```
OGs_100100_T1_78_before
                         Monocots_ACG_0008184
                         Monocots_AEO_0015993
                         Monocots_AGJ_0024926
                         -Monocots_AHE_0015303
   Monocots_AGW_0016203
   Monocots_ABP_0026658
   Monocots_AFA_0026404
Monocots_AIT_0002893
    Monocots_ABQ_0030015
   Monocots_AEY_0023573
   Monocots_AEB_0007210
   Monocots_AHF_0015781
   Monocots_AGD_0037131
   Monocots_AAH_0013224
   Monocots_ADO_0012452
   Monocots_AIS_0002827
  Monocots_AFT_0002049
   -Monocots_AIR_0026809
  Monocots_AGK_0039976
  Monocots_AFD_0027812
—Monocots_AAO_0002491
  Monocots_AKN_0006670
                                                OGs_100100_T1_78_after
                                                 Outgroup_ADK_0030071
  Monocots_AKO_0004834
 Monocots_ADV_0024199
                                                           Monocots_AGJ_0024926
 Monocots_ACT_0009808
                                                          Monocots_AEO_0015993
 Monocots_ACU_0003612
                                                          Monocots_ABP_0026658
                                                          Monocots_AFA_0026404
-Monocots_AIT_0002893
   -Monocots_AHJ_0004393
  -Monocots_AAV_0004043
 Monocots_AAB_0011436
                                                          Monocots_ABQ_0030015
     -Monocots_AHH_0008017
                                                          Monocots_AEY_0023573
 -Monocots_ACP_0008810
                                                           -Monocots_AEB_0007210
Monocots_ADJ_0011845
                                                          Monocots_AHF_0015781
 Monocots_AIJ_0017711
                                                          Monocots_AGD_0037131
 Monocots_AEQ_0008697
                                                           Monocots_AAH_0013224
        -Monocots_AIH_0031277
                                                          Monocots_ADO_0012452
                                                         Monocots_AIS_0002827
Magnoliids_ABX_0012338
                                                         -Monocots_AFT_0002049
Magnoliids_ABW_0010938
_Magnoliids_AIB_0021483
                                                           -Monocots_AIR_0026809
 -Magnoliids_ABS_0011681
                                                         Monocots_AGK_0039976
                                                         Monocots_AFD_0027812
 Magnoliids_AID_0031582
                                                          -Monocots_AAO_0002491
   -Eudicots_AKF_0013615
  Eudicots_ADL_0029914
                                                         Monocots_AKN_0006670
                                                         <sup>l</sup>Monocots_AKO_0004834
  Eudicots_AKH_0029780
                                                    Monocots_ADV_0024199
  <sup>L</sup>Eudicots_AKK_0024134
  Eudicots_AKD_0012954
                                                      Monocots_ACT_0009808
  Eudicots_AKC_0018233
                                                      Monocots_ACU_0003612
         -Eudicots_AKB_0001615
                                                       -Monocots_AAV_0004043
  -Eudicots_AKJ_0019934
                                                   Monocots_AAB_0011436
 Eudicots_AKA_0040057
                                                                 -Monocots_AHH_0008017
  -Eudicots_AAS_0011987
                                                      Monocots_ACP_0008810
  Fudicots_ADN_0006772
                                                       -Monocots_ADJ_0011845
  -Eudicots_AKG_0028267
                                                      Monocots_AIJ_0017711
   -Eudicots_AKI_0030822
                                                    Monocots_AEQ_0008697
                                                 Magnoliids_ABX_0012338
      Eudicots_AGG_0025945
    -Eudicots_AKR_0005520
                                                  Magnoliids_ABW_0010938
    -Eudicots_AKL_0004550
                                                  -basal angiosperms_AEV_0021485
         -Eudicots_AKQ_0019480
                                                  -basal angiosperms_ADD_0012011
  -Eudicots_AHC_0008801
                                                   Ceratophyllales_AIA_0009878
  -Eudicots_AAR_0005643
                                                       Eudicots_AKH_0029780
 Eudicots_ACY_0029591
                                                       <sup>L</sup>Eudicots_AKK_0024134
  _Chloranthales_ABU_0023524
                                                      Eudicots_ADL_0029914
                                                       -Eudicots_AKD_0012954
  Chloranthales_ABV_0002493
-Eudicots_AIO_0002378
                                                      Eudicots_AKC_0018233
 Eudicots_ABE_0009879
                                                       -Eudicots_AKJ_0019934
Ceratophyllales_AIA_0009878
-basal angiosperms_AKM_0004265
-basal angiosperms_AEV_0021485
-basal angiosperms_ADD_0012011
                                                     <sub>|</sub> Eudicots_AKA_0040057
                                                       -Eudicots_AAS_0011987
                                                         Eudicots_ADN_0006772
                                                         -Eudicots_AKG_0028267
Eudicots_AEG_0017015
                                                           Eudicots_AKI_0030822
Eudicots_AIN_0016872
                                                                -Eudicots_AGG_0025945
Eudicots_AZA_0002611
                                                            Eudicots_AKR_0005520
Monocots_AFF_0013815
-Monocots_ABF_0035135
                                                           Eudicots_AKL_0004550
                                                                           Eudicots_AKQ_0019480
Eudicots_AHC_0008801
Monocots_AKE_0023585
                                                     Eudicots_ACY_0029591
Outgroup_ADK_0030071
                                                       Chloranthales_ABU_0023524
                                                       Chloranthales_ABV_0002493
 -Outgroup_AZB_0033820
0. 934519
                                                 0. 347405
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