?.11	?.15	?.12	?.12	?.16	?.11	?.15	?.14	?.11	?.11
Ind-----12	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	17.?	15.?	11.?	13.?
Ind-----13	11.11	13.24	11.13	15.15	12.12	12.12	15.23	11.11	15.17	15.15	11.11	11.13
Ind---1314	?.11	?.13	?.11	?.15	?.12	?.12	?.15	?.11	?.15	?.14	?.11	?.11
Ind-----14	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	17.?	15.?	11.?	13.?
Ind-----15	11.11	13.24	11.13	15.15	12.12	12.12	15.23	11.11	15.17	14.15	11.11	11.13
Ind---1516	?.11	?.13	?.11	?.15	?.12	?.12	?.16	?.11	?.15	?.14	?.11	?.11
Ind-----16	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	17.?	15.?	11.?	13.?
Ind-----17	11.11	13.24	11.13	15.15	12.12	12.12	15.23	11.11	15.17	14.15	11.11	11.13
Ind---1718	?.11	?.13	?.11	?.15	?.12	?.12	?.16	?.11	?.15	?.14	?.11	?.11
Ind-----18	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	17.?	15.?	11.?	13.?
Ind-----19	11.11	13.24	11.13	15.15	12.12	12.12	16.23	11.11	15.17	14.15	11.11	11.13
Ind---1920	?.11	?.13	?.11	?.15	?.12	?.12	?.15	?.11	?.15	?.14	?.11	?.11
Ind-----20	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	17.?	15.?	11.?	13.?
Ind-----21	11.11	13.24	11.13	15.15	12.12	12.12	16.23	11.11	15.17	14.15	11.11	11.13
Ind---2122	?.11	?.13	?.11	?.15	?.12	?.12	?.15	?.11	?.15	?.14	?.11	?.11
Ind-----22	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	17.?	15.?	11.?	13.?
Ind-----23	11.11	13.24	11.13	15.15	12.12	12.12	15.23	11.11	15.17	14.15	11.11	11.13
Ind---2324	?.11	?.13	?.11	?.15	?.12	?.12	?.16	?.11	?.15	?.14	?.11	?.11
Ind-----24	11.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	17.?	15.?	11.?	13.?
Ind-----25	12.12	?.?	11.13	15.17	14.14	11.12	23.23	11.11	12.17	18.12	22.14	15.13	13.13

Fake__diploid_Michoacan_population

Indiv. 1 2 3 4 5 6 7 8 9 10 11 12

Ind---2526?.29 ?.20 ?.12 ?.15 ?.12 ?.12 ?.15 ?.11 ?.17 ?.12 ?.15 ?.13
Ind-----26 71.7220.? 12.? 15.? 14.? 12.? 23.? 12.? 17.? 15.? 15.? 14.?
Ind-----27 11.2524.2411.1311.1714.1412.1216.2311.1216.1812.1814.1411.13
Ind---2728?.11 ?.24 ?.11 ?.11 ?.14 ?.12 ?.10 ?.11 ?.16 ?.12 ?.11 ?.11
Ind-----28 28.? 24.? 13.? 11.? 14.? 12.? 23.? 11.? 16.? 18.? 15.? 11.?
Ind-----29 11.7124.2811.1315.1512.1212.1215.2311.1216.1712.1214.1513.13
Ind---293072.12?.24 ?.12 ?.15 ?.12 ?.12 ?.23 ?.11 ?.16 ?.17 ?.11 ?.14
Ind-----30 12.? 24.? 12.? 17.? 14.? 12.? 23.? 12.? 17.? 18.? 15.? 14.?
Ind-----31 30.3047.4712.1215.1512.1412.1216.2311.1215.1715.1714.1411.14
Ind---3132?.11 ?.? ?.11 ?.17 ?.12 ?.12 ?.16 ?.11 ?.16 ?.16 ?.15 ?.11
Ind-----32 12.? ?.? 13.? 21.? 14.? 12.? 16.? 12.? 17.? 16.? 15.? 14.?
Ind-----33 12.1231.3111.1315.1714.1411.1223.2311.1218.1822.2214.1513.13
Ind---3334?.12 ?.? ?.11 ?.15 ?.14 ?.11 ?.23 ?.11 ?.17 ?.12 ?.14 ?.13
Ind-----34 12.? ?.? 13.? 17.? 14.? 12.? 23.? 12.? 18.? 22.? 15.? 13.?
Ind-----35 12.12?.? 11.1315.1714.1411.1223.2311.1217.1812.2214.1513.13
Ind---3536?.12 ?.? ?.11 ?.15 ?.14 ?.11 ?.23 ?.11 ?.17 ?.12 ?.14 ?.13
Ind-----36 12.? ?.? 13.? 17.? 14.? 12.? 23.? 12.? 18.? 22.? 15.? 13.?
Ind-----37 12.12?.? 11.1315.1714.1411.1223.2311.1217.1812.2214.1513.13
Ind---3738?.12 ?.? ?.11 ?.15 ?.14 ?.11 ?.23 ?.11 ?.17 ?.12 ?.14 ?.13
Ind-----38 12.? ?.? 13.? 17.? 14.? 12.? 23.? 12.? 18.? 22.? 15.? 13.?
Ind-----39 11.12?.? 11.1115.1514.1411.1223.2311.1116.1612.1714.1511.14
Ind---3940?.11 ?.28 ?.12 ?.15 ?.12 ?.12 ?.23 ?.11 ?.15 ?.15 ?.15 ?.11
Ind-----40 11.? 28.? 12.? 15.? 12.? 12.? 23.? 11.? 16.? 15.? 15.? 14.?
Ind-----41 11.1123.2311.1311.1714.1412.1223.2311.1112.1612.1514.1411.13
Ind---4142?.12 ?.? ?.11 ?.15 ?.14 ?.11 ?.23 ?.11 ?.17 ?.12 ?.14 ?.13
Ind-----42 12.? ?.? 13.? 17.? 14.? 12.? 23.? 12.? 18.? 12.? 15.? 13.?
Ind-----43 25.7123.2811.1311.1114.1411.1215.2311.1116.1712.2114.1511.11
Ind---434472.11?.24 ?.11 ?.17 ?.14 ?.12 ?.15 ?.11 ?.16 ?.15 ?.15 ?.11
Ind-----44 11.? 24.? 13.? 21.? 14.? 12.? 23.? 11.? 16.? 20.? 15.? 11.?
Ind-----45 ?.? 24.2412.1215.1712.1411.1216.2312.1217.1712.1514.1511.14
Ind---4546?.29 ?.28 ?.11 ?.15 ?.14 ?.12 ?.23 ?.11 ?.12 ?.12 ?.14 ?.11
Ind-----46 29.? 28.? 13.? 15.? 14.? 12.? 23.? 11.? 12.? 15.? 14.? 14.?
Ind-----47 12.1224.2812.1216.1612.1212.1211.2311.1115.1514.2214.1411.13
Ind---4748?.71 ?.28 ?.11 ?.15 ?.14 ?.12 ?.23 ?.11 ?.17 ?.12 ?.16 ?.11
Ind-----48 72.? 47.? 13.? 17.? 14.? 12.? 23.? 11.? 17.? 12.? 16.? 13.?
Ind-----49 12.1224.2411.1317.1712.1412.1223.2311.1116.1712.2015.1513.13
Ind---4950?.71 ?.24 ?.11 ?.15 ?.14 ?.12 ?.16 ?.11 ?.17 ?.12 ?.14 ?.13
Ind-----50 72.? 24.? 11.? 17.? 14.? 12.? 15.? 11.? 17.? 22.? 14.? 14.?
Ind-----51 ?.? ?.? 11.1311.1512.1412.1223.2311.1116.1716.1611.1413.14

