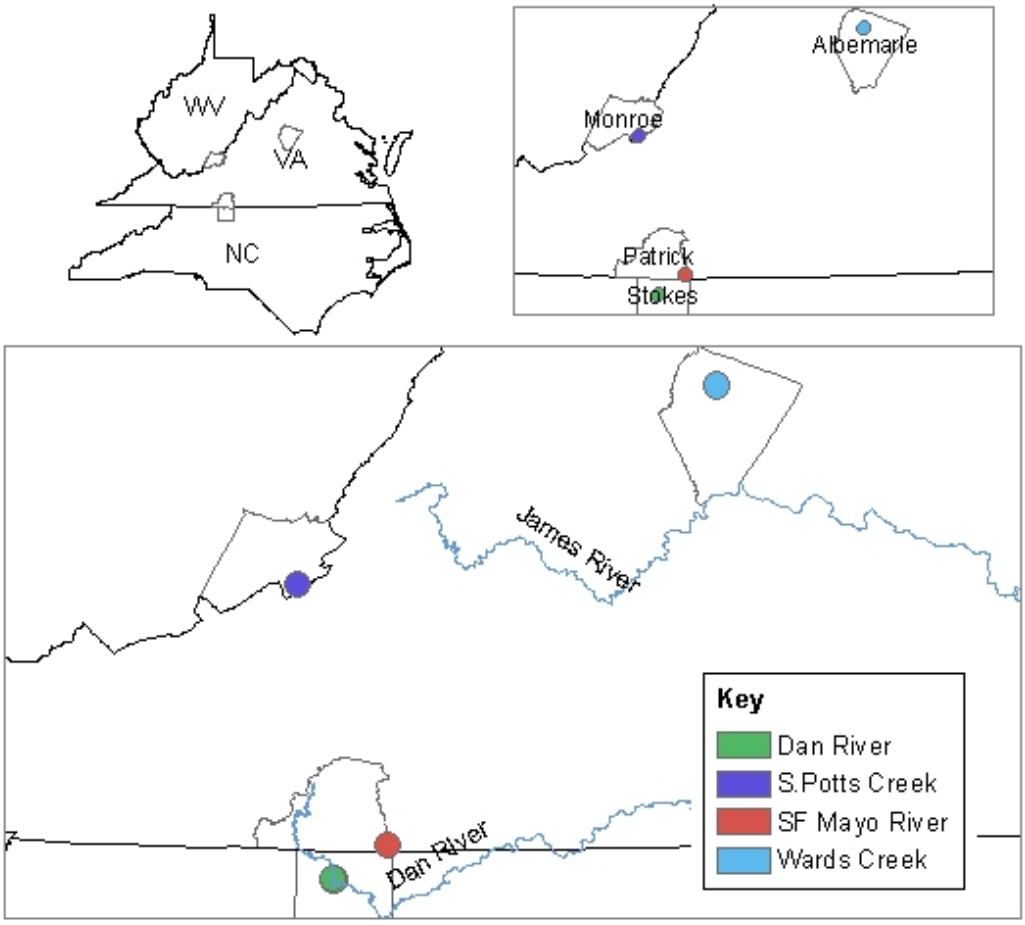

WV
VA
NC
Albemarle
Monroe
Patrick
Stokes
James River
Dan River
Key
Dan River
S.Potts Creek
SF Mayo River
Wards Creek

Figure 1.

A.

B.

Figure 2.

