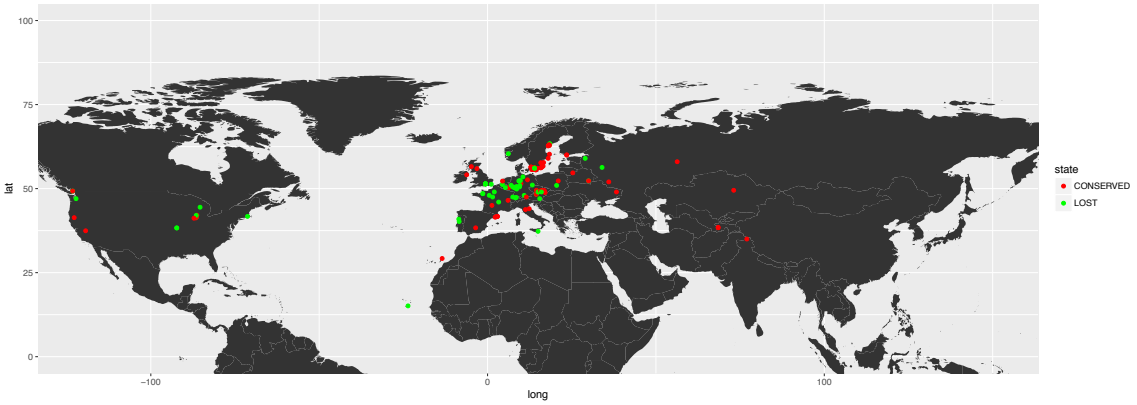
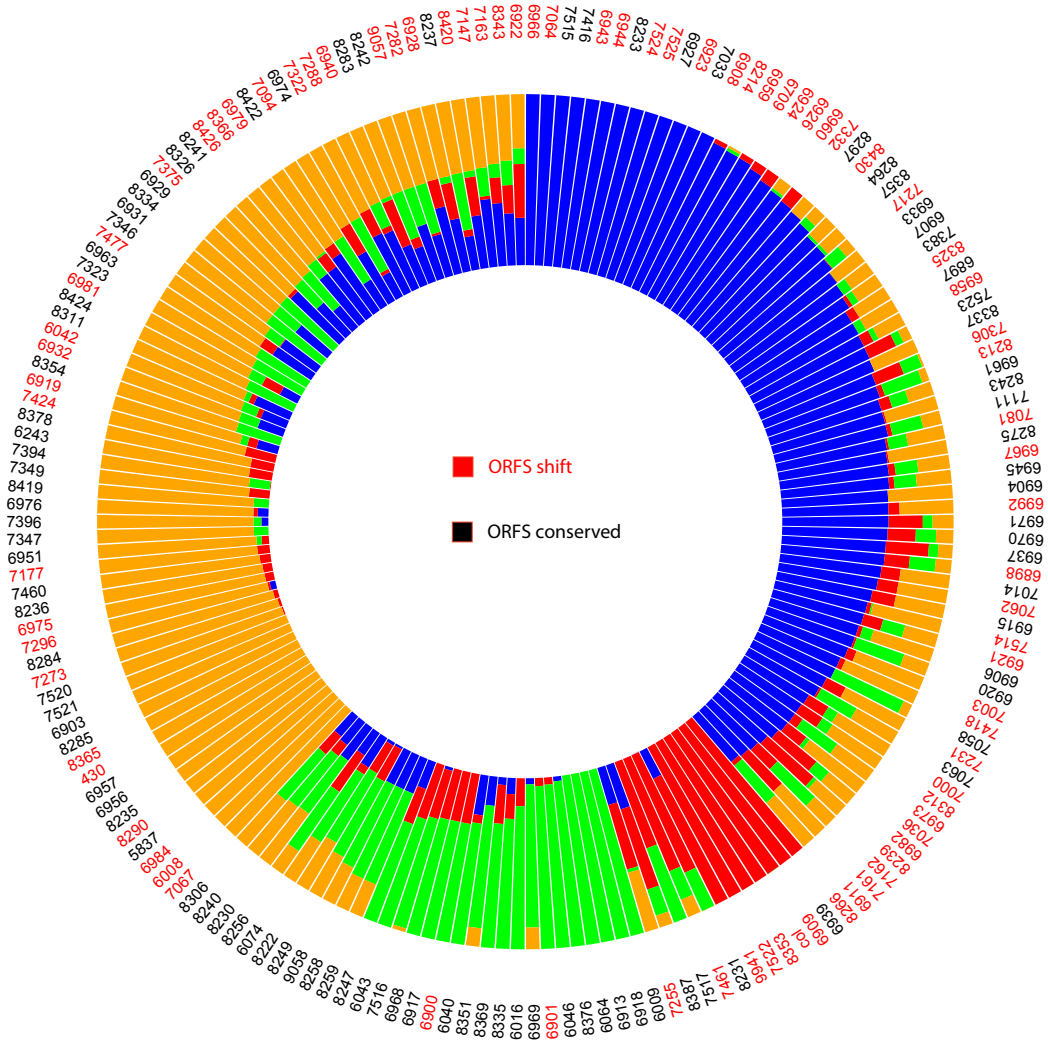
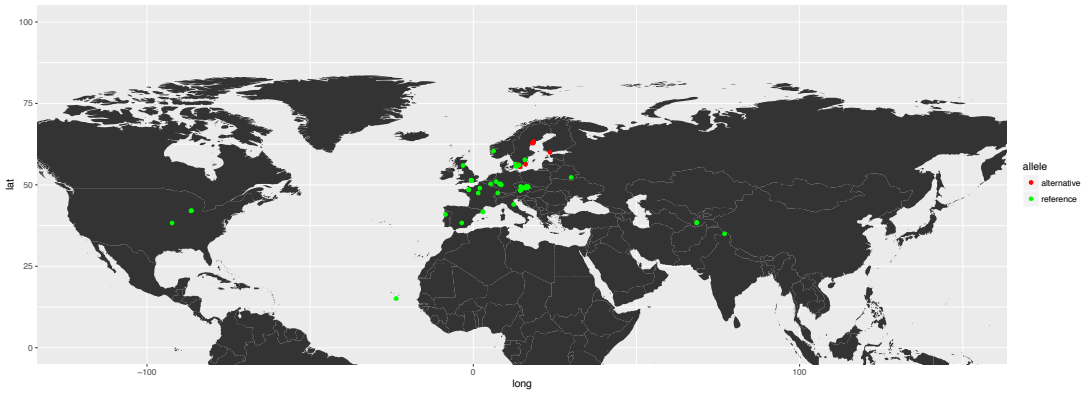
a