Fake__diploid_Michoacan_population

Indiv. 1 2 3 4 5 6 7 8 9 10 11 12

Ind---5152?.12 ?.24 ?.11 ?.15 ?.14 ?.12 ?.23 ?.11 ?.16 ?.12 ?.11 ?.13
Ind-----52 12.? 24.? 13.? 17.? 14.? 12.? 23.? 12.? 17.? 23.? 15.? 13.?
Ind-----53 11.7126.2811.1315.1512.1212.1215.2311.1117.1712.1514.1413.13
Ind---5354?2.11?.24 ?.11 ?.17 ?.14 ?.11 ?.23 ?.11 ?.12 ?.12 ?.15 ?.11
Ind-----54 12.? 28.? 11.? 17.? 14.? 12.? 23.? 11.? 16.? 15.? 15.? 11.?
Ind-----55 11.1224.2711.1117.1714.1411.1223.2311.1112.1612.1515.1511.11
Ind---5556?.12 ?.24 ?.11 ?.11 ?.14 ?.12 ?.15 ?.11 ?.17 ?.12 ?.15 ?.11
Ind-----56 12.? 28.? 13.? 15.? 14.? 12.? 23.? 11.? 18.? 15.? 15.? 13.?
Ind-----57 11.2723.2412.1211.1612.1412.1223.2311.1112.1512.1215.1513.13
Ind---5758?.11 ?.28 ?.11 ?.15 ?.12 ?.12 ?.23 ?.11 ?.16 ?.12 ?.14 ?.13
Ind-----58 71.7228.? 13.? 17.? 14.? 12.? 23.? 12.? 17.? 12.? 15.? 14.?
Ind-----59 11.1124.2412.1217.1714.1412.1223.2311.1116.1615.1515.1513.13
Ind---5960?.11 ?.24 ?.12 ?.17 ?.14 ?.12 ?.23 ?.11 ?.16 ?.15 ?.15 ?.13
Ind-----60 11.? 24.? 12.? 17.? 14.? 12.? 23.? 11.? 16.? 15.? 15.? 13.?
Ind-----61 12.1224.2411.1311.1512.1412.1223.2311.1217.1712.1615.1511.13
Ind---6162?.12 ?.24 ?.11 ?.11 ?.12 ?.12 ?.23 ?.11 ?.17 ?.12 ?.15 ?.11
Ind-----62 12.? 24.? 13.? 15.? 14.? 12.? 23.? 12.? 17.? 16.? 15.? 13.?
Ind-----63 11.1247.4711.1315.1712.1212.1223.2311.1215.1715.1711.1511.13
Ind---6364?.12 ?.24 ?.11 ?.11 ?.12 ?.12 ?.23 ?.11 ?.17 ?.12 ?.15 ?.11
Ind-----64 12.? 24.? 13.? 15.? 14.? 12.? 23.? 12.? 17.? 16.? 15.? 13.?
Ind-----65 12.1227.2712.1215.1712.1412.1223.2311.1117.1712.1514.1511.14
Ind---6566?.12 ?.? ?.11 ?.15 ?.12 ?.12 ?.23 ?.12 ?.17 ?.12 ?.11 ?.11
Ind-----66 28.? ?.? 13.? 15.? 14.? 12.? 23.? 12.? 17.? 12.? 11.? 11.?
Ind-----67 28.29?.? 11.1313.1712.1412.1223.2311.1215.1612.2014.1511.13
Ind---6768?.11 ?.? ?.12 ?.11 ?.12 ?.11 ?.23 ?.11 ?.17 ?.14 ?.11 ?.14
Ind-----68 11.? ?.? 12.? 15.? 14.? 12.? 23.? 12.? 17.? 17.? 14.? 14.?
Ind-----69 12.1224.2411.1311.1512.1412.1223.2311.1217.1712.1615.1511.13
Ind---6970?.12 ?.27 ?.12 ?.15 ?.12 ?.12 ?.23 ?.11 ?.17 ?.12 ?.14 ?.11
Ind-----70 12.? 27.? 12.? 17.? 14.? 12.? 23.? 11.? 17.? 15.? 15.? 14.?
Ind-----71 11.12?.? 11.1315.1514.1412.1223.2311.1116.1712.1514.1513.14
Ind---7172?.11 ?.13 ?.11 ?.15 ?.14 ?.12 ?.15 ?.11 ?.16 ?.12 ?.11 ?.11
Ind-----72 11.? 13.? 13.? 17.? 14.? 12.? 23.? 11.? 16.? 12.? 14.? 13.?
Ind-----73 28.29?.? 11.1313.1712.1412.1223.2311.1215.1612.2014.1511.13
Ind---7374?.71 ?.23 ?.11 ?.15 ?.12 ?.12 ?.16 ?.11 ?.17 ?.15 ?.14 ?.11
Ind-----74 72.? 47.? 13.? 15.? 14.? 12.? 23.? 12.? 17.? 18.? 15.? 13.?
Ind-----75 11.11?.? 11.1315.1512.1212.1216.1511.1217.1714.2415.1511.13
Ind---7576?.71 ?.24 ?.11 ?.11 ?.14 ?.12 ?.23 ?.11 ?.16 ?.14 ?.15 ?.11
Ind-----76 72.? 28.? 13.? 11.? 14.? 12.? 23.? 11.? 18.? 25.? 15.? 14.?