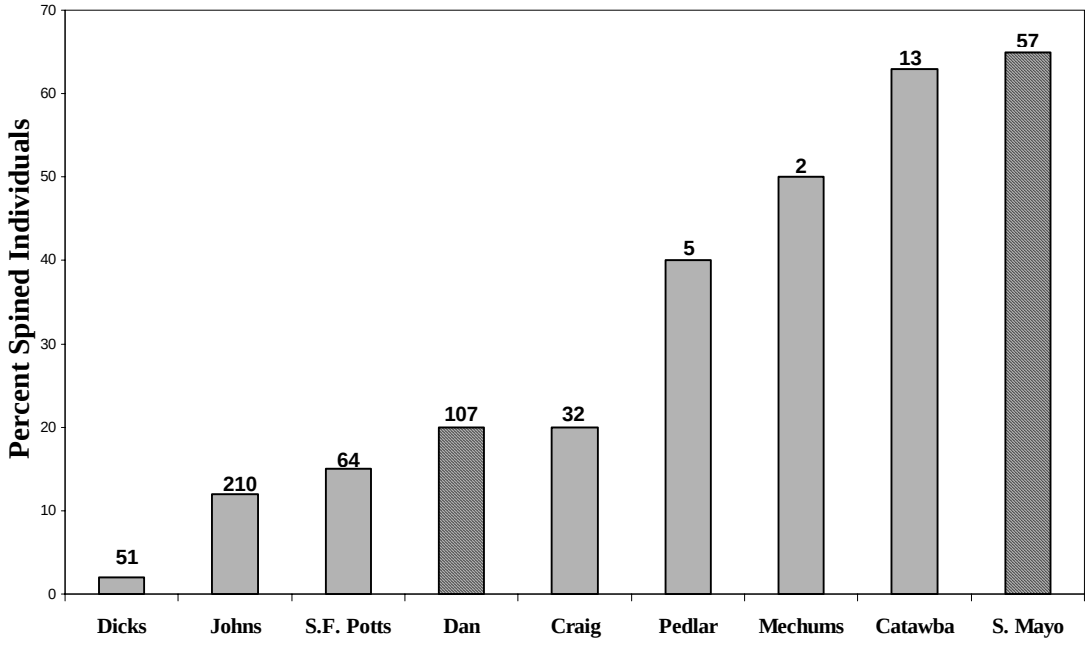

Percent Spined Individuals
70
60
50
40
30
20
10
0
51
210
64
107
32
5
2
13
57
Dicks
Johns
S.F. Potts
Dan
Craig
Pedlar
Mechums
Catawba
S. Mayo

Figure 3.

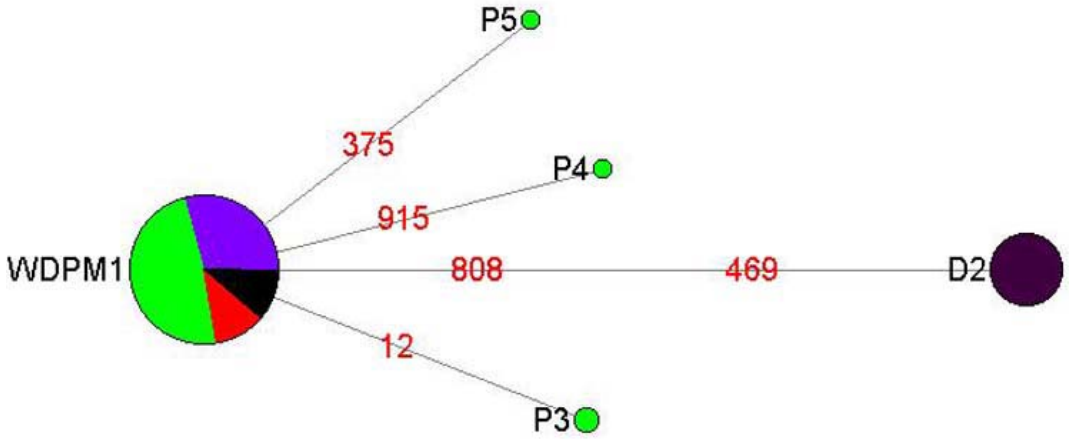


Figure 4.

