

Report 01 - Exploratory analysis of distance and its implication in duplication and speciation events

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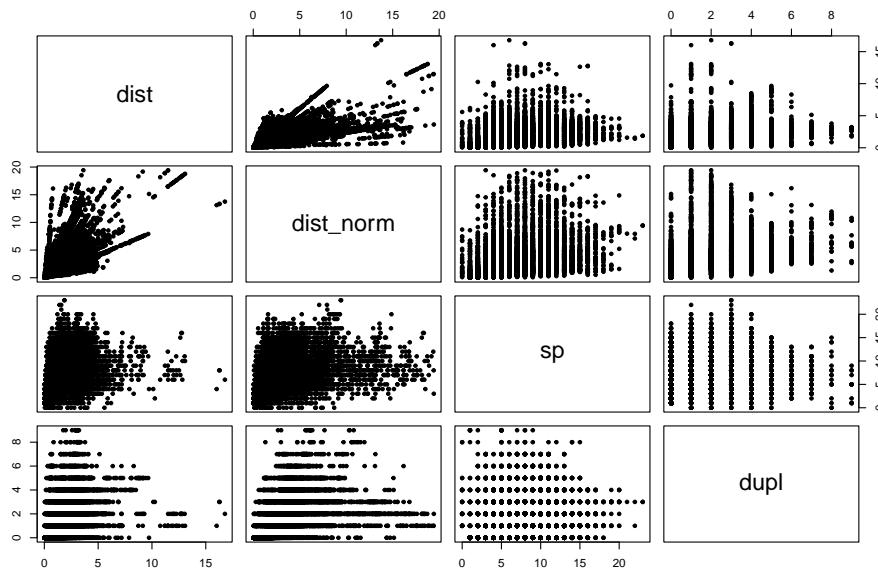
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Retrieved data

```
##   id      tree    prot      from from_sp
## 1 5 Phy000CZPL_YEAST YNR030W Phy000EYAK_YARLI  YARLI
## 2 5 Phy000CX7L_YEAST YFL059W Phy000EXNX_YARLI  YARLI
## 3 5 Phy000CZPL_YEAST YNR030W Phy000EYAK_YARLI  YARLI
## 4 5 Phy000CX7L_YEAST YFL059W Phy000EXNX_YARLI  YARLI
## 5 5 Phy000CZPL_YEAST YNR030W Phy000EYAK_YARLI  YARLI
## 6 5 Phy000CX7L_YEAST YFL059W Phy000EXNX_YARLI  YARLI

##   from_sp      to to_sp      dist dist_norm sp dupl
## 1  YARLI Phy000JQB2_KLUWA KLUWA 2.110419  1.343531 3  0
## 2  YARLI Phy0005L06_DEBHA DEBHA 0.701397  3.898599 3  0
## 3  YARLI Phy000NWIYI_SACKL SACKL 2.075238  1.321134 5  0
## 4  YARLI Phy000HOB6_PICGU PICGU 0.715596  3.977522 3  0
## 5  YARLI Phy0008OMI_KLULA KLULA 2.366784  1.506737 6  0
## 6  YARLI Phy000JQJD_KLUWA KLUWA 0.789342  4.387427 4  1
```

Relationships between raw numerical variables



Summarizing data

```

Min. 1st Qu. Median Mean 3rd Qu. Max. skew kurt sum
##   Median.dist Median.dist_norm Median.sp Median.dupl
## 1    2.362404      3.492565      5          1
## 2    2.243741      3.251277      5          1
## 3    2.050145      3.340613      5          2
## 4    2.384548      3.543286      6          2
## 5    2.269817      3.532236      7          2
## 6    2.144327      3.226063      5          1

##   Mean.dist Mean.dist_norm Mean.sp Mean.dupl
## 1  2.637641      4.686751  4.711610  1.797753
## 2  2.511678      4.556358  4.998145  1.751391
## 3  2.350201      4.471194  4.546022  1.936037
## 4  2.583006      4.889221  5.424704  1.922166
## 5  2.481469      4.800943  7.334416  2.043831
## 6  2.408569      4.408195  5.121622  1.830116

##   skew.dist skew.dist_norm     skew.sp skew.dupl
## 1  3.135068      3.698351  0.51112450  1.198881
## 2  3.251173      6.807064  0.55663914  1.242936
## 3  3.391360      7.132250  0.38583187  1.153682
## 4  2.703199      5.794260 -0.05314095  1.143600
## 5  2.554588      6.286550  0.07890201  1.096209
## 6  3.396304      7.653066  0.39802151  1.155366

```