Fake__diploid_Tlaxcala_population

Indiv.	1	2	3	4	5	6	7	8	9	10	11	12
Ind-----77	41.41	24.49	13.13	15.17	11.14	11.12	23.23	11.12	11.16	14.17	15.15	11.11
Ind---7778	?.?	?.27	?.11	?.13	?.11	?.11	?.16	?.11	?.15	?.15	?.15	?.11
Ind-----78	?.?	54.?	11.?	15.17	14.?	12.?	15.?	13.?	17.?	15.?	15.?	13.?
Ind-----79	52.52	27.27	13.13	15.15	14.14	12.12	15.23	11.11	17.18	15.18	15.18	11.11
Ind---7980	?.18	?.?	?.11	?.13	?.14	?.12	?.16	?.11	?.12	?.14	?.15	?.13
Ind-----80	18.?	?.?	13.?	15.?	14.?	12.?	23.?	11.?	17.?	15.?	15.?	13.?
Ind-----81	47.48	23.27	13.13	15.17	12.14	12.12	15.15	11.13	16.16	14.14	15.15	11.14
Ind---8182	?.52	?.27	?.13	?.15	?.14	?.12	?.16	?.11	?.18	?.15	?.15	?.11
Ind-----82	52.?	27.?	13.?	15.?	14.?	12.?	23.?	11.?	18.?	18.?	18.?	11.?
Ind-----83	13.25	49.49	13.13	15.17	14.14	12.12	15.23	11.11	14.17	15.15	15.15	14.14
Ind---8384	?.18	?.?	?.11	20.13	?.14	?.12	?.16	?.11	?.12	?.14	?.15	?.13
Ind-----84	18.?	?.?	13.?	15.?	14.?	12.?	23.?	11.?	17.?	15.?	15.?	13.?
Ind-----85	18.18	?.?	11.13	13.15	14.14	12.12	16.23	11.11	12.17	14.15	15.15	13.13
Ind---8586	?.?	?.23	?.13	?.13	?.12	?.12	?.16	?.12	?.11	?.15	?.15	?.13
Ind-----86	?.?	29.?	13.?	20.?	14.?	12.?	23.?	12.?	17.?	17.?	18.?	13.?
Ind-----87	52.52	27.27	13.13	15.15	14.14	12.12	16.23	11.11	17.18	15.18	15.18	11.11
Ind---8788	?.43	?.27	?.13	?.15	?.12	?.11	?.23	?.11	?.17	?.14	?.15	?.11
Ind-----88	43.?	27.?	13.?	15.?	14.?	12.?	23.?	13.?	18.?	14.?	15.?	17.?
Ind-----89	52.52	27.27	13.13	15.15	14.14	12.12	15.23	11.11	18.18	15.18	15.18	11.11
Ind---8990	?.25	?.27	?.11	?.15	?.14	?.12	?.16	?.12	?.14	?.15	?.15	?.14
Ind-----90	25.?	27.?	13.?	15.?	14.?	12.?	16.?	12.?	16.?	15.?	15.?	14.?
Ind-----91	47.48	23.27	13.13	15.17	12.14	12.12	15.16	11.13	11.16	14.14	15.15	11.14
Ind---9192	?.?	?.26	?.13	?.15	?.14	?.11	?.16	?.11	?.14	?.14	?.15	?.11
Ind-----92	?.?	26.?	13.?	15.?	14.?	12.?	15.?	11.?	18.?	16.?	15.?	13.?
Ind-----93	?.?	24.24	11.13	15.15	12.14	11.12	23.23	11.13	14.18	15.15	15.15	14.17
Ind---9394	?.?	?.23	?.11	?.15	?.14	?.12	?.15	?.11	?.16	?.15	?.15	?.14
Ind-----94	?.?	23.?	13.?	17.?	14.?	12.?	23.?	11.?	17.?	17.?	15.?	14.?
Ind-----95	29.29	24.27	13.13	13.13	11.14	11.12	16.16	11.11	17.17	14.16	15.15	11.13
Ind---9596	?.?	?.23	?.11	?.15	?.14	?.12	?.16	?.11	?.16	?.15	?.15	?.14
Ind-----96	?.?	23.?	13.?	17.?	14.?	12.?	23.?	11.?	17.?	17.?	15.?	14.?
Ind-----97	27.27	24.24	13.13	13.13	11.14	12.12	15.16	11.11	12.17	19.19	15.18	11.13
Ind---9798	?.45	?.49	?.13	?.15	?.11	?.11	?.16	?.13	?.14	?.14	?.15	?.11
Ind-----98	46.?	49.?	13.?	15.?	11.?	12.?	18.?	13.?	14.?	15.?	15.?	11.?
Ind-----99	45.46	24.24	13.13	13.15	11.14	12.12	15.23	11.11	16.16	15.15	15.15	13.14
Ind--99100	52.29	?.27	?.11	?.15	?.11	?.12	?.15	?.11	?.17	?.14	?.14	?.11
Ind----100	29.?	52.?	11.?	15.?	12.?	12.?	23.?	13.?	18.?	15.?	15.?	14.?
Ind----101	18.18	?.?	11.13	13.15	14.14	12.12	15.23	11.11	12.17	14.15	15.15	13.13
Ind-101102	2.27	?.28	?.11	?.15	?.14	?.12	?.15	?.12	?.11	?.15	?.14	?.11
Ind----102	27.?	28.?	13.?	17.?	14.?	12.?	16.?	13.?	17.?	15.?	15.?	14.?
Ind----103	45.46	27.27	11.13	13.15	12.14	12.12	16.18	11.11	17.18	14.17	15.15	14.14

Fake__diploid_Tlaxcala_population

Indiv.	1	2	3	4	5	6	7	8	9	10	11	12
Ind-103	104	?.?	?.24	?.11	?.15	?.11	?.11	?.16	?.11	?.17	?.16	?.15	?.14
Ind----104	?.?	57.?	13.?	15.?	14.?	12.?	23.?	12.?	18.?	18.?	15.?	14.?
Ind----105	29.2	924.2	412.1	213.1	512.1	211.1	218.2	311.1	117.1	816.1	614.1	514.17
Ind-105	106	6.25	?.26	?.11	?.15	?.12	?.11	?.15	?.11	?.12	?.17	?.13	?.13
Ind----106	44.4	526.?	13.?	15.?	14.?	11.?	15.?	11.?	17.?	17.?	15.?	14.?
Ind----107	?.?	23.2	613.1	313.1	714.1	412.1	215.1	811.1	116.1	714.1	515.1	511.14
Ind-107	108	?.?	?.23	?.11	?.13	?.11	?.11	?.16	?.11	?.18	?.14	?.15	?.13
Ind----108	?.?	49.?	13.?	15.?	14.?	12.?	15.?	12.?	18.?	17.?	15.?	13.?
Ind----109	?.?	23.2	613.1	313.1	714.1	412.1	216.1	811.1	116.1	714.1	515.1	511.14
Ind-109	110	0.45	?.24	?.11	?.15	?.12	?.12	?.15	?.11	?.17	?.17	?.15	?.11
Ind----110	46.?	26.?	13.?	15.?	14.?	12.?	23.?	11.?	18.?	24.?	18.?	11.?
Ind----111	25.4	624.2	411.1	313.1	314.1	412.1	216.1	511.1	112.1	514.1	614.1	811.14
Ind-111	112	2.27	?.23	?.12	?.15	?.11	?.12	?.15	?.11	?.12	?.14	?.15	?.11
Ind----112	27.?	23.?	12.?	17.?	14.?	12.?	15.?	11.?	17.?	15.?	15.?	14.?
Ind----113	25.4	523.2	712.1	213.1	511.1	411.1	216.2	311.1	214.1	715.1	715.1	514.14
Ind-113	114	6.29	?.?	?.13	?.13	?.11	?.12	?.23	?.11	?.12	?.15	?.15	?.11
Ind----114	29.?	?.?	13.?	15.?	14.?	12.?	23.?	12.?	18.?	15.?	15.?	14.?
Ind----115	?.?	23.2	313.1	313.1	511.1	412.1	223.2	311.1	218.1	815.1	515.1	511.14
Ind-115	116	?.?	?.24	?.11	?.13	?.14	?.12	?.16	?.11	?.14	?.15	?.15	?.11
Ind----116	?.?	27.?	13.?	13.?	14.?	12.?	16.?	12.?	16.?	16.?	15.?	13.?
Ind----117	?.?	26.2	712.1	213.1	711.1	411.1	215.1	812.1	317.1	715.1	715.1	511.11
Ind-117	118	8.25	?.?	?.13	?.15	?.14	?.12	?.16	?.11	?.16	?.14	?.14	?.11
Ind----118	27.?	?.?	13.?	17.?	14.?	12.?	23.?	12.?	17.?	15.?	15.?	13.?
Ind----119	?.?	26.2	712.1	213.1	711.1	411.1	215.1	812.1	212.1	715.1	715.1	511.11
Ind-119	120	0.?	?.27	?.11	?.13	?.11	?.12	?.10	?.11	?.17	?.14	?.15	?.11
Ind----120	?.?	49.?	11.?	15.?	14.?	12.?	23.?	12.?	17.?	17.?	15.?	14.?
Ind----121	27.2	924.2	413.1	313.1	312.1	412.1	216.1	612.1	216.1	714.2	615.1	514.14
Ind-121	122	2.45	?.23	?.13	?.15	?.14	?.12	?.15	?.11	?.12	?.15	?.15	?.11
Ind----122	46.?	23.?	13.?	17.?	14.?	12.?	23.?	12.?	16.?	15.?	15.?	14.?
Ind----123	?.?	11.4	911.1	313.1	714.1	411.1	216.1	811.1	211.1	714.1	515.1	814.14
Ind-123	124	4.43	?.?	?.11	?.13	?.14	?.12	?.18	?.11	?.11	?.15	?.15	?.13
Ind----124	44.?	?.?	13.?	20.?	14.?	12.?	23.?	11.?	17.?	15.?	15.?	14.?
Ind----125	?.?	?.?	13.1	313.1	711.1	112.1	215.1	511.1	116.1	614.1	915.1	511.13
Ind-125	126	?.?	?.?	?.13	?.13	?.11	?.12	?.16	?.11	?.16	?.14	?.15	?.11
Ind----126	?.?	?.?	13.?	17.?	11.?	12.?	15.?	11.?	17.?	19.?	15.?	13.?
Ind----127	?.?	?.?	13.1	313.1	711.1	112.1	215.1	611.1	116.1	714.1	915.1	511.13
Ind-127	128	?.?	?.26	?.13	?.15	?.12	?.11	?.16	?.13	?.17	?.15	?.15	?.11
Ind----128	?.?	26.?	13.?	15.?	14.?	12.?	23.?	13.?	17.?	18.?	15.?	13.?
Ind----129	?.?	26.2	712.1	213.1	711.1	411.1	216.1	812.1	312.1	715.1	715.1	511.11

