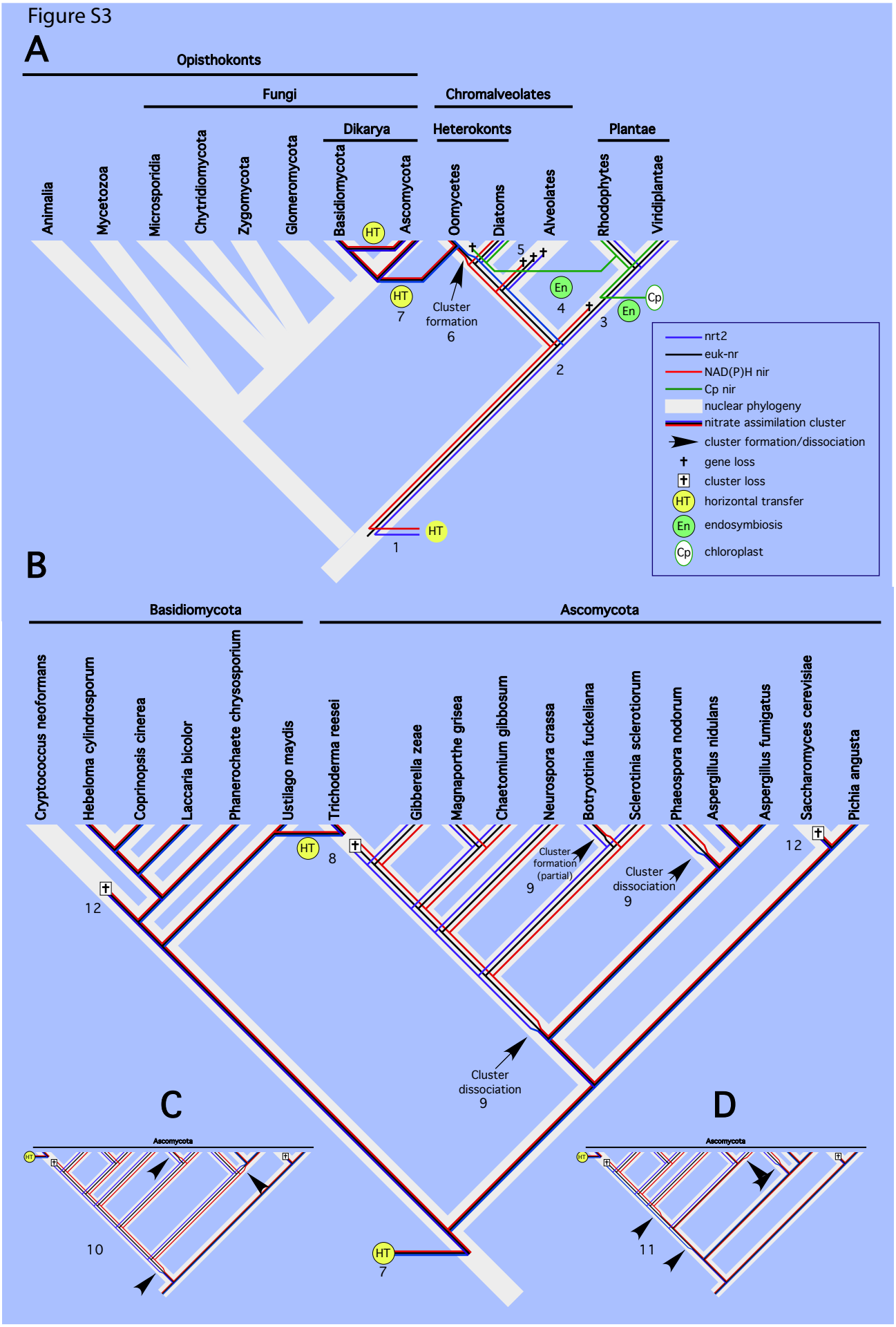
Figure S3


A
Opisthokonts
Fungi
Chromalveolates
Dikarya
Heterokonts
Plantae
Animalia
Mycetozoa
Microsporidia
Chytridiomycota
Zygomycota
Glomeromycota
Basidiomycota
Ascomycota
Oomycetes
Diatoms
Alveolates
Rhodophytes
Viridiplantae
HT
Cluster formation
6
7
5
4
3
2
1
En
Cp
nrt2
euk-nr
NAD(P)H nir
Cp nir
nuclear phylogeny
nitrate assimilation cluster
cluster formation/dissociation
gene loss
cluster loss
horizontal transfer
endosymbiosis
chloroplast
B
Basidiomycota
Ascomycota
Cryptococcus neoformans
Hebeloma cylindrosporum
Coprinopsis cinerea
Laccaria bicolor
Phanerochaete chrysosporium
Ustilago maydis
Trichoderma reesei
Gibberella zeae
Magnaporthe grisea
Chaetomium gibbosum
Neurospora crassa
Botryotinia fuckeliana
Sclerotinia sclerotiorum
Phaeospora nodorum
Aspergillus nidulans
Aspergillus fumigatus
Saccharomyces cerevisiae
Pichia angusta
8
12
Cluster formation (partial)
9
Cluster dissociation
C
D
10
11