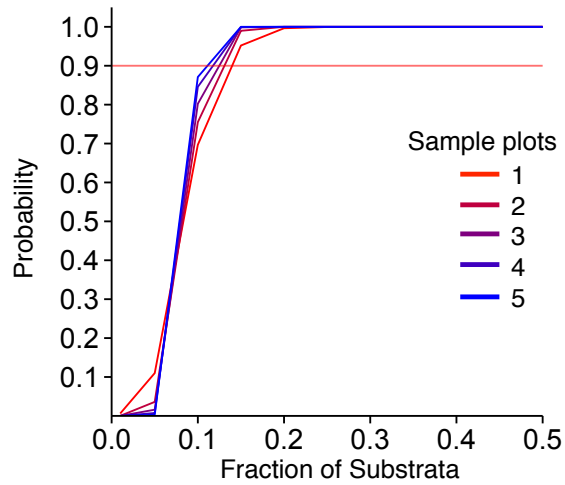# Supplementary Material for

Spatially explicit analysis of field inventories for national forest carbon monitoring
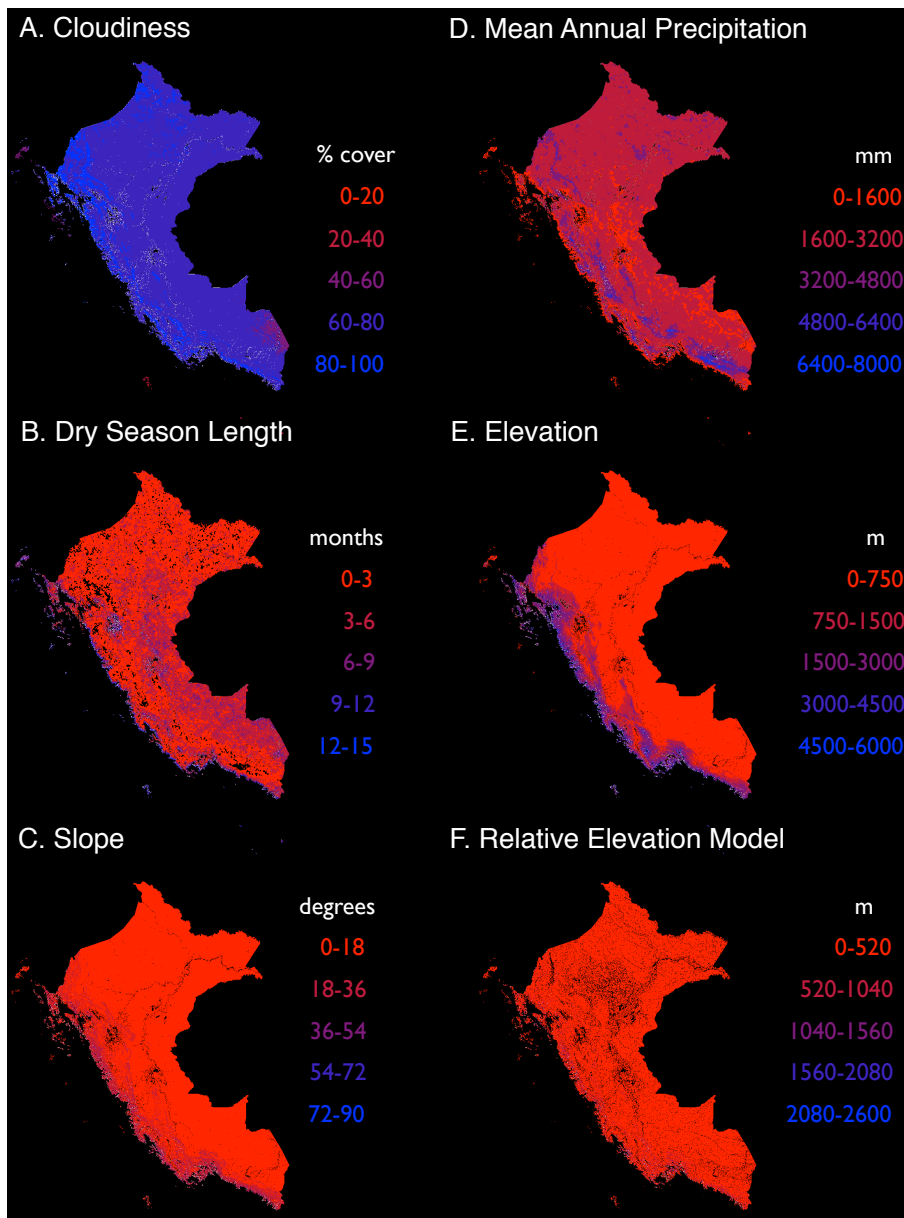
David C. Marvin & Gregory P. Asner