Fake__diploid_Tlaxcala_population

Indiv.	1	2	3	4	5	6	7	8	9	10	11	12
Ind-129	130.25	?.24	?.13	?.13	?.11	?.11	?.16	?.11	?.17	?.15	?.15	?.11
Ind----130	25.?	24.?	13.?	15.?	14.?	12.?	15.?	12.?	18.?	15.?	15.?	14.?
Ind----131	45.45	24.49	11.13	15.15	14.14	11.12	15.15	11.11	12.16	15.19	15.15	13.14

Fake__diploid_Toluca_population

Indiv.	1	2	3	4	5	6	7	8	9	10	11	12
Ind----132	13.13	29.46	11.13	15.21	14.14	12.12	16.23	11.11	16.17	14.14	15.15	11.14
Ind-132	133.?	?.24	?.11	?.15	?.14	?.12	?.16	?.11	?.16	?.15	?.11	?.11
Ind----133	?.?	25.?	13.?	17.?	14.?	12.?	23.?	11.?	17.?	15.?	15.?	11.?
Ind----134	30.31	28.28	11.13	17.17	14.14	12.12	16.23	11.11	16.17	14.17	15.15	11.14
Ind-134	135.25	?.24	?.11	?.15	?.14	?.12	?.15	?.11	?.17	?.14	?.15	?.14
Ind----135	25.?	49.?	13.?	15.?	14.?	12.?	23.?	11.?	17.?	15.?	15.?	14.?
Ind----136	31.31	24.24	11.13	15.17	14.14	12.12	16.15	11.11	16.16	14.15	15.15	14.14
Ind-136	137.29	?.24	?.11	?.15	?.12	?.11	?.16	?.11	?.16	?.15	?.15	?.11
Ind----137	29.?	28.?	13.?	15.?	12.?	11.?	23.?	11.?	16.?	16.?	19.?	14.?
Ind----138	16.16	48.50	13.13	15.15	14.14	12.12	16.15	11.11	16.16	14.14	15.15	11.13
Ind-138	139.27	?.24	?.11	?.13	?.12	?.12	?.16	?.11	?.16	?.14	?.15	?.11
Ind----139	27.?	49.?	13.?	15.?	14.?	12.?	16.?	11.?	17.?	14.?	15.?	13.?
Ind----140	29.29	29.49	11.13	17.17	14.14	12.12	16.23	11.11	16.16	14.14	15.15	14.14
Ind-140	141.27	?.28	?.11	?.17	?.14	?.11	?.16	?.11	?.16	?.14	?.13	?.11
Ind----141	27.?	48.?	13.?	17.?	14.?	12.?	23.?	11.?	17.?	14.?	15.?	11.?
Ind----142	13.26	24.49	11.13	17.17	12.14	12.12	15.23	12.12	16.21	14.14	15.15	14.14
Ind-142	143.25	?.23	?.11	?.13	?.14	?.11	?.15	?.11	?.12	?.15	?.15	?.11
Ind----143	29.?	26.27	13.?	15.?	14.?	12.?	18.23	12.13	17.?	16.19	15.?	13.14
Ind----144	45.46	24.26	11.13	13.15	12.14	12.12	15.23	11.11	16.16	12.12	15.15	14.17
Ind-144	145.13	?.26	?.12	?.13	?.14	?.12	?.16	?.11	?.16	?.14	?.15	?.11
Ind----145	24.?	49.?	12.?	15.?	14.?	12.?	23.?	11.?	17.?	17.?	15.?	14.?
Ind----146	25.25	24.49	11.13	13.15	14.14	12.12	15.23	11.11	16.17	14.17	14.15	11.14
Ind-146	147.?	?.23	?.11	?.13	?.11	?.12	?.23	?.11	?.16	?.12	?.15	?.11
Ind----147	?.?	49.?	13.?	15.?	14.?	12.?	23.?	11.?	17.?	14.?	22.?	14.?
Ind----148	24.27	24.25	11.13	15.15	14.14	12.12	16.16	11.11	16.16	14.16	14.15	11.14
Ind-148	149.?	2.25	49.24	?.11	?.15	?.12	?.12	?.16	?.11	?.16	17.14	?.15	?.11
Ind----149	25.?	24.?	13.?	15.?	12.?	12.?	23.?	11.?	16.?	14.?	15.?	11.?
Ind----150	12.40	24.50	12.12	17.19	12.14	11.12	15.23	11.11	16.17	15.15	15.15	11.14
Ind-150	151.?	?.24	?.11	?.15	?.14	?.12	?.16	?.11	?.16	?.14	?.15	?.11
Ind----151	?.?	27.?	13.?	21.?	14.?	12.?	23.?	11.?	16.?	14.?	15.?	14.?

Fake__diploid_Toluca_population

Indiv.	1	2	3	4	5	6	7	8	9	10	11	12
Ind----152	13.	29	24.	24	11.	13	13.	15	14.	14	12.	12
Ind-152153	3.?		?.	24	?.	11	?.	15	?.	14	?.	11
Ind----153	?.?		52.	?	13.	?	15.	?	14.	?	11.	?
Ind----154	25.	25	24.	26	12.	12	15.	15	14.	14	12.	12
Ind-154155	5.25		?.	49	?.	11	?.	15	?.	14	?.	12
Ind----155	39.	40	49.	?	13.	?	15.	?	14.	?	12.	?
Ind----156	25.	39	24.	49	11.	13	15.	15	14.	14	12.	12
Ind-156157	7 0.25		?.	24	?.	11	?.	15	?.	14	?.	12
Ind----157	39.	40	49.	?	13.	?	15.	?	14.	?	12.	?
Ind----158	25.	39	24.	49	11.	13	15.	15	14.	14	12.	12
Ind-158159	9 0.25		?.	24	?.	11	?.	15	?.	14	?.	12
Ind----159	39.	40	49.	?	13.	?	15.	?	14.	?	12.	?
Ind----160	25.	28	24.	29	13.	13	15.	15	14.	14	12.	12
Ind-160161	1.25		?.	24	?.	13	?.	15	?.	14	?.	12
Ind----161	28.?		29.	?	13.	?	15.	?	14.	?	12.	?
Ind----162	25.	28	24.	29	13.	13	15.	15	14.	14	12.	12
Ind----162	23.	11	11.	16.	18	14.	14	15.	15	11.	14	
Ind----152	23.	11	11.	15.	16	14.	14	15.	20	11.	14	
Ind-152153	?.	11	?.	15	?.	14	?.	15	?.	14		
Ind----153	?.	11	?.	16.	?	14.	?	15.	?	14.	?	
Ind----154	23.	11	11.	17.	17	14.	14	15.	19	11.	11	
Ind-154155	?.	11	?.	15	?.	14	?.	14	?.	11		
Ind----155	?.	11	?.	16.	?	14.	?	15.	?	11.	?	
Ind----156	23.	11	11.	15.	16	14.	14	14.	15	11.	11	
Ind-156157	?.	11	?.	15	?.	14	?.	14	?.	11		
Ind----157	?.	11	?.	16.	?	14.	?	15.	?	11.	?	
Ind----158	23.	11	11.	15.	16	14.	14	14.	15	11.	11	
Ind-158159	?.	11	?.	15	?.	14	?.	14	?.	11		
Ind----159	?.	11	?.	16.	?	14.	?	15.	?	11.	?	
Ind----160	23.	11	11.	16.	18	14.	14	15.	15	11.	14	
Ind-160161	?.	11	?.	16	?.	14	?.	15	?.	11		
Ind----161	?.	11	?.	18.	?	14.	?	15.	?	14.	?	
Ind----162	23.	11	11.	16.	18	14.	14	15.	15	11.	14	