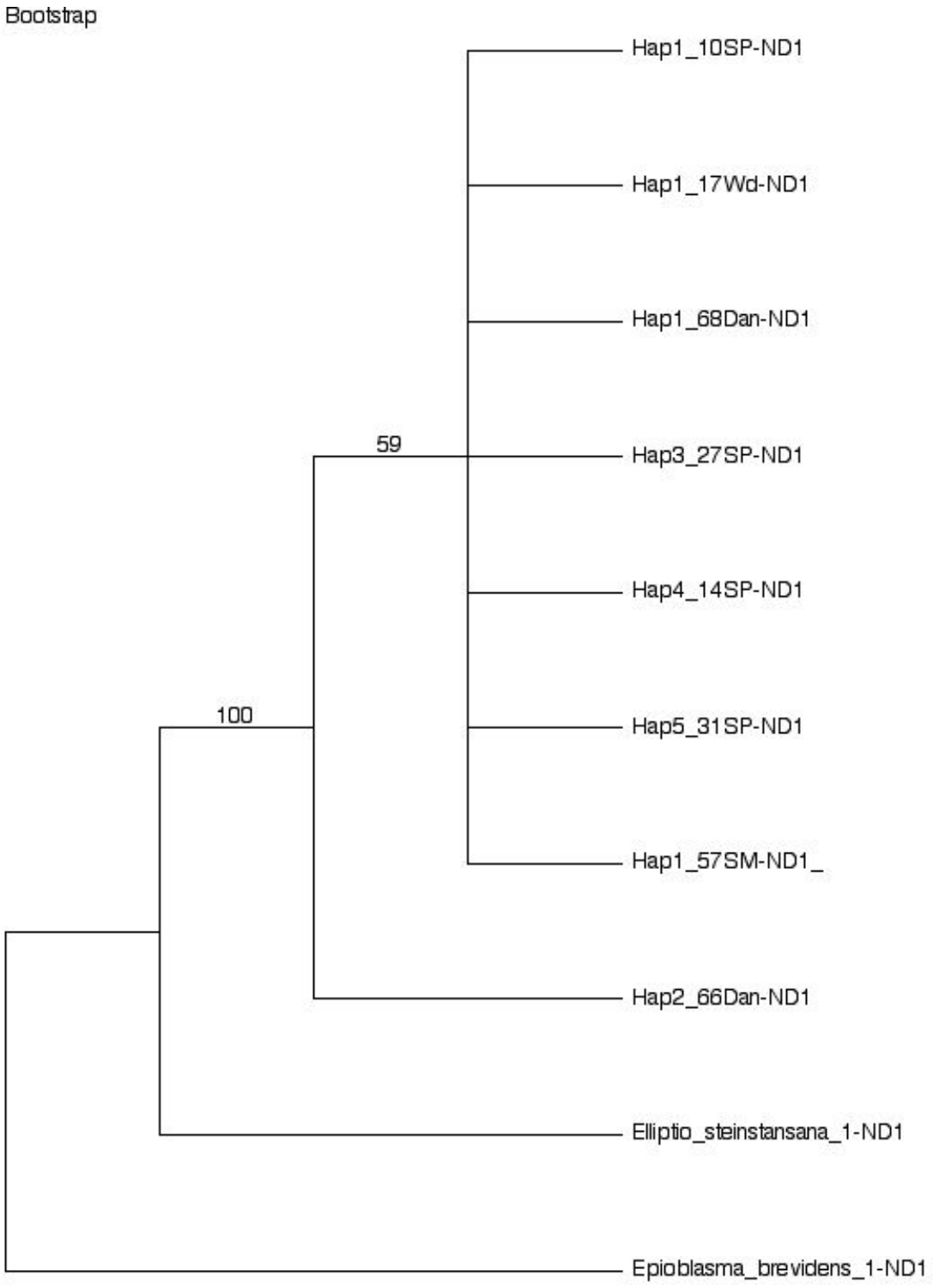

Bootstrap
Hap1_10SP-ND1
Hap1_17Wd-ND1
Hap1_68Dan-ND1
59
Hap3_27SP-ND1
Hap4_14SP-ND1
100
Hap5_31SP-ND1
Hap1_57SM-ND1_
Hap2_66Dan-ND1
Elliptio_steinstansana_1-ND1
Epioblasma_brevidens_1-ND1

Figure 5.

