

Date: 6-7-2011

Experiment: experiment(3)

Method: Calculate distance experiment

Algorithm: fitch

Phylip Algorithm:

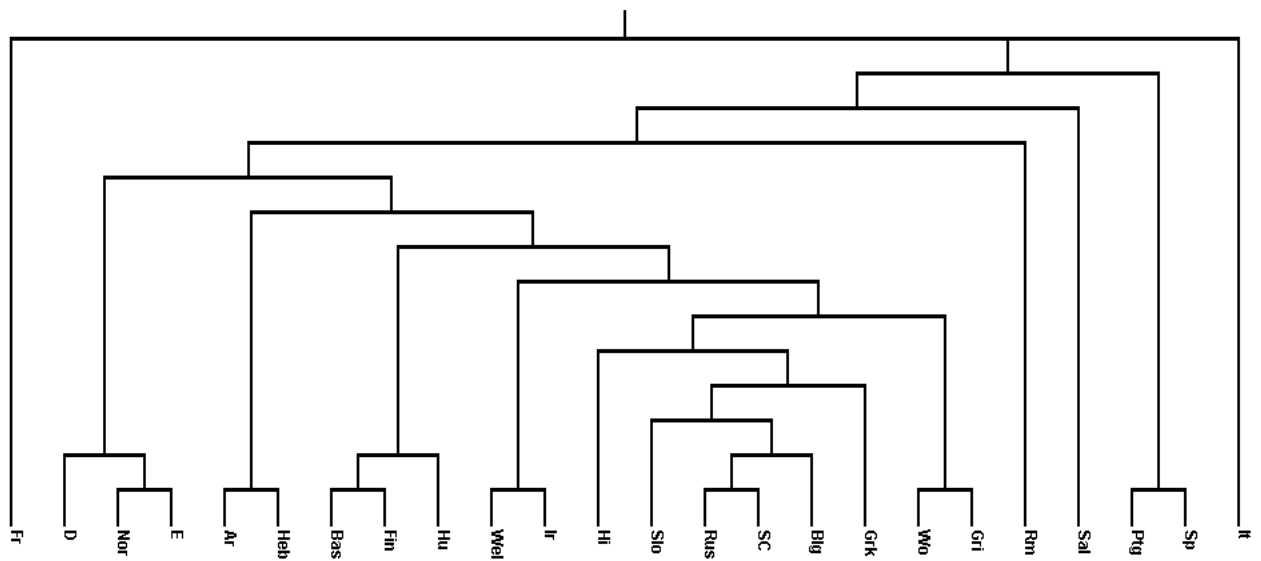
Method: Fitch-Margoliash

Power: 2.0

Outgroup: No outgroup

Randomize: false

Data Sets: 0



It	+	+	+	-	+	+	+	+	-	-	-	0	-	-	+	-	+	+	-	+	+	-	0	0	-	+	+	+	0	+	+	+	0	-	-	+	0	+	+	-	0	0	-	+	+	-	0	+	+	-	+	0	-	+	-	
Sal	+	+	+	-	+	+	+	+	-	-	+	0	-	-	+	-	+	+	-	+	+	-	0	0	-	+	+	+	+	0	+	+	-	0	-	+	0	+	+	+	+	-	-	+	-	+	0	+	-	+	0	0	-	0	-	
Sp	+	+	+	+	+	+	+	+	-	-	0	-	-	+	-	+	+	+	-	+	+	-	0	0	-	+	+	+	0	+	+	+	0	-	-	+	0	+	+	-	0	0	-	+	+	+	0	+	+	-	0	+	-	+	-	
Fr	+	+	+	-	+	-	+	+	0	-	-	0	-	-	+	-	+	+	+	+	+	-	0	0	-	+	+	+	0	0	+	+	+	0	-	-	+	0	+	+	-	0	0	-	+	+	+	0	+	+	-	+	-	+	-	
Ptg	+	+	+	-	+	+	+	+	-	-	-	0	-	-	+	-	+	+	-	+	+	-	0	0	-	+	+	+	0	+	+	+	0	-	-	+	0	+	+	-	0	0	-	+	+	-	0	+	+	-	+	-	+	-	+	
Rm	+	+	+	-	+	+	+	+	-	-	+	0	0	-	+	-	+	+	-	-	0	-	+	0	-	+	+	+	0	+	+	+	-	0	-	+	0	+	+	-	0	0	-	+	+	+	0	+	+	-	0	0	-	+	0	
Gri	+	+	+	-	+	+	+	+	-	-	0	-	-	+	-	+	+	-	-	0	+	-	0	0	-	+	+	+	0	+	+	+	-	0	-	+	+	+	+	-	0	-	+	+	-	0	0	+	0	-	+	-	+	-	+	
Grk	+	+	+	+	+	+	+	+	-	-	-	0	+	-	+	-	+	+	-	-	0	+	-	0	0	-	+	+	+	0	+	+	+	0	-	-	+	+	-	0	0	0	0	-	+	+	+	-	0	-	0	0	+	-	-	
E	+	+	+	-	+	+	+	+	-	-	-	0	-	-	+	-	+	+	-	+	+	-	0	0	-	+	-	-	0	0	+	+	+	-	-	-	-	0	0	0	0	0	0	-	+	-	+	0	0	0	-	0	0	-	+	0
D	+	+	+	-	+	+	+	+	-	-	-	0	-	-	+	-	+	+	-	+	+	+	0	0	-	+	+	-	+	+	+	+	-	0	-	+	+	-	0	0	0	0	0	-	+	-	+	0	+	0	+	0	-	+	0	
Nor	+	+	+	-	+	+	+	+	-	-	+	0	-	-	+	-	+	+	-	+	+	+	-	-	-	+	+	+	+	+	+	-	0	-	-	-	0	0	0	0	0	-	+	-	+	0	+	0	-	+	+	0	-	+	0	
Blg	+	+	+	-	+	+	+	+	-	-	+	0	0	-	+	-	+	-	-	+	+	-	-	0	-	+	+	+	0	+	+	+	-	+	-	+	0	-	0	0	0	0	-	+	+	+	0	0	-	0	0	+	-	+	0	
SC	+	+	+	-	+	+	-	0	-	0	0	0	0	0	+	-	-	0	0	0	-	0	+	-	0	0	-	+	+	+	0	+	+	+	-	+	-	+	+	-	0	0	0	0	0	0	0	0	0	0	+	-	0			
Rus	+	+	+	-	+	+	-	0	-	0	0	0	0	0	+	-	-	0	0	0	-	0	+	-	0	0	-	+	+	+	0	+	+	+	-	+	-	+	+	-	0	0														