Allele frequency spectra

Locus 1

Allele	Pop1	Pop2	Pop3	All
12	0.356	-	0.017	0.193
11	0.430	-	-	0.229
29	0.034	0.127	0.100	0.071
71	0.060	-	-	0.032
72	0.060	-	-	0.032
25	0.013	0.127	0.283	0.100
28	0.027	-	0.050	0.025
30	0.013	-	0.017	0.011
27	0.007	0.113	0.083	0.050
41	-	0.028	-	0.007
52	-	0.127	-	0.032
18	-	0.113	-	0.029
47	-	0.028	-	0.007
48	-	0.028	-	0.007
13	-	0.014	0.083	0.021
43	-	0.042	-	0.011
45	-	0.127	0.017	0.036
46	-	0.099	0.017	0.029
44	-	0.028	-	0.007
31	-	-	0.050	0.011
16	-	-	0.033	0.007
26	-	-	0.017	0.004
24	-	-	0.033	0.007
32	-	-	0.017	0.004
40	-	-	0.100	0.021
39	-	-	0.083	0.018
Total	9	13	16	26
H_{exp}	0.679	0.895	0.870	0.884

Locus 2

Allele	Pop1	Pop2	Pop3	All
13	0.217	-	-	0.095
24	0.492	0.222	0.391	0.380
20	0.017	-	-	0.007
28	0.117	0.022	0.062	0.073
47	0.050	-	-	0.022

Allele	Pop1	Pop2	Pop3	All
31	0.017	-	-	0.007
23	0.042	0.189	0.031	0.088
26	0.008	0.133	0.062	0.062
27	0.042	0.278	0.031	0.117
49	-	0.100	0.219	0.084
54	-	0.011	-	0.004
29	-	0.011	0.078	0.022
52	-	0.011	0.016	0.007
57	-	0.011	-	0.004
11	-	0.011	-	0.004
46	-	-	0.016	0.004
25	-	-	0.031	0.007
48	-	-	0.031	0.007
50	-	-	0.031	0.007
Total	9	11	12	19
H_{exp}	0.691	0.809	0.780	0.692

Locus 3

Allele	Pop1	Pop2	Pop3	All
11	0.441	0.227	0.387	0.358
13	0.395	0.664	0.516	0.509
12	0.164	0.109	0.097	0.133
Total	3	3	3	3
H_{exp}	0.623	0.496	0.574	0.287

Locus 4

Allele	Pop1	Pop2	Pop3	All
15	0.625	0.482	0.661	0.583
17	0.224	0.179	0.177	0.199
11	0.105	-	-	0.049
21	0.013	-	0.032	0.012
16	0.020	-	-	0.009
13	0.013	0.312	0.113	0.135
20	-	0.027	-	0.009
19	-	-	0.016	0.003
Total	6	4	5	8
H_{exp}	0.548	0.637	0.517	-0.113

Locus 5

Allele	Pop1	Pop2	Pop3	All

Allele	Pop1	Pop2	Pop3	All
14	0.500	0.655	0.855	0.620
12	0.500	0.118	0.129	0.299
11	-	0.227	0.016	0.080
Total	2	3	3	3
H_{exp}	0.500	0.506	0.252	-0.594

Locus 6

Allele	Pop1	Pop2	Pop3	All
12	0.908	0.818	0.887	0.873
11	0.092	0.182	0.113	0.127
Total	2	2	2	2
H_{exp}	0.167	0.298	0.200	-1.373

Locus 7

Allele	Pop1	Pop2	Pop3	All
10	0.033	0.009	-	0.018
23	0.743	0.300	0.571	0.560
11	0.020	-	-	0.009
15	0.112	0.291	0.143	0.178
16	0.092	0.309	0.270	0.200
18	-	0.091	0.016	0.034
Total	5	5	4	6
H_{exp}	0.425	0.721	0.580	-1.760

Locus 8

Allele	Pop1	Pop2	Pop3	All
11	0.803	0.673	0.921	0.782
12	0.197	0.209	0.063	0.175
13	-	0.118	0.016	0.043
Total	2	3	3	3
H_{exp}	0.317	0.490	0.148	-2.403

Locus 9

Allele	Pop1	Pop2	Pop3	All
12	0.079	0.118	0.016	0.080
16	0.283	0.182	0.597	0.309
15	0.145	0.018	0.097	0.093
17	0.414	0.373	0.226	0.364
18	0.079	0.182	0.048	0.108

Allele	Pop1	Pop2	Pop3	All
11	-	0.055	-	0.019
14	-	0.073	-	0.025
21	-	-	0.016	0.003
Total	5	7	6	8
H_{exp}	0.715	0.772	0.581	-2.659

Locus 10

Allele	Pop1	Pop2	Pop3	All
14	0.138	0.255	0.688	0.285
12	0.322	-	0.047	0.160
15	0.263	0.427	0.125	0.291
23	0.013	-	-	0.006
22	0.079	-	-	0.037
11	0.013	-	-	0.006
21	0.020	-	-	0.009
18	0.026	0.055	-	0.031
17	0.033	0.127	0.062	0.071
16	0.053	0.064	0.062	0.058
20	0.026	-	-	0.012
24	0.007	0.009	-	0.006
25	0.007	-	-	0.003
19	-	0.055	0.016	0.021
26	-	0.009	-	0.003
Total	13	8	6	15
H_{exp}	0.795	0.726	0.501	-2.862

Locus 11

Allele	Pop1	Pop2	Pop3	All
11	0.257	-	0.016	0.123
15	0.414	0.864	0.790	0.639
14	0.316	0.045	0.113	0.185
16	0.013	-	-	0.006
18	-	0.082	-	0.028
13	-	0.009	0.016	0.006
19	-	-	0.032	0.006
22	-	-	0.016	0.003
20	-	-	0.016	0.003
Total	4	4	7	9
H_{exp}	0.662	0.245	0.361	-3.321

Locus 12

Allele	Pop1	Pop2	Pop3	All
11	0.342	0.400	0.540	0.400
14	0.132	0.336	0.397	0.252
13	0.526	0.236	0.048	0.335
17	-	0.027	0.016	0.012
Total	3	4	4	4
H_{exp}	0.589	0.670	0.549	-3.657