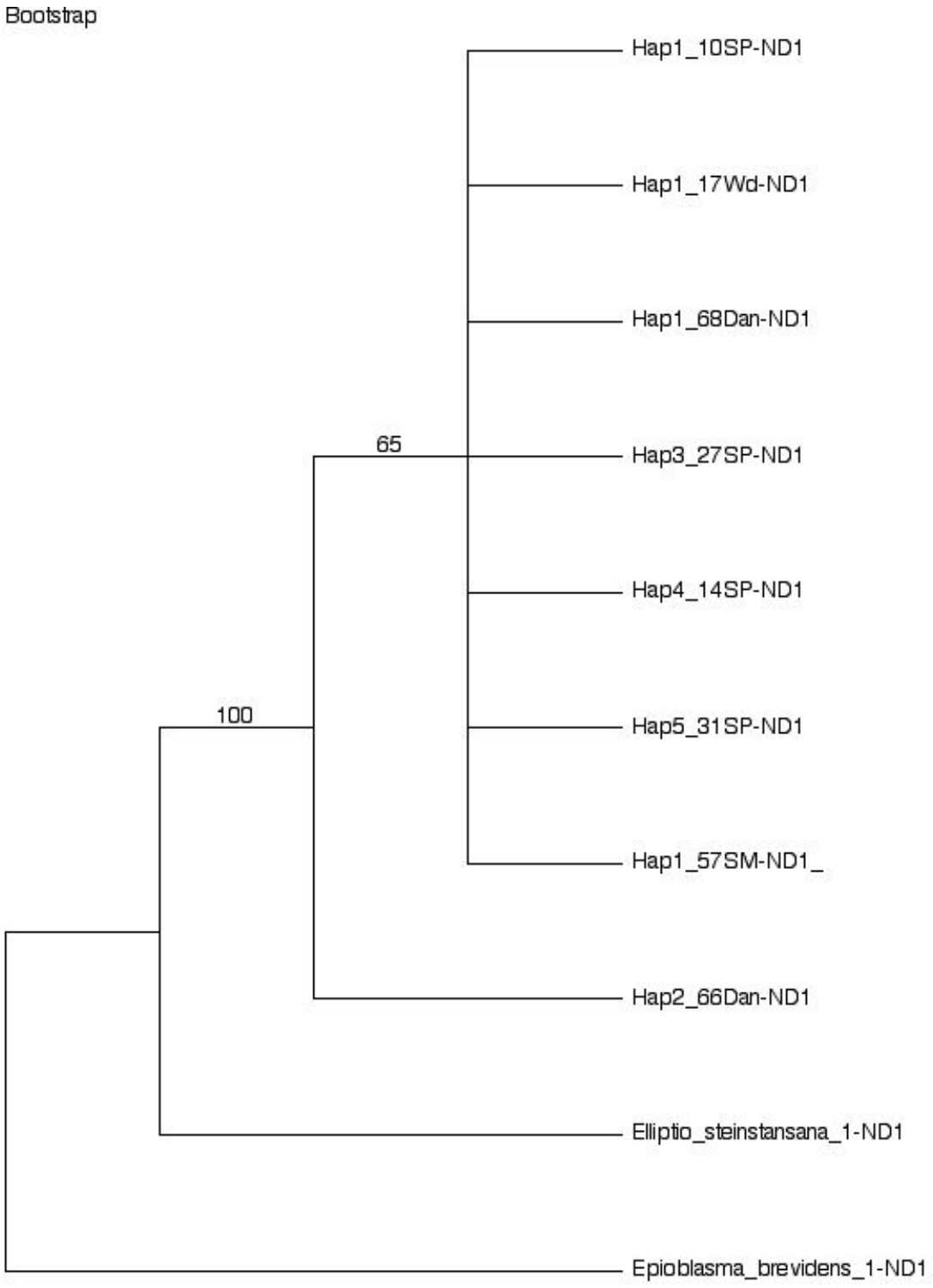

Bootstrap
Hap1_10SP-ND1
Hap1_17Wd-ND1
Hap1_68Dan-ND1
65
Hap3_27SP-ND1
Hap4_14SP-ND1
100
Hap5_31SP-ND1
Hap1_57SM-ND1_
Hap2_66Dan-ND1
Elliptio_steinstansana_1-ND1
Epioblasma_brevidens_1-ND1

Figure 6.

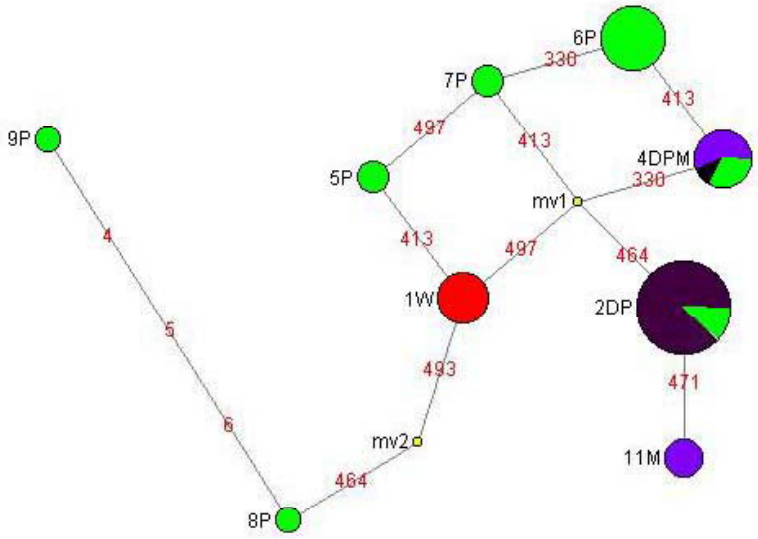

6P
330
7P
413
497
413
4DPM
330
5P
mv1
413
497
464
1W
2DP
493
471
mv2
11M
464
8P
6
5
4
9P

Figure 7.

