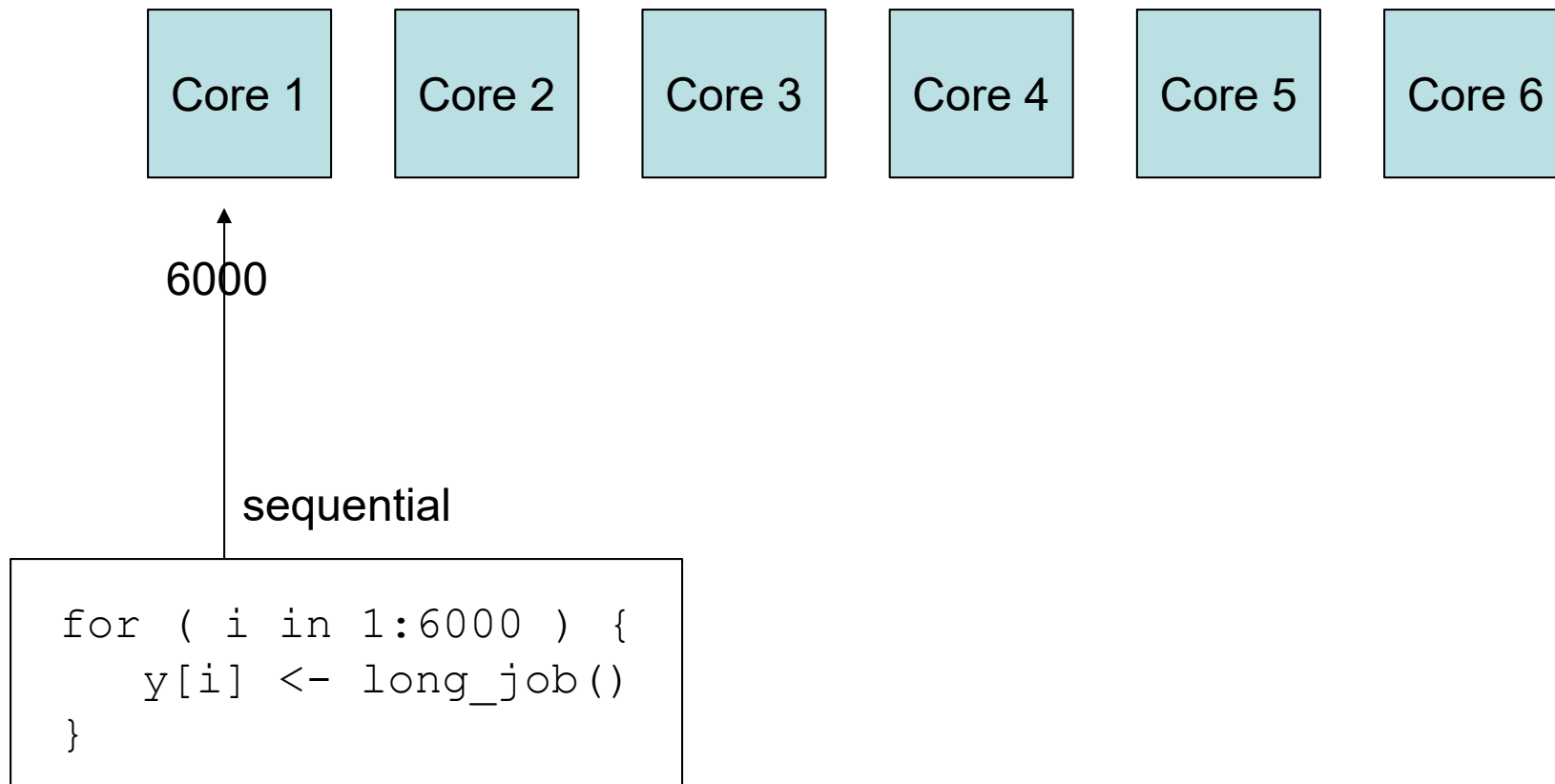


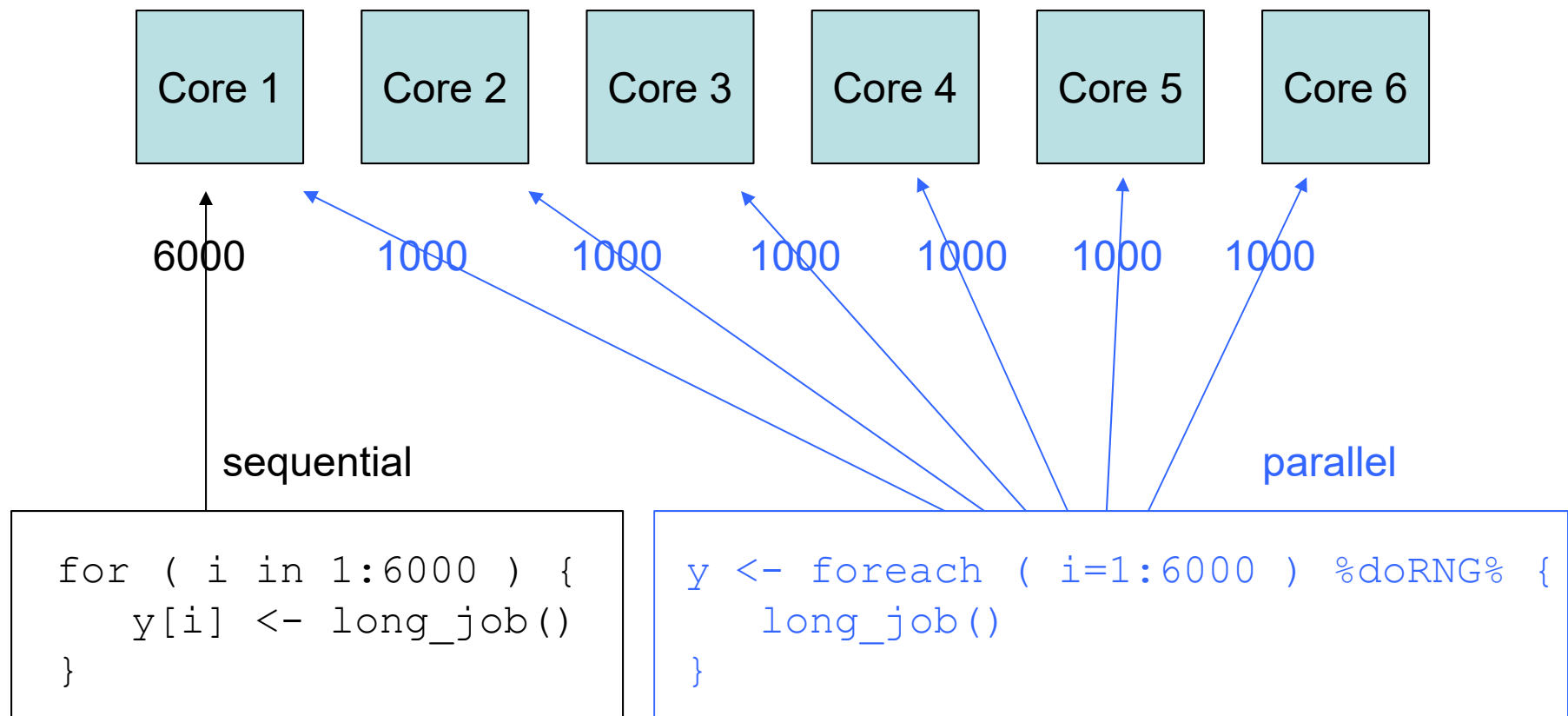
# Today

- Bagging
  - code
  - inference algorithm (predictive performance)
  - tuning
- Parallel processing