Average expected heterozygosity

	Pop1	Pop2	Pop3	All
H_{exp}	1.119	1.211	0.986	-0.154

Bayesian Analysis: Posterior distribution table

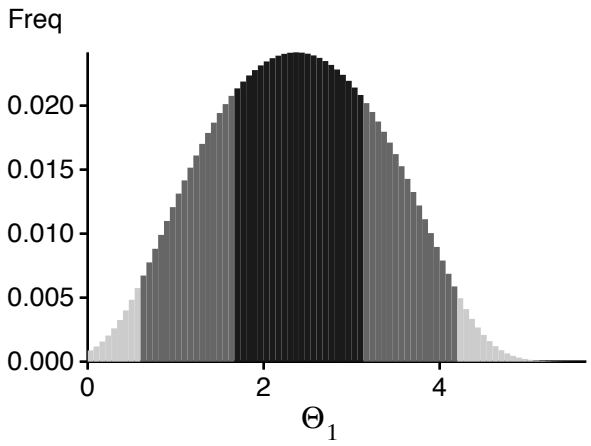
Locus	Parameter	2.5%	25.0%	Mode	75.0%	97.5%	Median	Mean
1	Θ_1	0.00000	0.26667	0.90000	1.46667	2.53333	1.23333	0.88308
1	Θ_2	0.00000	0.80000	1.96667	3.00000	6.86667	2.43333	2.74159
1	Θ_3	0.00000	0.80000	2.16667	3.60000	47.26667	3.10000	8.10696
1	$M_{2->1}$	3.067	6.667	9.400	12.000	19.200	10.067	10.446
1	$M_{3->1}$	1.467	4.267	7.133	10.400	19.067	8.867	9.487
1	$M_{1->2}$	1.200	4.667	7.133	10.667	28.000	12.733	13.374
1	$M_{3->2}$	0.000	5.333	8.200	11.467	24.133	11.133	12.421
1	$M_{1->3}$	1.333	6.267	11.533	14.400	23.867	11.533	12.086
1	$M_{2->3}$	0.800	6.000	8.067	12.667	21.733	11.800	12.459
2	Θ_1	0.00000	1.33333	2.36667	3.20000	5.06667	2.56667	2.54304
2	Θ_2	0.00000	0.86667	2.16667	3.53333	8.66667	2.96667	4.11291
2	Θ_3	0.00000	0.33333	2.23333	4.73333	65.53333	4.43333	13.54370
2	$M_{2->1}$	1.867	5.867	8.600	12.000	16.933	9.400	9.408
2	$M_{3->1}$	0.400	3.600	5.667	7.600	11.067	5.933	5.881
2	$M_{1->2}$	3.200	6.533	10.467	14.800	28.533	13.133	14.478
2	$M_{3->2}$	0.800	5.600	9.267	11.600	15.867	8.733	8.588
2	$M_{1->3}$	3.333	11.467	18.467	21.200	29.600	16.467	16.289
2	$M_{2->3}$	4.400	8.400	13.267	17.067	31.467	14.867	16.136
3	Θ_1	0.00000	1.80000	3.50000	6.00000	46.73333	5.16667	10.21527
3	Θ_2	0.00000	0.13333	2.10000	5.60000	75.86667	5.50000	19.84898
3	Θ_3	0.00000	0.00000	1.96667	15.00000	15.86667	42.63334	43.56722
3	$M_{2->1}$	0.000	0.000	0.067	4.000	17.200	4.067	5.813
3	$M_{3->1}$	0.000	0.000	0.067	2.533	14.133	2.600	3.841
3	$M_{1->2}$	0.000	0.000	0.067	8.533	46.800	8.600	13.947
3	$M_{3->2}$	0.000	0.000	0.067	3.867	29.467	3.933	7.574
3	$M_{1->3}$	0.000	0.000	4.467	20.133	122.133	20.067	34.414
3	$M_{2->3}$	0.000	0.000	7.533	16.133	122.667	16.200	33.087
4	Θ_1	0.00000	1.46667	2.56667	3.53333	5.66667	2.83333	2.83997
4	Θ_2	0.00000	0.66667	1.56667	2.26667	3.86667	1.76667	1.64189
4	Θ_3	0.00000	0.00000	2.16667	29.80000	82.06667	30.76667	36.83694
4	$M_{2->1}$	0.000	3.200	5.533	7.867	12.800	6.067	6.199
4	$M_{3->1}$	0.000	1.467	3.400	5.067	9.467	3.933	3.915
4	$M_{1->2}$	0.267	4.400	7.800	10.933	17.467	8.600	8.736

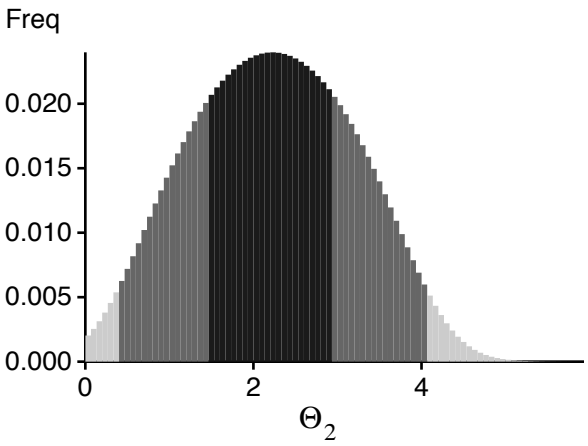
Locus	Parameter	2.5%	25.0%	Mode	75.0%	97.5%	Median	Mean
4	$M_{3->2}$	0.000	1.600	4.067	6.667	13.200	5.533	5.691
4	$M_{1->3}$	2.133	10.267	16.333	24.000	56.000	20.467	24.494
4	$M_{2->3}$	0.667	7.467	16.467	23.467	83.600	20.867	29.402
5	Θ_1	0.00000	0.86667	1.96667	2.93333	5.66667	2.36667	2.40540
5	Θ_2	0.00000	0.66667	2.16667	3.93333	33.53333	3.50000	7.44746
5	Θ_3	0.00000	0.00000	1.83333	15.60000	80.80000	16.76667	29.34504
5	$M_{2->1}$	0.000	0.800	2.200	3.600	6.533	2.867	2.396
5	$M_{3->1}$	0.000	0.533	2.600	4.267	11.200	3.800	3.850
5	$M_{1->2}$	0.000	2.267	4.600	7.067	12.933	5.667	5.803
5	$M_{3->2}$	0.000	1.600	4.067	6.400	18.667	5.267	6.823
5	$M_{1->3}$	0.000	3.467	7.533	18.667	72.000	16.733	24.211
5	$M_{2->3}$	0.000	3.200	7.400	15.467	84.800	13.800	23.945
6	Θ_1	0.00000	1.73333	3.10000	4.66667	13.13333	3.96667	6.34154
6	Θ_2	1.00000	1.13333	4.03333	29.86667	70.80000	39.36666	42.89584
6	Θ_3	0.00000	0.00000	1.30000	20.20000	56.00000	44.30000	45.30239
6	$M_{2->1}$	0.000	0.000	1.400	3.600	15.067	3.667	4.360
6	$M_{3->1}$	0.000	0.000	0.067	3.467	29.467	3.533	7.424
6	$M_{1->2}$	0.000	2.800	8.467	17.733	68.000	16.200	23.946
6	$M_{3->2}$	0.000	0.000	3.133	10.267	48.400	10.333	16.324
6	$M_{1->3}$	2.533	6.267	13.933	44.933	155.867	42.733	60.084
6	$M_{2->3}$	0.000	0.000	4.333	18.800	127.733	18.867	41.767
7	Θ_1	0.13333	1.66667	2.70000	3.66667	5.60000	2.90000	2.88413
7	Θ_2	0.00000	1.20000	2.43333	3.73333	8.13333	3.10000	3.55265
7	Θ_3	0.00000	0.00000	1.63333	27.86667	78.66666	27.90000	34.81898
7	$M_{2->1}$	0.000	2.533	4.467	6.133	8.933	4.733	4.601
7	$M_{3->1}$	0.000	0.933	2.600	4.000	7.333	3.267	2.802
7	$M_{1->2}$	0.667	3.733	6.333	9.333	17.333	7.667	8.291
7	$M_{3->2}$	0.000	1.067	3.400	5.600	12.667	4.733	5.006
7	$M_{1->3}$	1.333	9.067	14.600	22.400	46.533	18.867	21.852
7	$M_{2->3}$	0.000	6.933	11.133	16.667	34.000	13.400	16.978
8	Θ_1	0.00000	0.93333	2.30000	3.93333	18.73333	3.36667	8.54712
8	Θ_2	0.00000	0.00000	3.70000	17.60000	73.60000	17.63333	30.37210
8	Θ_3	0.00000	0.00000	1.30000	12.20000	46.86666	13.50000	27.70534
8	$M_{2->1}$	0.000	0.000	0.067	2.267	10.400	2.333	3.022
8	$M_{3->1}$	0.000	0.000	0.067	3.467	18.400	3.533	4.974
8	$M_{1->2}$	0.000	2.400	6.067	8.667	48.267	8.200	13.417
8	$M_{3->2}$	0.000	0.000	3.400	6.267	29.067	6.200	8.800