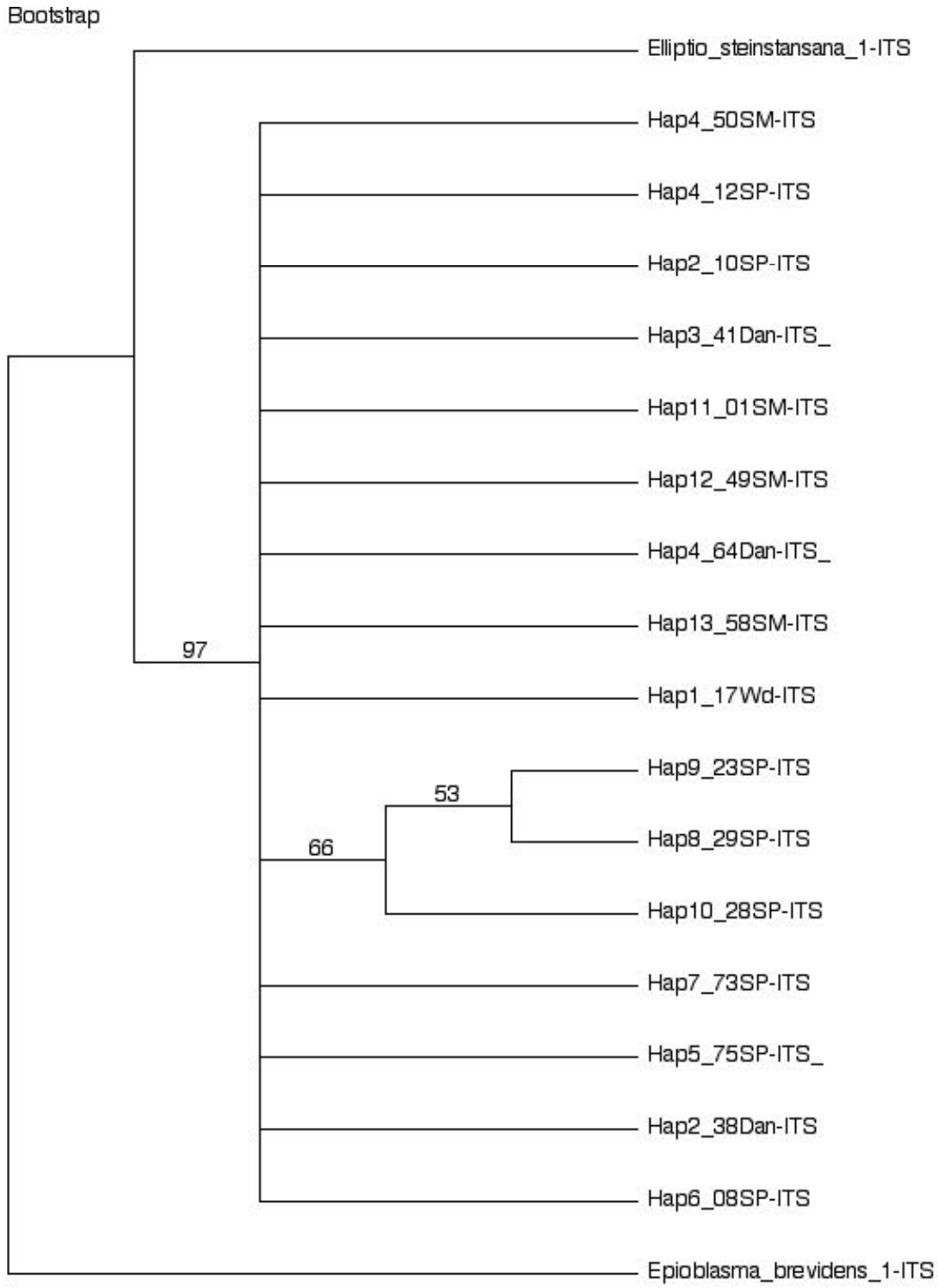

Bootstrap
Elliptio_steinstansana_1-ITS
Hap4_50SM-ITS
Hap4_12SP-ITS
Hap2_10SP-ITS
Hap3_41Dan-ITS_
Hap11_01SM-ITS
Hap12_49SM-ITS
Hap4_64Dan-ITS_
Hap13_58SM-ITS
97
Hap1_17Wd-ITS
Hap9_23SP-ITS
53
66
Hap8_29SP-ITS
Hap10_28SP-ITS
Hap7_73SP-ITS
Hap5_75SP-ITS_
Hap2_38Dan-ITS
Hap6_08SP-ITS
Epioblasma_brevidens_1-ITS

Figure 8.