# Parallel processing



# Parallel processing



# Setup

```
library(doFuture)    —————→ library(future)
library(doRNG)        library(foreach)
registerDoFuture()

availableCores()
plan(multisession, workers=8)

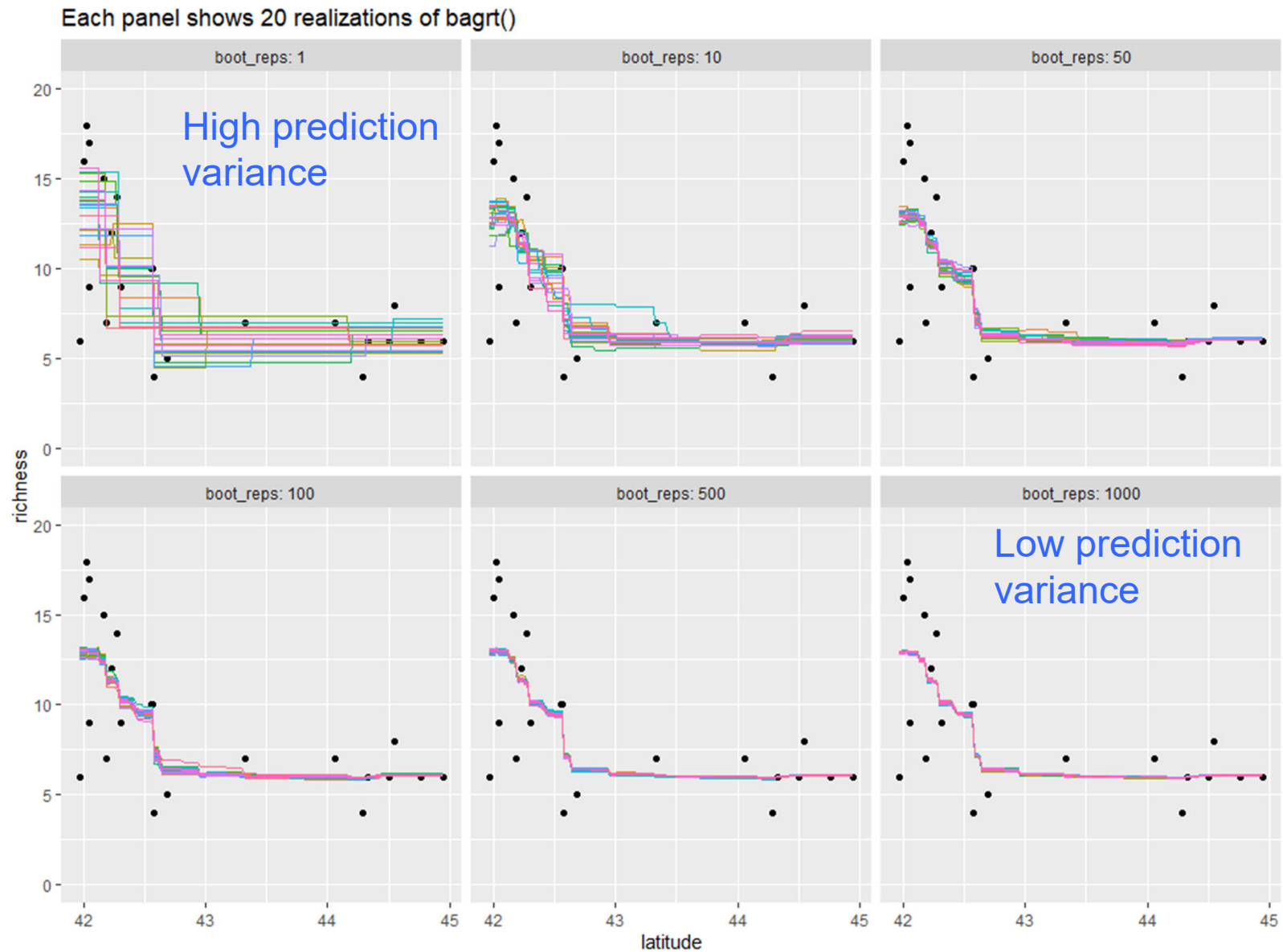
# Handy timing function:
system.time( some_function() )

# Saving/loading long jobs
save(myresult1, myresult2, file="/saved/myresult.Rdata")
load("/saved/myresult.Rdata")
```

