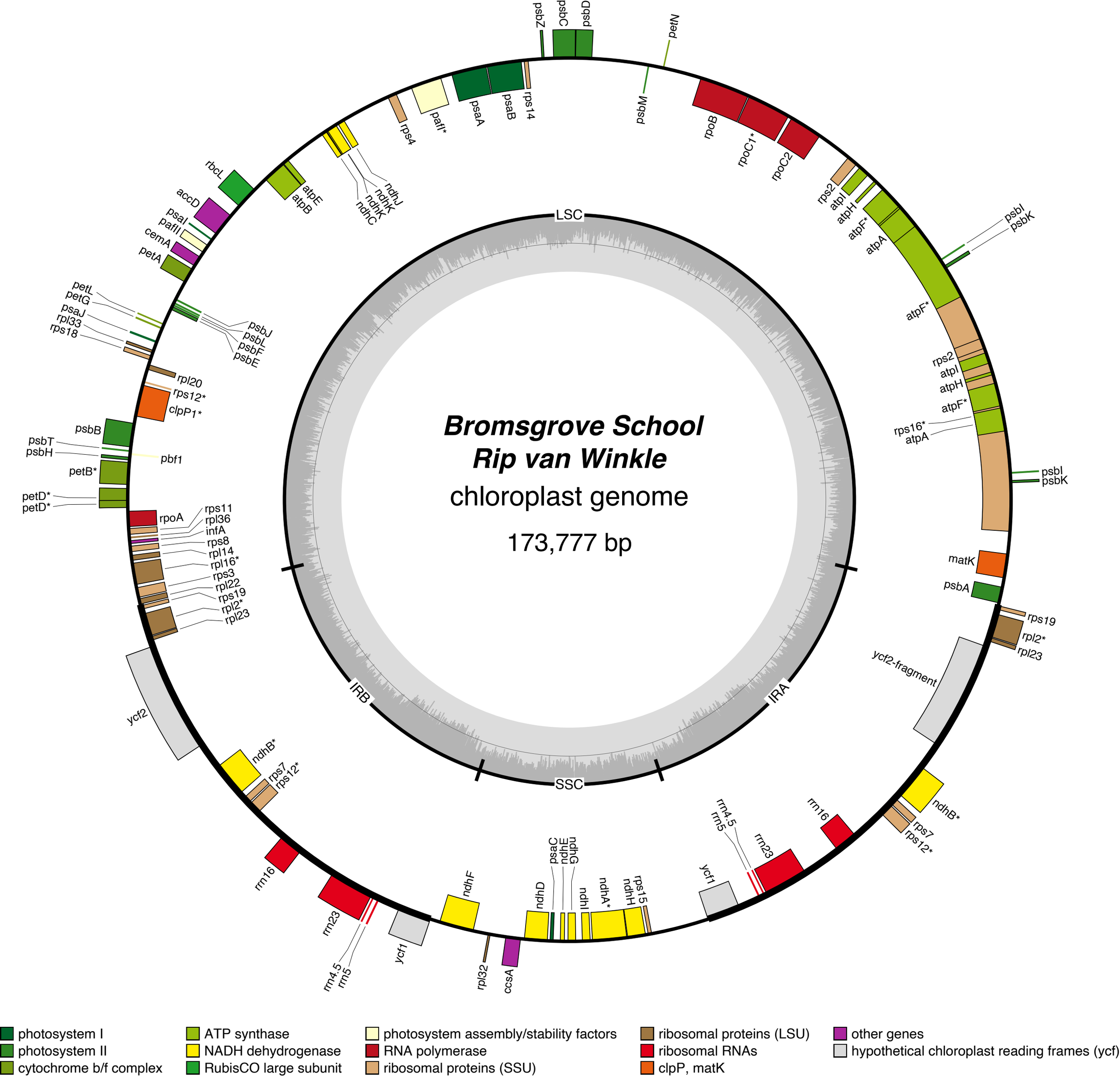
Bromsgrove School
Rip van Winkle
chloroplast genome
173,777 bp
LSC
IRB
IRA
SSC
psbZ
psbC
psbD
petN
psbM
rpoB
rpoC1*
rpoC2
rps2
atpI
atpH
atpF*
atpA
psbI
psbK
rps4
pafI*
psaA
psaB
rps14
rbcL
accD
psaI
pafII
cemA
petA
atpE
atpB
ndhJ
ndhK
ndhK
ndhC
petL
petG
psaJ
rpl33
rps18
psbJ
psbL
psbF
psbE
rpl20
rps12*
clpP1*
psbB
psbT
psbH
pbf1
petB*
petD*
petD*
rpoA
rps11
rpl36
infA
rps8
rpl14
rpl16*
rps3
rpl22
rps19
rpl2*
rpl23
ycf2
ndhB*
rps7
rps12*
rrn16
rrn23
rrn4.5
rrn5
ycf1
ndhF
rpl32
ccsA
ndhD
psaC
ndhE
ndhG
ndhI
ndhA*
ndhH
rps15
ycf1
rrn4.5
rrn5
rrn23
rrn16
ndhB*
rps7
rps12*
ycf2-fragment
rps19
rpl2*
rpl23
psbA
matK
rps16*
atpA
atpF*
rps2
atpI
atpH
atpF*
psbI
psbK
photosystem I
photosystem II
cytochrome b/f complex
ATP synthase
NADH dehydrogenase
RubisCO large subunit
photosystem assembly/stability factors
RNA polymerase
ribosomal proteins (SSU)
ribosomal proteins (LSU)
ribosomal RNAs
clpP, matK
other genes
hypothetical chloroplast reading frames (ycf)