

```

Loadings:
      PC1  PC2  PC3  PC4  PC5  PC6  PC7  PC8  PC9
tas_breadth  0.817  0.286 -0.344 -0.101  0.115          0.262
tas_position -0.338 -0.659  0.402  0.153 -0.245      0.415      0.118
pcp_breadth  -0.666  0.485  0.416 -0.137          0.326
pcp_position -0.764  0.239  0.405      0.212 -0.151 -0.229  0.127 -0.110
mtn_mass     -0.123  0.790          0.246  0.103  0.514      -0.107
wtr_mass     -0.387 -0.466 -0.363  0.223  0.604 -0.232  0.109      0.107
dispersal_ability  0.100  0.189  0.182  0.868  0.137  0.358 -0.127
pair_age      0.228 -0.423  0.400 -0.491  0.375  0.473
distance      0.613          0.584      0.185 -0.356      -0.344
boundary_length  0.620  0.109  0.633  0.133      -0.147  0.116  0.378

      PC1  PC2  PC3  PC4  PC5  PC6  PC7  PC8  PC9
SS loadings  2.795  1.878  1.686  1.126  0.739  0.590  0.543  0.298  0.224
Proportion Var 0.279  0.188  0.169  0.113  0.074  0.059  0.054  0.030  0.022
Cumulative Var 0.279  0.467  0.636  0.748  0.822  0.881  0.936  0.965  0.988

Call:
phylolm(formula = I(log(cost)) ~ PC1.tasbreadth + PC2.mtnmass +
  PC3.boundarylength + PC4.dispersalability, data = mydata,
  phy = mytree, model = "lambda")

AIC logLik
681.1 -333.5

Raw residuals:
      Min       1Q   Median       3Q      Max
-2.73216 -0.60811 -0.09543  0.74091  2.57661

Mean tip height: 104.1374
Parameter estimate(s) using ML:
lambda : 0.0000001
sigma2 : 0.009609122

Coefficients:
              Estimate StdErr t.value      p.value
(Intercept)  18.550271  0.065960 281.2338 < 0.00000000000000022 ***
PC1.tasbreadth  0.389256  0.066101  5.8888      0.0000000136908 ***
PC2.mtnmass    0.308573  0.066101  4.6682      0.0000051630607 ***
PC3.boundarylength  0.454677  0.066101  6.8785      0.0000000000566 ***
PC4.dispersalability -0.022863  0.066101 -0.3459      0.7298
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

R-squared: 0.3112      Adjusted R-squared: 0.2992

Note: p-values and R-squared are conditional on lambda=0.0000001.

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