Phylip outfile:

24 Populations

Fitch-Margoliash method version 3.69

```

      — — — — — 2
      \ \ (Obs - Exp)
Sum of squares = /_ /_ -----
                  2
                  i j      Obs
Negative branch lengths not allowed
      +--      D
      +-8
      ! ! +-      Nor
      ! +-9
      ! +---      E
      !
      +-7      +-----      Ar
      ! ! +-----16
      ! ! !      +-      Heb
      ! ! !
      ! ! !      +-----      Bas
      ! ! !      +-21
      ! +-13 +--19 +---      Fin
      ! ! ! !
      ! ! ! +-----      Hu
      ! ! !
      ! ! ! +-----      Wel
      ! +-18 +-----14
      ! ! ! +      Ir
      ! ! !
      ! ! ! +-----      Hi
      +-5      ! ! !
      ! !      +-15      !      +--      Slo
      ! !      ! +-20      !
      ! !      ! ! ! +-22      +      Rus
      ! !      ! ! ! ! ! +-12
      ! !      ! ! ! ! +-11      +      SC
      ! !      ! ! +-10      !
      ! !      +-6      !      +-      Blg
      +-2 !      !      !
      ! ! !      !      +-----      Grk
      ! ! !      !
      ! ! !      ! +-----      Wo
      ! ! !      +-17
      ! ! !      +      Gri
      +-4 ! !
      ! ! ! +--      Rm
      ! ! !
      ! ! +-      Sal
      ! !
      ! ! +      Ptg
      ! +-3
      ! +--      Sp
      !
      1-      Fr
```

```

!
+      It
remember: this is an unrooted tree!
Sum of squares =      10.59533
Average percent standard deviation =      13.87957
Between      And      Length
-----
  1          4      0.01557
  4          2      0.01810
  2          5      0.00908
  5          7      0.01154
  7          8      0.02748
  8          D      0.04569
  8          9      0.01945
  9          Nor    0.03293
  9          E      0.06007
  7         13      0.01623
 13         16      0.09465
 16          Ar     0.12360
 16          Heb    0.03920
 13         18      0.00433
 18         19      0.06297
 19         21      0.02668
 21          Bas    0.22181
 21          Fin    0.06989
 19          Hu     0.08565
 18         15      0.00873
 15         14      0.10092
 14          Wel    0.07589
 14          Ir     0.00000
 15          6      0.01010
  6         20      0.01284
 20          Hi     0.09315
 20         10      0.00869
 10         22      0.02179
 22          Slo    0.04569
 22         11      0.00991
 11         12      0.04130
 12          Rus    0.01050
 12          SC     0.01810
 11          Blg    0.04212
 10          Grk    0.09177
  6         17      0.04150
 17          Wo     0.21508
 17          Gri    0.00372
  5          Rm     0.06195
  2          Sal    0.03476
  4          3      0.01329
  3          Ptg    0.01001
  3          Sp     0.04769
  1          Fr     0.03927
  1          It     0.00073

```