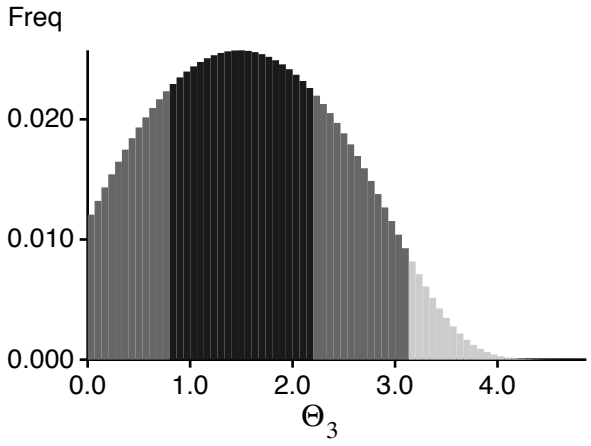
Locus	Parameter	2.5%	25.0%	Mode	75.0%	97.5%	Median	Mean
8	$M_{1->3}$	0.000	0.000	3.133	27.733	99.067	27.800	51.602
8	$M_{2->3}$	0.000	0.000	0.067	9.067	88.667	9.133	22.802
9	Θ_1	0.00000	2.93333	4.96667	7.33333	20.73333	6.23333	8.52987
9	Θ_2	0.00000	0.80000	2.76667	6.26667	37.93333	5.76667	14.76972
9	Θ_3	0.00000	0.13333	1.30000	2.33333	46.73333	2.16667	10.01434
9	$M_{2->1}$	0.133	2.933	5.267	8.400	13.600	6.733	6.765
9	$M_{3->1}$	0.000	0.800	2.867	4.800	11.333	4.200	4.262
9	$M_{1->2}$	2.267	7.733	10.467	15.733	25.467	12.867	13.830
9	$M_{3->2}$	0.000	2.400	5.000	7.333	12.400	5.533	5.661
9	$M_{1->3}$	0.000	4.267	13.933	20.267	92.933	17.933	27.239
9	$M_{2->3}$	0.000	2.800	9.400	12.667	28.000	10.467	11.655
10	Θ_1	0.00000	2.40000	4.16667	6.40000	26.00000	5.36667	8.25464
10	Θ_2	0.00000	0.93333	2.10000	3.53333	9.13333	2.90000	3.81470
10	Θ_3	0.00000	0.00000	0.56667	1.06667	2.33333	1.03333	0.57899
10	$M_{2->1}$	1.467	6.267	9.400	12.667	19.733	10.067	10.285
10	$M_{3->1}$	0.000	2.533	4.467	7.067	11.467	5.400	5.232
10	$M_{1->2}$	0.933	6.933	10.733	18.933	33.867	15.533	16.604
10	$M_{3->2}$	0.000	0.000	0.067	7.733	26.667	7.800	9.963
10	$M_{1->3}$	0.000	9.467	15.000	21.867	35.333	16.200	17.116
10	$M_{2->3}$	0.000	8.400	13.800	18.667	36.400	15.267	16.419
11	Θ_1	0.00000	1.46667	2.63333	3.66667	6.13333	2.96667	3.00354
11	Θ_2	0.00000	0.33333	1.10000	1.73333	3.00000	1.36667	1.11279
11	Θ_3	0.00000	0.00000	1.83333	31.53333	68.00000	38.43333	41.34778
11	$M_{2->1}$	0.000	2.933	5.533	7.867	11.200	5.667	5.547
11	$M_{3->1}$	0.000	1.467	3.533	5.333	9.067	4.200	3.938
11	$M_{1->2}$	0.000	3.467	6.867	10.267	21.467	8.467	9.228
11	$M_{3->2}$	0.000	1.200	3.800	7.200	19.467	6.333	7.288
11	$M_{1->3}$	0.000	4.133	12.600	17.600	40.533	14.733	17.289
11	$M_{2->3}$	3.200	9.333	16.067	26.933	82.533	24.333	30.864
12	Θ_1	0.00000	1.20000	2.43333	3.73333	7.40000	3.03333	3.31246
12	Θ_2	0.00000	0.46667	3.90000	19.06667	79.06667	18.76667	31.33003
12	Θ_3	0.00000	0.00000	0.03333	1.40000	21.13333	1.43333	3.97173
12	$M_{2->1}$	0.000	1.600	3.533	5.200	8.933	4.067	3.917
12	$M_{3->1}$	0.000	0.000	0.067	2.000	5.467	2.067	1.737
12	$M_{1->2}$	0.400	6.933	10.200	14.267	22.533	11.400	11.865
12	$M_{3->2}$	0.000	0.000	2.200	6.533	27.467	6.600	8.951
12	$M_{1->3}$	0.000	0.800	4.067	9.333	29.200	8.467	11.531

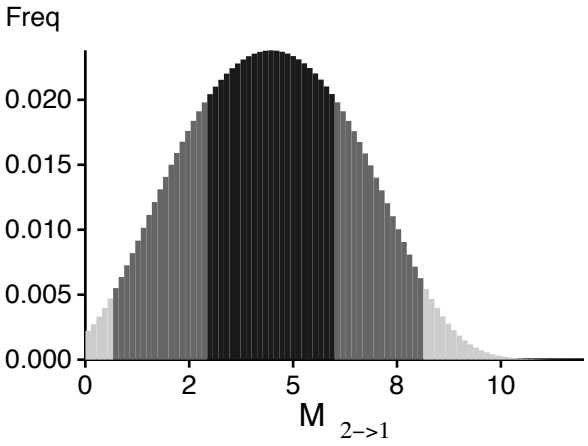
Locus	Parameter	2.5%	25.0%	Mode	75.0%	97.5%	Median	Mean
12	$M_{2->3}$	0.000	1.333	4.600	11.467	86.267	10.467	19.630
All	Θ_1	0.53333	1.60000	2.36667	3.13333	4.20000	2.43333	2.37051
All	Θ_2	0.33333	1.40000	2.23333	2.93333	4.06667	2.30000	2.22530
All	Θ_3	0.00000	0.73333	1.50000	2.20000	3.13333	1.63333	1.48241
All	$M_{2->1}$	0.533	2.800	4.467	6.000	8.133	4.600	4.470
All	$M_{3->1}$	0.000	1.333	2.867	4.267	6.267	3.267	2.901
All	$M_{1->2}$	3.467	6.133	7.933	9.467	12.133	8.067	7.916
All	$M_{3->2}$	0.400	2.800	4.467	6.000	8.400	4.600	4.435
All	$M_{1->3}$	6.800	10.400	12.600	14.533	18.267	12.733	12.609
All	$M_{2->3}$	4.667	7.867	9.933	11.867	15.600	10.200	10.114

