

D. Pollock - Pierid mtDNAPierids

- Coliads
- Pierinae

Cox Tree - bad

rRNA tree - OK

>80% bootstraps good

Cox vs rRNA

- Cox pos. III v. biased towards AT
- rRNA highly variable rate

3 Rate Model

Tamura & Nei & ~~Watanabe~~ - purifying selection maintaining nucleotide frequencies

① observed  $\Delta$ 's as est. by parsimony  
 ② ~~then~~ - largest are transversions

LSD