100
75
50
25
0
lat
−100
0
100
long
state
CONSERVED
LOST

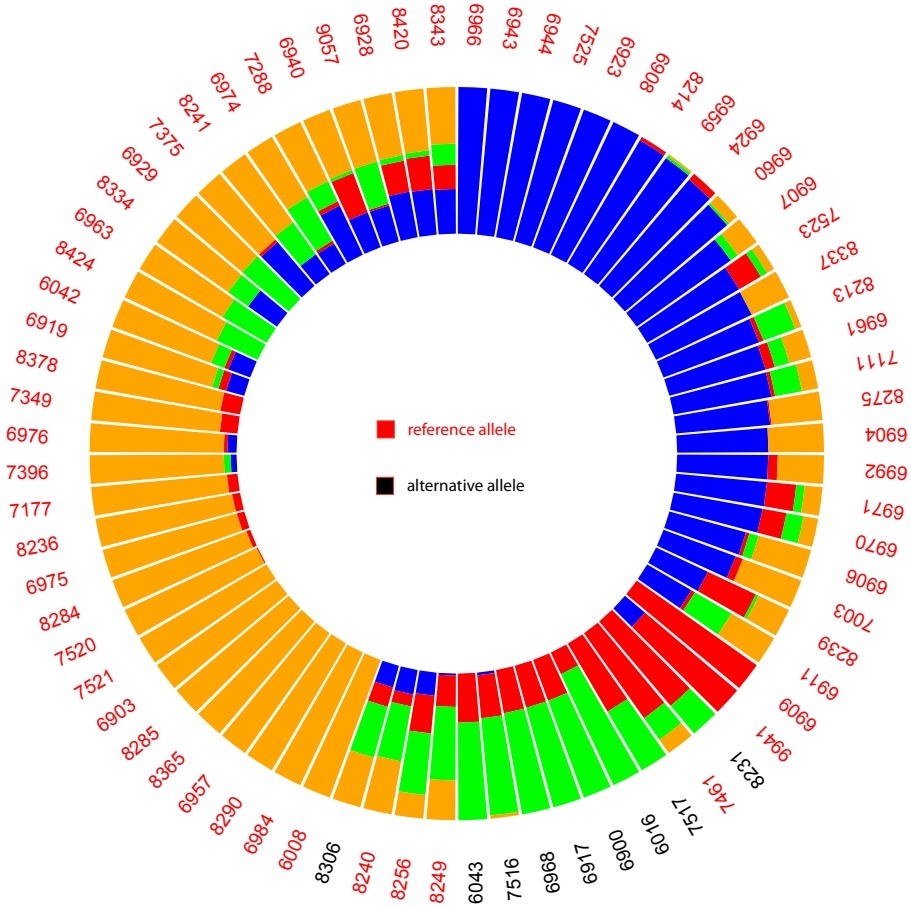
b


ORFS shift
ORFS conserved

c


100
75
50
25
0
lat
−100
0
100
long
allele
alternative
reference

d


reference allele
alternative allele
8343
9666
6943
6944
7525
6923
6908
8214
6959
6924
6960
6907
7523
8337
8213
6961
7111
8275
6904
6992
6971
6970
6906
7003
8239
6971
6909
9941
8231
7461
7517
6016
6090
6917
6968
7516
6043
8249
8256
8240
8306
6008
6984
8290
6957
8365
8285
6903
7521
7520
8284
6975
8236
7177
7396
6976
7349
8378
6919
6042
8424
6963
8334
6929
7375
8241
6974
7288
6940
9057
6928
8420