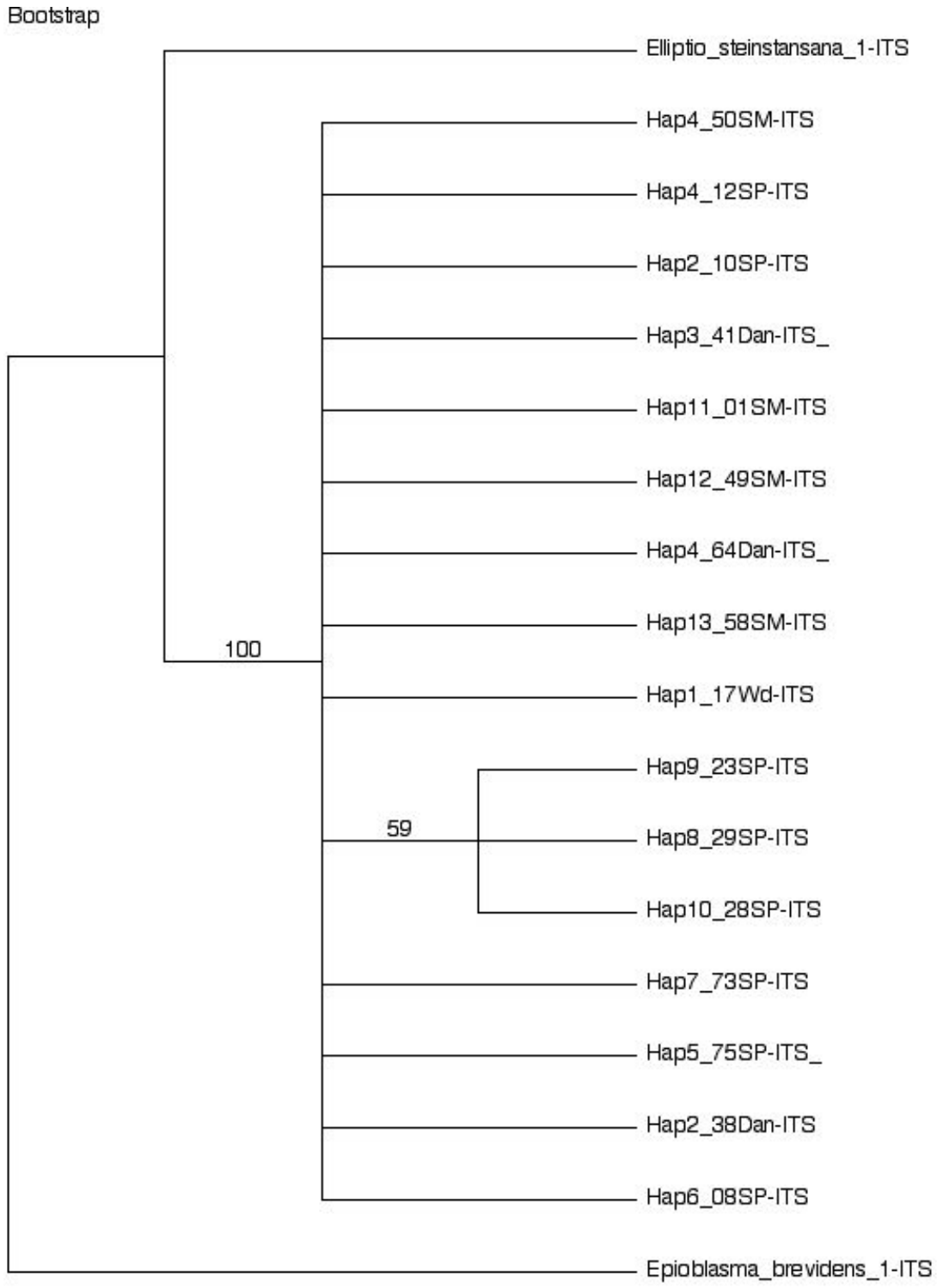

Bootstrap
Elliptio_steinstansana_1-ITS
Hap4_50SM-ITS
Hap4_12SP-ITS
Hap2_10SP-ITS
Hap3_41Dan-ITS_
Hap11_01SM-ITS
Hap12_49SM-ITS
Hap4_64Dan-ITS_
Hap13_58SM-ITS
100
Hap1_17Wd-ITS
Hap9_23SP-ITS
59
Hap8_29SP-ITS
Hap10_28SP-ITS
Hap7_73SP-ITS
Hap5_75SP-ITS_
Hap2_38Dan-ITS
Hap6_08SP-ITS
Epioblasma_brevidens_1-ITS

Figure 9.