Figure S1. The fraction of stratified random substrata needed to reliably (pr=0.9, red line) estimate the model total national carbon stocks, plotted by the number of sample field plots used per substratum to estimate each substratum's mean ACD.
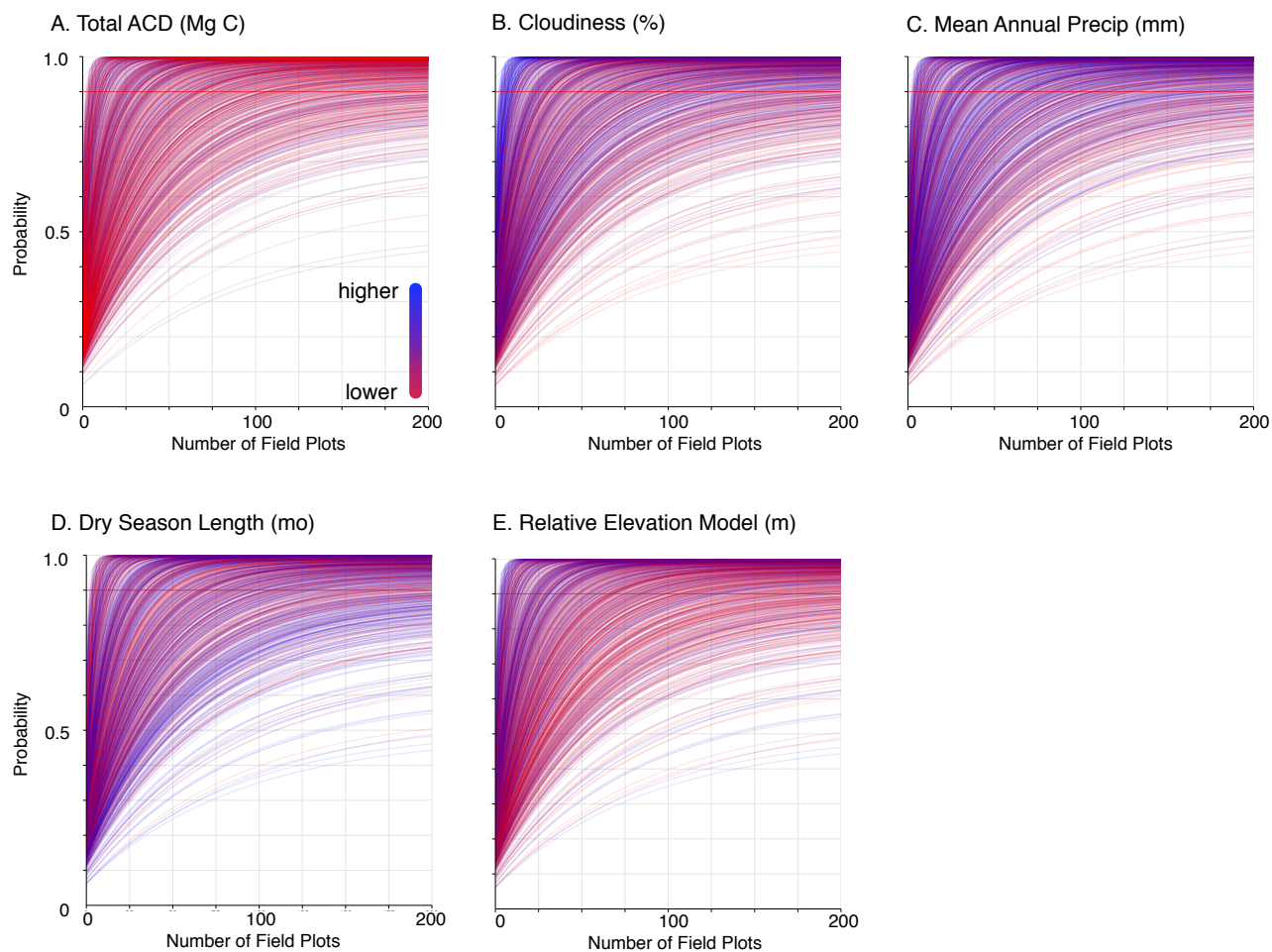
Figure S2. Number of field plots needed to reliably (pr=0.9, red line) estimate the mean model ACD (Mg C ha^{-1}) of a substratum using stratified sampling for (A) total model ACD, (B) cloudiness, (C) mean annual precipitation, (D) dry season length, and (E) relative elevation. Coloring is same as in Fig 1B-D.