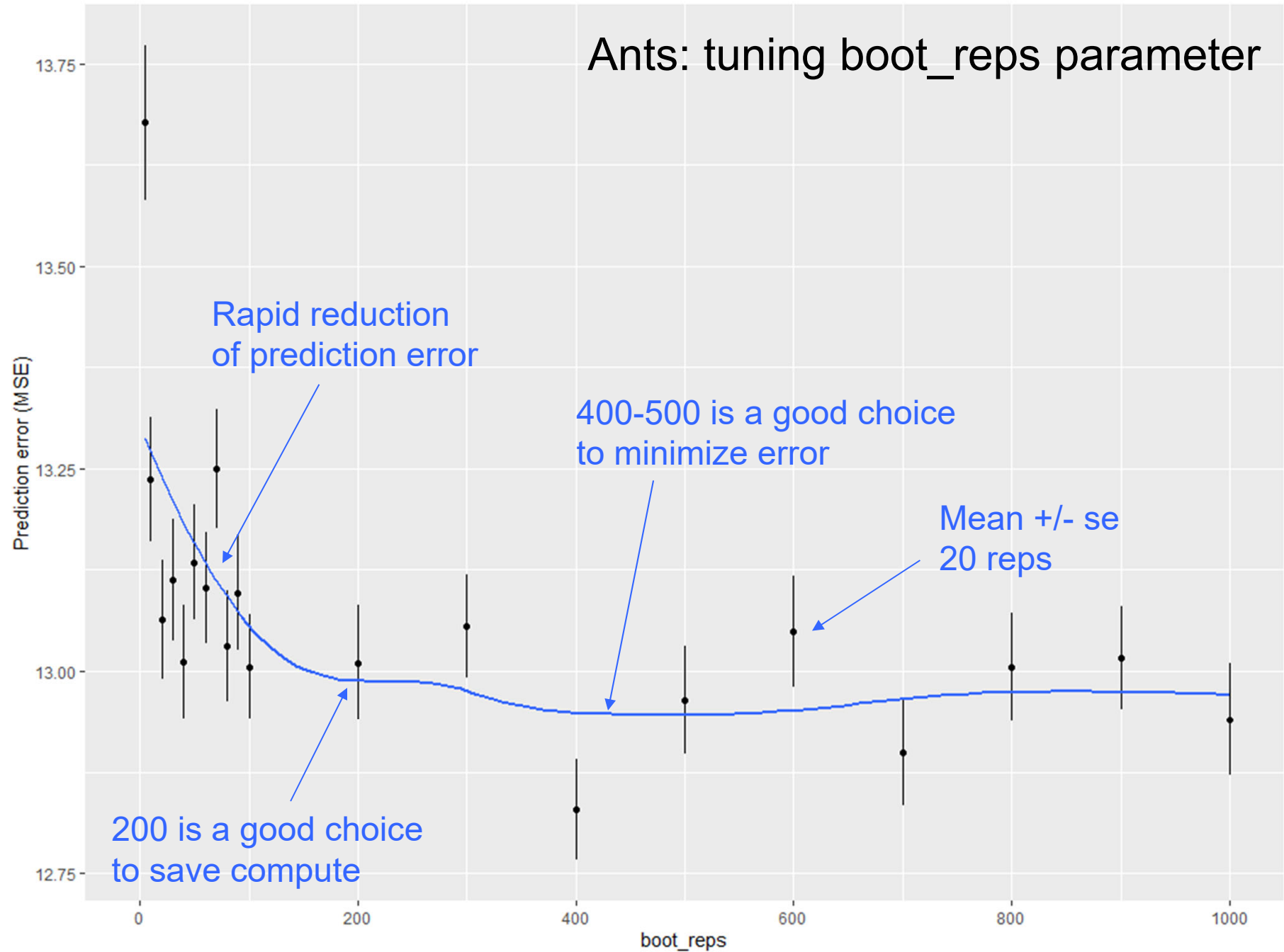
# Inference algorithm

- 5-fold CV, 500 splits
- Ants: mean prediction error (MSE)  
12.93 +/- 0.07

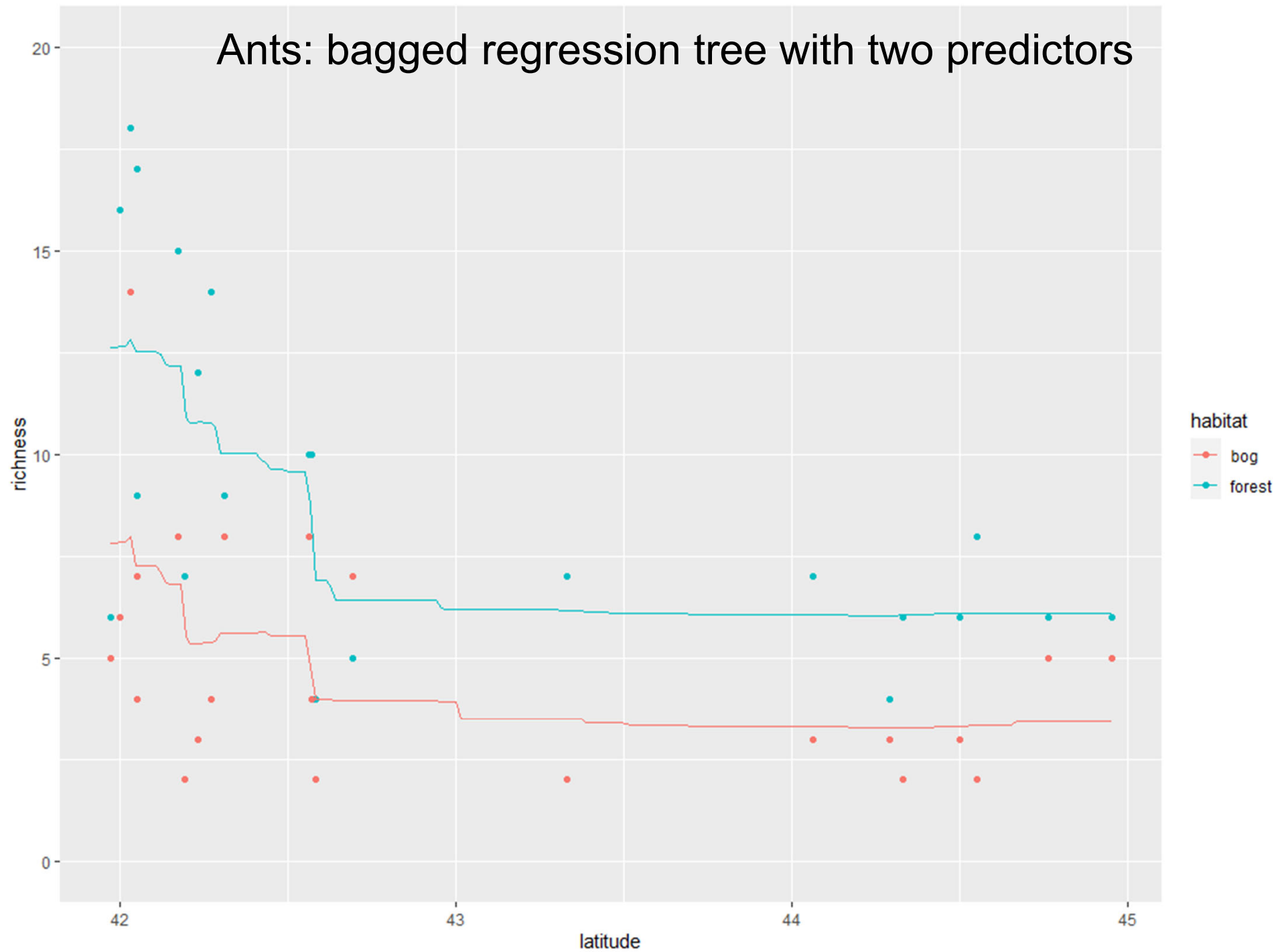
# Bagging reduces prediction variance



## Ants: tuning boot\_reps parameter



# Ants: bagged regression tree with two predictors





Bagged KNN 7 (blue) compared to single KNN 7 (black)