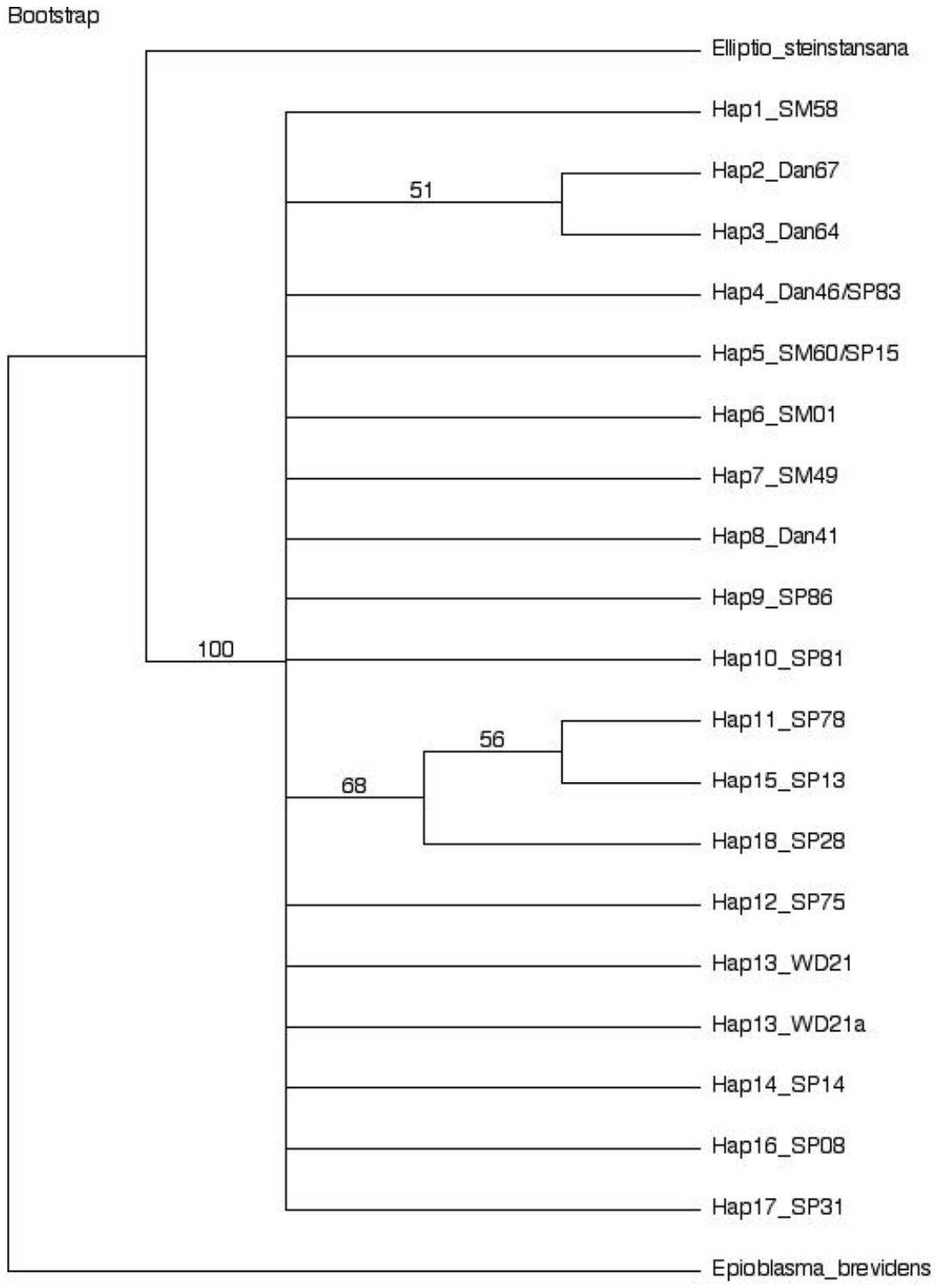

Bootstrap
Elliptio_steinstansana
Hap1_SM58
Hap2_Dan67
51
Hap3_Dan64
Hap4_Dan46/SP83
Hap5_SM60/SP15
Hap6_SM01
Hap7_SM49
Hap8_Dan41
Hap9_SP86
100
Hap10_SP81
Hap11_SP78
56
68
Hap15_SP13
Hap18_SP28
Hap12_SP75
Hap13_WD21
Hap13_WD21a
Hap14_SP14
Hap16_SP08
Hap17_SP31
Epioblasma_brevidens

Figure 10.

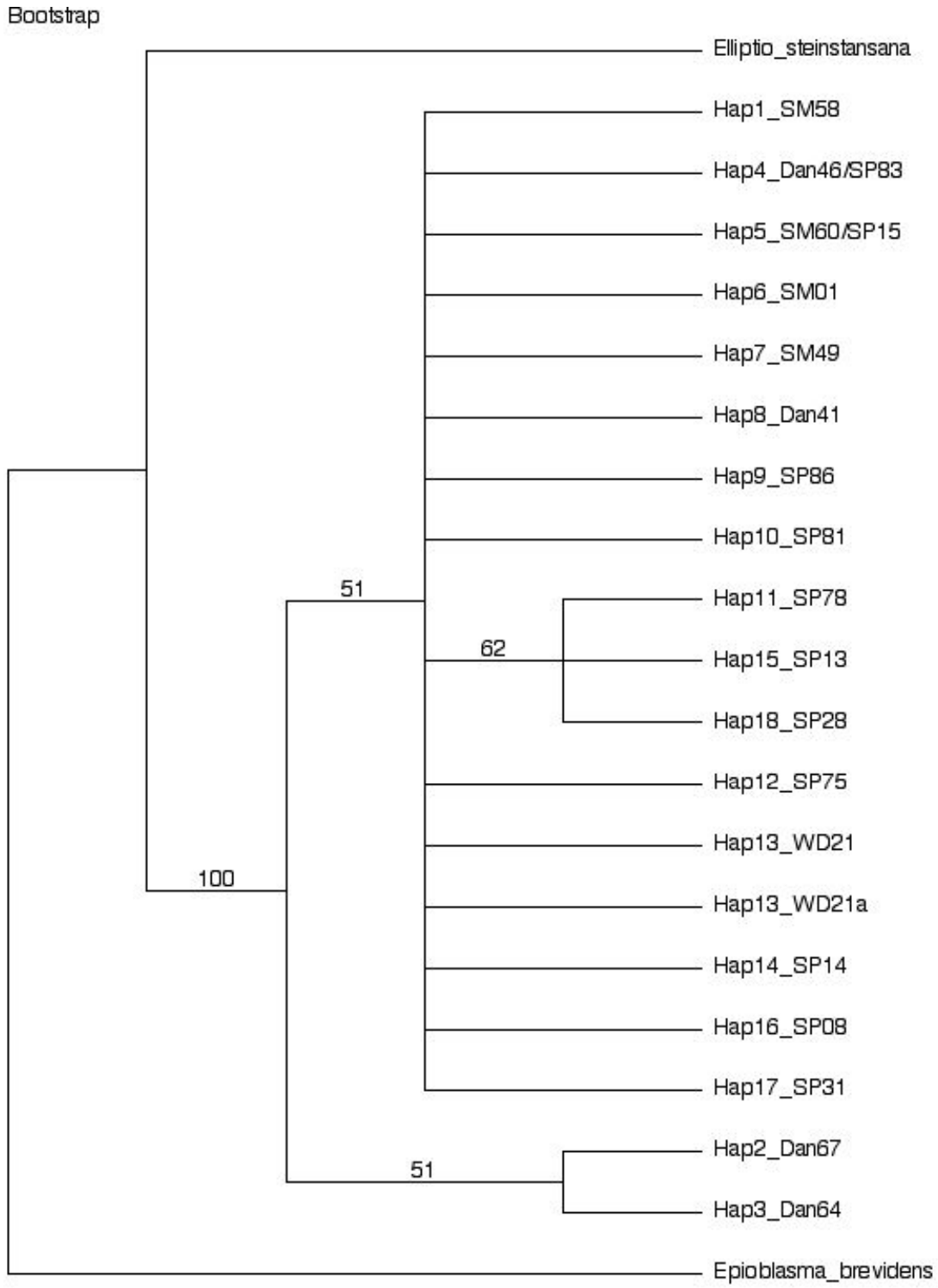

Bootstrap
Elliptio_steinstansana
Hap1_SM58
Hap4_Dan46/SP83
Hap5_SM60/SP15
Hap6_SM01
Hap7_SM49
Hap8_Dan41
Hap9_SP86
Hap10_SP81
51
Hap11_SP78
62
Hap15_SP13
Hap18_SP28
Hap12_SP75
Hap13_WD21
100
Hap13_WD21a
Hap14_SP14
Hap16_SP08
Hap17_SP31
Hap2_Dan67
51
Hap3_Dan64
Epioblasma_brevidens

Figure 11.