A. Cloudiness

% cover
0-20
20-40
40-60
60-80
80-100

B. Dry Season Length

months
0-3
3-6
6-9
9-12
12-15

C. Slope

degrees
0-18
18-36
36-54
54-72
72-90

D. Mean Annual Precipitation

mm
0-1600
1600-3200
3200-4800
4800-6400
6400-8000

E. Elevation

m
0-750
750-1500
1500-3000
3000-4500
4500-6000

F. Relative Elevation Model

m
0-520
520-1040
1040-1560
1560-2080
2080-2600

Figure S3. Strata binned and colored by five equal ranges for (A) cloudiness, (B) dry season length, (C) slope, (D) mean annual precipitation, (E) elevation, and (F) relative elevation model (see Methods for description).
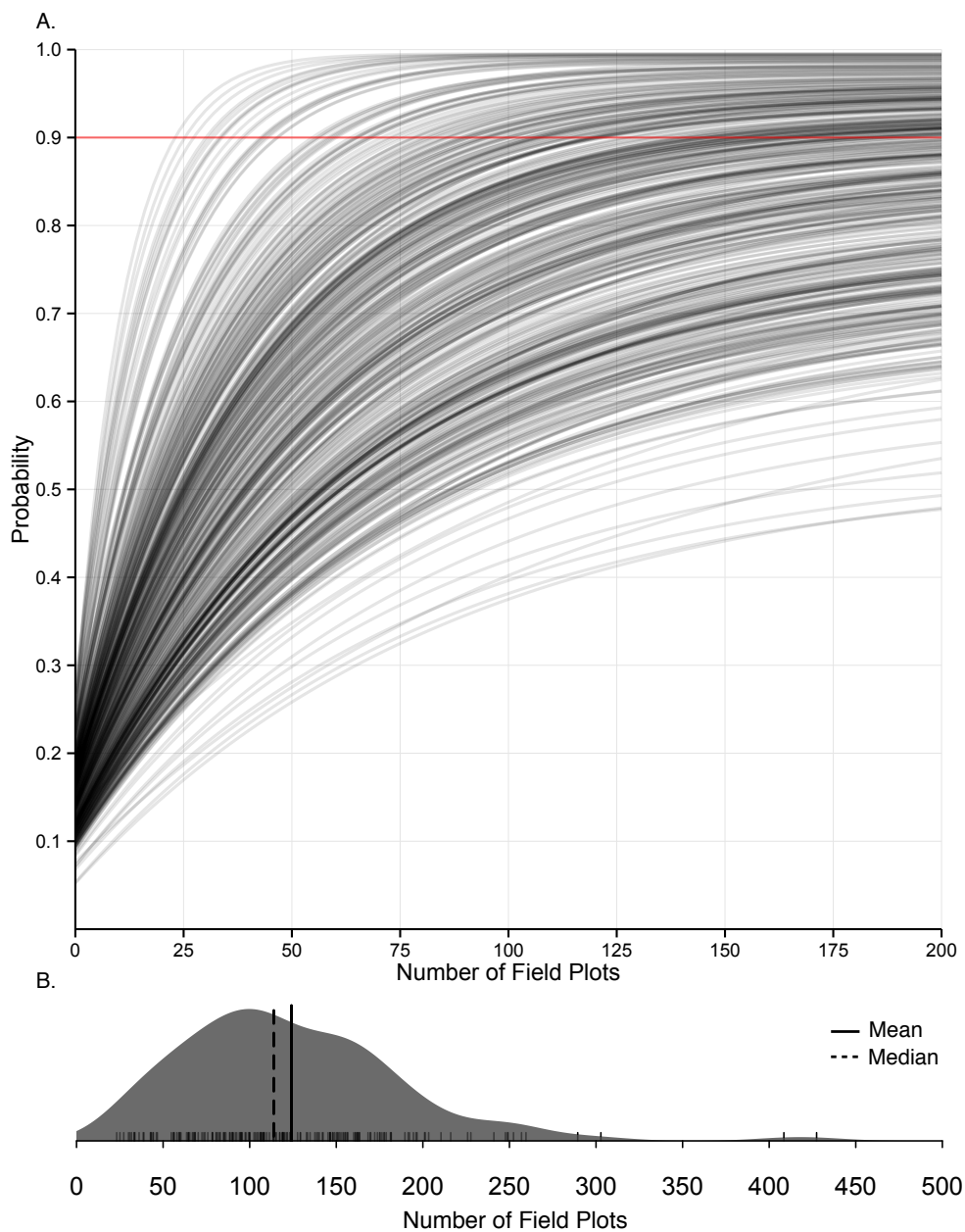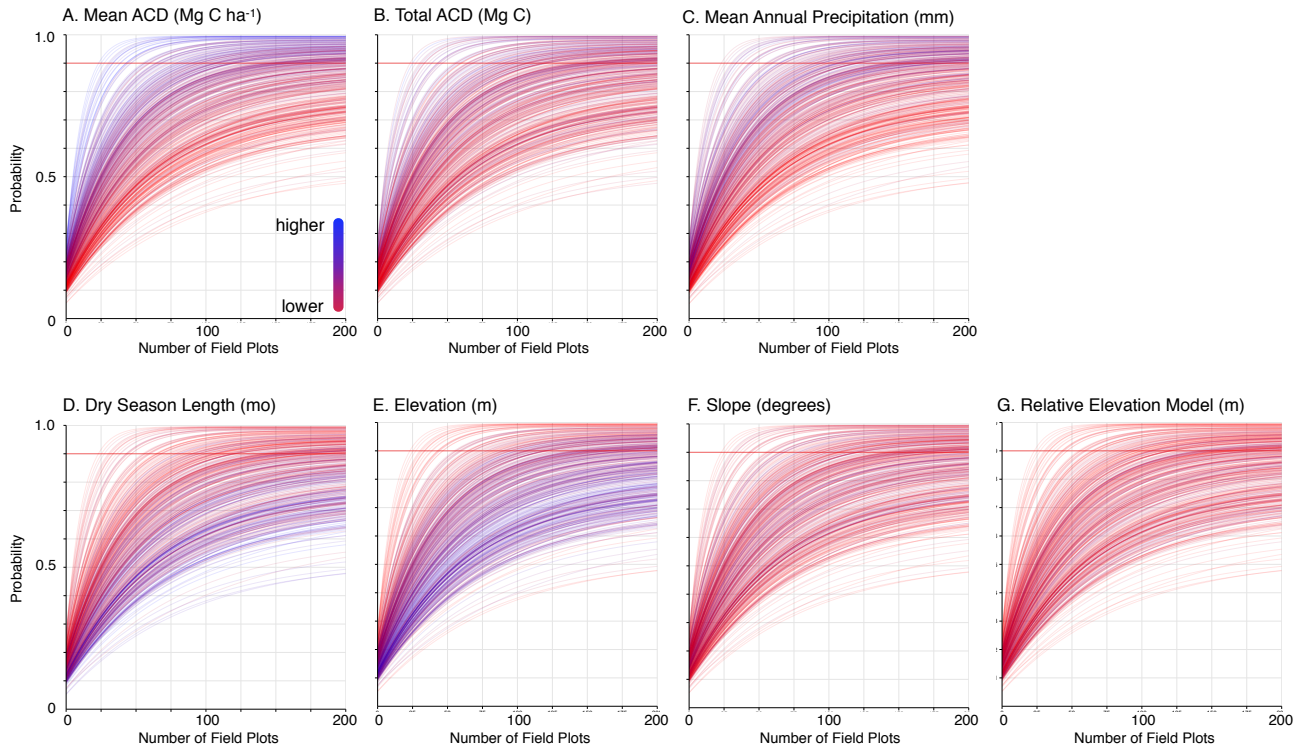
Figure S4. (A) Number of field plots needed to reliably (pr=0.9, red line) estimate the mean model ACD (Mg C ha^{-1}) of a substratum using equal range binning. (B) Frequency distribution of the number of field plots needed to reliably estimate a substratum's mean model ACD.

Figure S5. Number of field plots needed to reliably (pr=0.9, red line) estimate the mean model ACD (Mg C ha^{-1}) of a substratum using equal range binning for (A) mean model ACD, (B) total model ACD, (C) mean annual precipitation, (D) dry season length, (E) elevation, (F) slope, and (G) relative elevation. Coloring is same as in Fig S3.