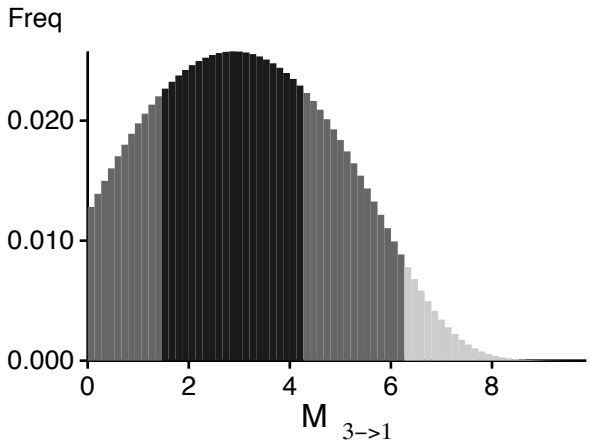
Bayesian Analysis: Posterior distribution over all loci

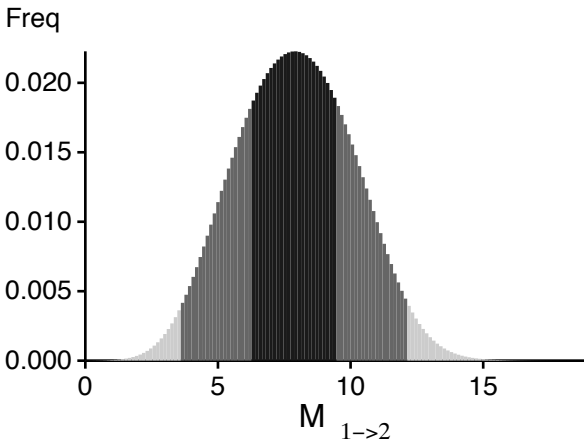


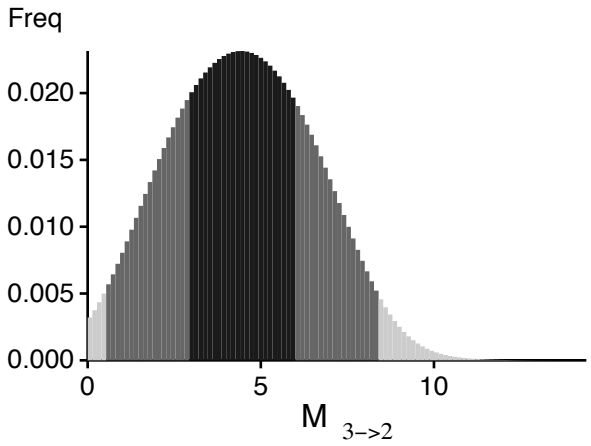


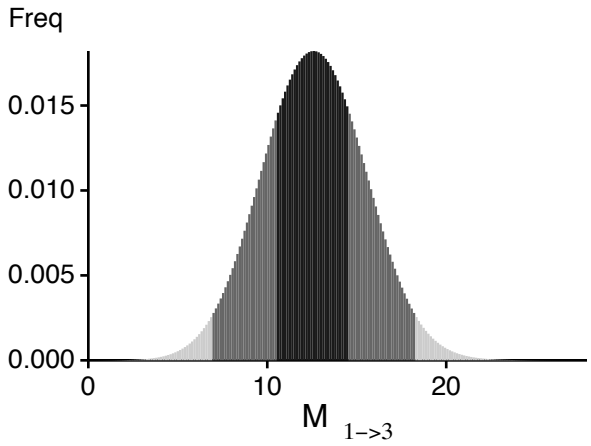


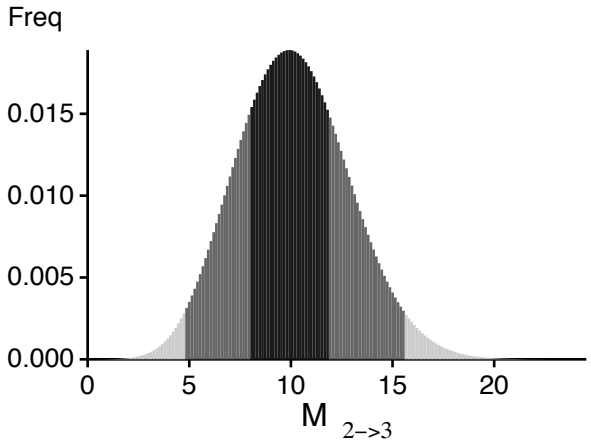







Freq
0.020
0.015
0.010
0.005
0.000
0
5
10
M 3–>2


Freq
0.015
0.010
0.005
0.000
0
10
20
M 1–>3


Freq
0.015
0.010
0.005
0.000
0
5
10
15
20
M 2–>3

Log-Probability of the data given the model (marginal likelihood)

Use this value for Bayes factor calculations:
BF = Exp[ln(Prob(D | thisModel) - ln(Prob(D | otherModel)
or as LBF = 2 (ln(Prob(D | thisModel) - ln(Prob(D | otherModel))
shows the support for thisModel]

Locus	Raw thermodynamic score(1a)	Bezier approximation score(1b)	Harmonic mean(2)
1	-333417.97	-55391.34	-649701.41
2	-190786.02	-31182.46	-211451.20
3	-6234.13	-1198.43	-3292.95
4	-25435.94	-4340.76	-13003.33
5	-7832.65	-1386.96	-5074.96
6	-713.20	-201.49	-737.36
7	-69140.26	-11331.34	-54763.54
8	-2282.88	-508.94	-1414.89
9	-24081.70	-4214.78	-11737.75
10	-44743.97	-7622.37	-28601.03
11	-20916.03	-3553.51	-12461.50
12	-12386.12	-2202.56	-7206.03
All	-737971.42	-123135.48	-999446.49

(1a, 1b and 2) is an approximation to the marginal likelihood, make sure the program run long enough!
(1a, 1b) and (2) should give a similar result, (2) is considered more
crude than (1), but (1) needs heating with several well-spaced chains,
(1b) is using a Bezier-curve to get better approximations for runs with low number
of heated chains
[Scaling factor = -0.540459

Acceptance ratios for all parameters and the genealogies

Parameter	Accepted changes	Ratio
Θ_1	848981/6696272	0.12678
Θ_2	2048633/6697920	0.30586
Θ_3	3460254/6694947	0.51685
$M_{2->1}$	697540/6696952	0.10416
$M_{3->1}$	674863/6693685	0.10082
$M_{1->2}$	1128754/6697609	0.16853
$M_{3->2}$	1016024/6690378	0.15186
$M_{1->3}$	2101345/6693321	0.31395
$M_{2->3}$	2002666/6694153	0.29917
Genealogies	24702268/60009012	0.41164

MCMC-Autocorrelation and Effective MCMC Sample Size

Parameter	Autocorrelation	Effective Sampe Size
Θ_1	0.98798	24477.60
Θ_2	0.97711	30598.95
Θ_3	0.99148	22187.57
$M_{2->1}$	0.94323	42622.40
$M_{3->1}$	0.95824	41358.54
$M_{1->2}$	0.95420	41036.44
$M_{3->2}$	0.94295	42628.05
$M_{1->3}$	0.99009	43149.16
$M_{2->3}$	0.98435	50054.92
Ln[Prob(DIG)]	0.84874	48521.12

Potential Problems

This section reports potential problems with your run, but such reporting is often not very accurate. Whith many parameters in a multilocus analysis, it is very common that some parameters for some loci will not be very informative, triggering suggestions (for example to increase the prior range) that are not sensible. This suggestion tool will improve with time, therefore do not blindly follow its suggestions. If some parameters are flagged, inspect the tables carefully and judge wether an action is required. For example, if you run a Bayesian inference with sequence data, for macroscopic species there is rarely the need to increase the prior for Theta beyond 0.1; but if you use microsatellites it is rather common that your prior distribution for Theta should have a range from 0.0 to 100 or more. With many populations (>3) it is also very common that some migration routes are estimated poorly because the data contains little or no information for that route. Increasing the range will not help in such situations, reducing number of parameters may help in such situations.

No warning was recorded during the run