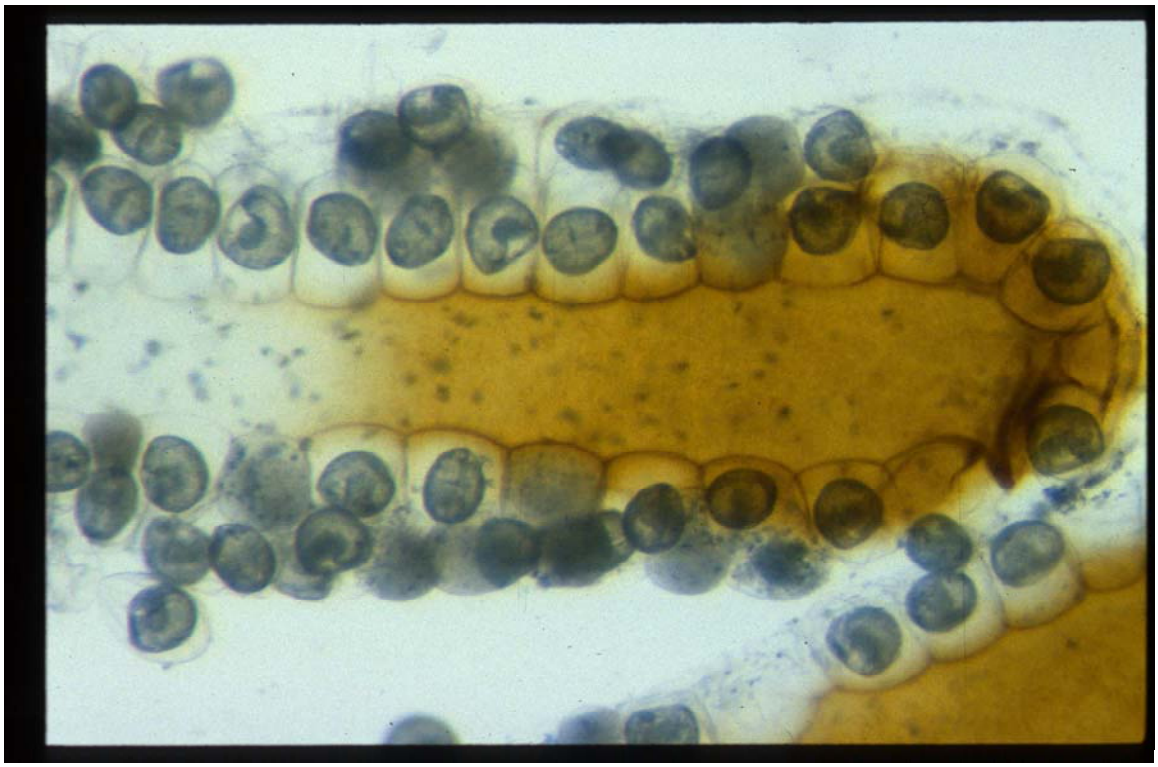
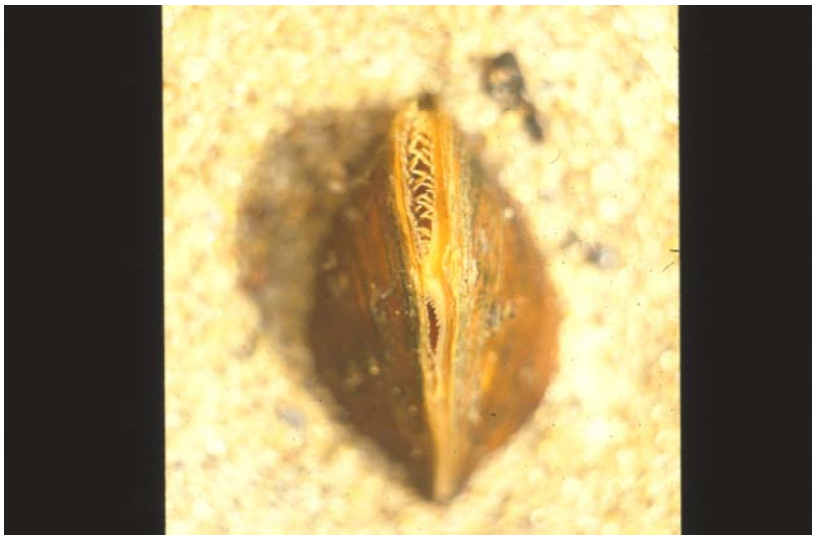


Figure 12.

A.



B.

Figure 13.

B.

Figure 13. Continuation

B.

Figure 13. Continuation

Figure 14.